



HIGHLIGHTS H28-E





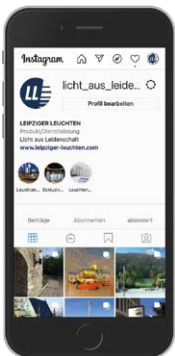
## LIGHTING SOLUTIONS AND CITY CONCEPTS SINCE 1889

Since 1889 streetlights have been developed and produced in the city of Leipzig in Germany. Following this tradition, the **medium-sized family-owned** enterprise LEIPZIGER LEUCHTEN today manufactures luminaires for urban and rural areas. In addition to series products, LEIPZIGER LEUCHTEN enjoys implementing its customers **individual lighting** ideas and offers **Smart City products** for intelligent urban concepts.

Early on, the need to expanding its portfolio was clear to LEIPZIGER LEUCHTEN. Therefore, since 1998 **urban furniture** and, since 2000, **feeder pillars** have contributed to the diversity of the range. The great advantage: the **coordinated series** enable an **uniform urban concept**, ensuring one single source for a **harmonious overall appearance** at the place of use.

LEIPZIGER LEUCHTEN is certified ISO 9001:2015 according to the international standard. The products quality, safety, conformity with current regulations, functionality, design as well as customer satisfaction are of paramount importance.

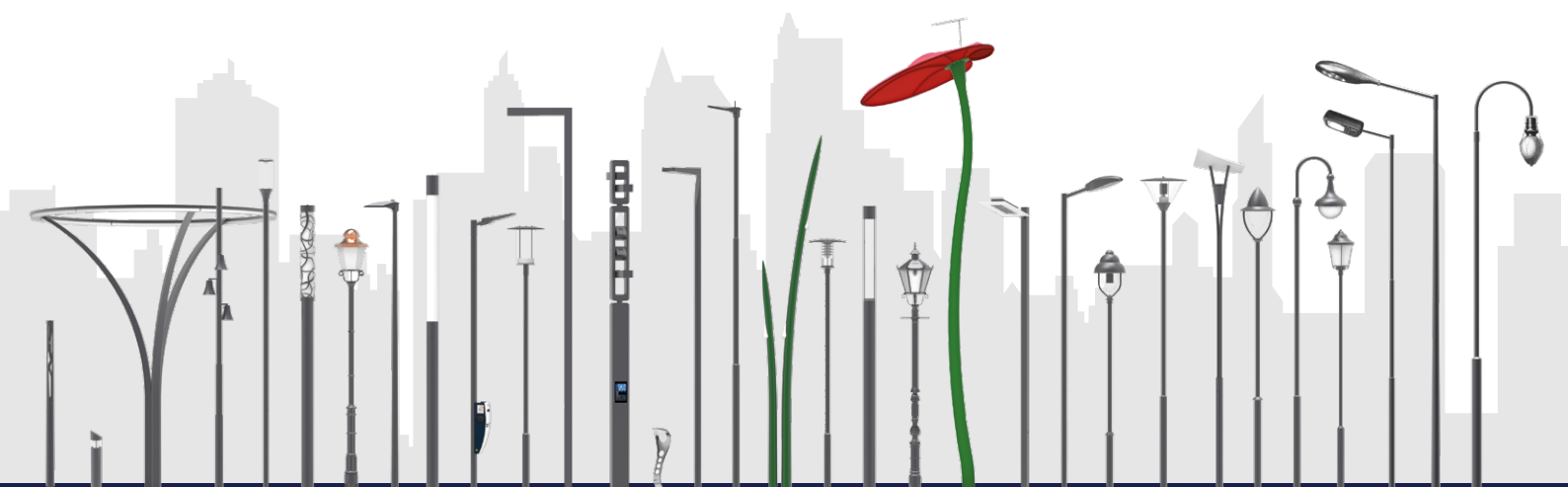
The team at LEIPZIGER LEUCHTEN **advise, plan, develop and design** with and for their customers who are architects and planners, cities and municipalities, wholesalers, installers and private customers. The sales department is **highly motivated** and happy to be at your service in Germany, in Europe and around the world.



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ON INSTAGRAM AND FACEBOOK

# LEIPZIGER LEUCHTEN



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subject to prior sale



## ALFONS I DAWU 2.0 ALFONS I WUFF 1.0

DAWU 2.0: multi-lumen-luminaire with DIP switch  
WUFF 1.0: powerful at a low price

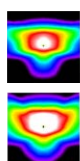
- 3,200lm/4,380lm (replacement for NAV 70W/ HCI 70W/ HQL 125W)
- 6,400lm/8,760lm (replacement for NAV 100W/ HCI 100W)
- DAWU 2.0: 4 luminous fluxes adjustable via DIP switch on the driver (1,900lm, 2,500lm, 3,200lm - factory setting, 3,500lm) or (3,800lm, 5,000lm, 6,400lm - factory setting, 7,000lm)
- necessary accessory:  
ASA 60: for side entry and post top ø 60mm  
ASA 76: for post top ø 76mm
- available lenses for street optics (asymmetrical wide beam)
- constant energy consumption

lamp	product code
<b>ALFONS I DAWU 2.0 / WUFF 1.0 – SK I</b>	
DAWU LED 20W/3,200lm/3,000K	9.136.7128.028-3
DAWU LED 40W/6,400lm/3,000K <sup>(2)</sup>	9.136.7228.028-3
WUFF LED 32W/4,380lm/4,000K	9.136.9132.01
WUFF LED 64W/8,760lm/4,000K <sup>(2)</sup>	9.136.9232.01
<b>ALFONS I DAWU 2.0 / WUFF 1.0 – SK II</b>	
DAWU LED 20W/3,200lm/3,000K	9.136.7128.028-3S
DAWU LED 40W/6,400lm/3,000K <sup>(2)</sup>	9.136.7228.028-3S
WUFF LED 32W/4,380lm/4,000K	9.136.9132.01S
WUFF LED 64W/8,760lm/4,000K <sup>(2)</sup>	9.136.9232.01S

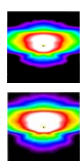
necessary accessory - for side entry or post top, DB 703	
ASA 60	9.924.0980.70
ASA 76	9.924.0979.70

accessory: wall bracket - hot-dip galvanised steel, DB 703	
WA 714-2	9.982.0015.714

<sup>(2)</sup> 2 LED modules



DAWU LED\*  
photometric guideline:  
pole height: 6m  
spacings: 35m



WUFF LED\*  
photometric guideline:  
pole height: 6m  
spacings: 35m



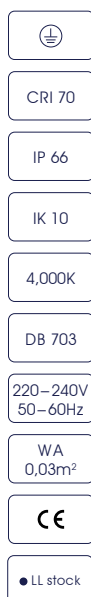
DAWU LED\*\*  
photometric guideline:  
pole height: 6m  
spacings: 35m



WUFF LED\*\*  
photometric guideline:  
pole height: 6m  
spacings: 35m



subject to prior sale



## ARNE I DAWU 2.0

multi-lumen-luminaire with DIP switch

- 4,350lm (replacement for NAV 70W/ HCI 70W/ HQL 125W)
- 4 luminous fluxes adjustable via DIP switch on the driver (3,750lm, 4,350lm - factory setting, 4,600lm, 4,900lm)
- perfect light for streets and squares
- necessary accessory:  
ASA 60: for side entry and post top ø 60mm  
ASA 76: for post top ø 76mm
- available lenses for street optics (asymmetrical wide beam)
- constant energy consumption

lamp	product code
<b>ARNE I DAWU 2.0</b>	
DAWU LED 27W/4,350lm/4,000K	9.146.7148.028
<b>necessary accessory - for side entry or post top, DB 703</b>	
ASA 60	9.924.0980.70
ASA 76	9.924.0979.70
<b>accessory: wall bracket - hot-dip galvanised steel, DB 703</b>	
WA 714-2	9.982.0015.714
<b>accessory: back light shield</b>	
LS DA 1	2.914.8301.17



DAWU LED  
photometric guideline:  
pole height: 6m  
spacings: 35m



## EVA I WUFF 2.0 EVA I DAWU 2.0

multi-lumen-replacement-luminaire with DIP switch

- 32W/4.100lm or 27W/4.100lm (replacement for NAV 70W/ HCI 70W/ HQL 125W)
- 4 luminous fluxes adjustable via DIP switch on the driver (WUFF 2.0: 3,000lm, 3,600lm, 3,900lm, 4,100lm - factory setting; DAWU 2.0: 3,500lm, 4,100lm - factory setting, 4,350lm, 4,650lm)
- for post top ø 60mm
- lenses: for narrow and wide beam (cycle path) or for symmetrical (square optics)
- constant energy consumption



lamp	product code
<b>EVA I WUFF 2.0 – cycle path optics, narrow and wide beam</b>	
WUFF LED 32W/4.100lm/3.000K	9.898.7132.009-3
<b>EVA I DAWU 2.0 – square optics, symmetrical</b>	
DAWU LED 27W/4.100lm/3.000K	9.898.7148.00058-3**



narrow and wide beam\*  
photometric guideline:  
pole height: 4,50m  
spacings: 35m



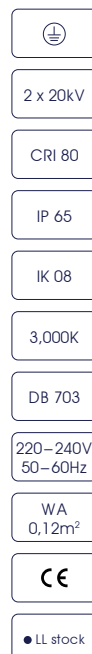
symmetrical\*\*  
photometric guideline:  
pole height: 4,50m  
spacings: 30m

subject to prior sale

## RICHARD IV/R U

glare-free light | attractive cylinder luminaire with louvre system

- 11W/2,000lm (replacement for NAV 50W/ HCI 50W/ HQL 80W)
- 15W/3,000lm or 21W/ 4,000lm (replacement for NAV 70W/ HCI 70W/ HQL 125W)
- lower inrush than operating current
- smart eco- and cool saving-functions
- reverse polarity protection
- for post top ø 76mm
- louvre system; symmetrical or asymmetrical light distribution
- Constant Light Output (CLO) function: the same light level even after exchange of driver



lamp	product code
<b>RICHARD IV/R U – symmetrical, generation 4.1</b>	
U LED 11W/2.000lm/3.000K	4.892.9024.184-24*
U LED 15W/3.000lm/3.000K	4.892.9033.184-24*
<b>RICHARD IV/R U – symmetrical, generation 4.1</b>	
U LED 21W/4.000lm/3.000K	4.892.9044.184-241*
<b>RICHARD IV/R U – asymmetrical, generation 4.1</b>	
U LED 21W/4.000lm/3.000K	4.892.9044.184-441**



symmetrical\*  
photometric guideline:  
pole height: 4,50m  
spacings: 33m



asymmetrical\*\*  
photometric guideline:  
pole height: 4,50m  
spacings: 34m

subject to prior sale

# APPLICATION GUIDE FOR SELECTING THE RIGHT LED

## FOR A QUICK OVERVIEW HOW TO REPLACE A CONVENTIONAL LAMPS WITH LED

For determining the required luminous flux of an LED module as an equivalent to a conventional light source in refurbishment projects. The matrix gives an initial indication of the required LED module. The type of glazing and the type of light emission of the light source play a decisive role.

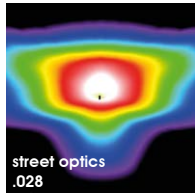
Determined replacement LED in lumens (gross)	LED modules														
	clear glazing			pearl structured, opal, clear glazing			opal glazing			clear glazing			clear, opal glazing		
	lens (DA, FF, FLS, PL-CP)			lens, louvre (PL-LS, U, FLS, DA)			free beam (U, PL-LS, LIN, TAB-LL)			reflector plate (LLM-DA)			indirect (LSL, TAB-LL)		
	- ALFONS I DA - ALFONS II DA - ARNE I DA - ARNO I DA - ARNO I PL-CP - ASL 2010/1 DA - ASL 2050 DA - COSMA III DA - RONDO I PL-CP - RONDO II DA - CARA II/2 DA - HL CARA I/1 DA - BURKHARD I DA - MORITZ II DA - MORITZ F VIII DA - FIETE I FLS - EMMA I DA - TILLA I DA - TILLA II DA - TORSTEN III FLS - TORSTEN VI FLS - RICHARD IV DA - DIETER II FLS - LUCAS I DA - LUCAS VII DA - ALBRECHT /9 DA - DAHLIA I FLS - DAHLIA P I FLS - SASKIA I FF - SASKIA II/10 FF - ALEX P III DA - STELLA L IV/10 FLS - STELLA L III/10 FLS - STELLA L IV/15 FLS - STELLA P IV FLS - STELLA P I/11 DA - STELLA L XXIII/15 DA - STELLA L IX/15 RGB - ANDREW I FLS - ANDREW I T FLS - MORTEN I DA			- GUSTAV I/R PL-LS - RICHARD IV/R U - DIETER VI/R U - DIETER VIII/R U - DIETER II/R U - EVA II/R U - CLARA II/R U - CLARA IV/R U - OTTO IV/R U - BERTHA V FLS - BERTHA VI FLS - MARIE /1 FLS - ALBRECHT /1 FLS - ALBRECHT /10 DA - MIKA L I/R PL-LS - PETRA LR III U - PETRA P X-2/R U - FRANZ I DA - HL FRANZ V DA - CLEO I DA			- EVA I/U - OTTO IV/U - WL DAHLIA VII/1 PL-LS - LOTTA L IV/1 PL-LS - KATHLEEN L I/10 LIN - KATHLEEN L I/20 LIN - TESSA L V/10 LIN - PETRA PA - PETRA P II TAB-LL - PETRA VIII TAB-LL - GEORG II TAB-LL - GEORG V TAB-LL			- ASL 2010/1 LLM(-DA) - NORA V LLM-DA - NORA VI LLM-DA - NORA VIII LLM-DA - RETRO I LLM-DA - RETRO VI LLM-DA - NADJA I/1 LLM-DA - NADJA III/1 LLM-DA - ALFRED /1 LLM-DA - ALFRED /4 LLM-DA			- FELIX II LSL - FELIX X LSL - MIA VII LSL - MIA VIII LSL - MIA P II LSL - LOTTA P I TAB-LL - LOTTA P III TAB-LL - KORA P I TAB-LL - KORA P III TAB-LL - VIVA P II TAB-LL - KRISTIN P II TAB-LL		
	NAV	HQL	HCI	NAV	HQL	HCI	NAV	HQL	HCI	NAV	HQL	HCI	NAV	HQL	HCI
1,000		50W	35W		50W	35W									
2,000	50W	80W		50W	80W		50W		35W		50W	35W		50W	35W
3,000			50W			50W	50W	80W		50W	80W		50W		80W
4,000	70W	125W		70W	125W	50W	70W	125W	50W			50W			
5,000										70W	125W	70W	50W		
6,000		250W											70W	125W	
7,000	100W		100W							100W		100W			
8,000							100W								
10,000			150W												
11,000		400W													
12,000	150W														
15,000	250W														
16,000	250W														
20,000	400W														
32,000	400W														
48,000	600W														



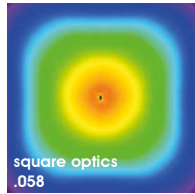
# REPRESENTATION OF THE LIGHT DISTRIBUTIONS

## OF THE LED MODULES USED

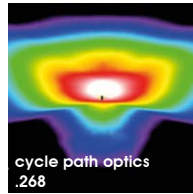
### DA LED



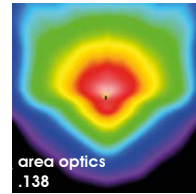
asymmetrical  
wide beam



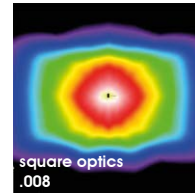
symmetrical  
wide beam



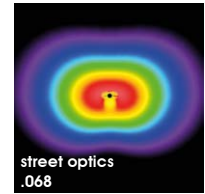
narrow and  
wide beam



asymmetrical  
deep wide beam



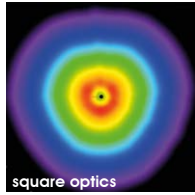
symmetrical  
deep wide beam  
geeignet nur für HL CARA



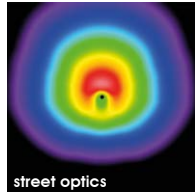
oval  
wide beam  
geeignet nur für CLEO

### R/U LED

(clear glazing, with louvre)



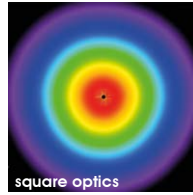
symmetrical



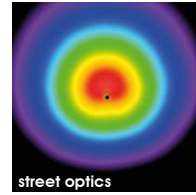
asymmetrical

### U LED

(satined glazing, without louvre)



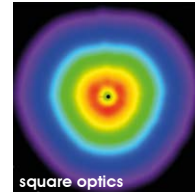
symmetrical



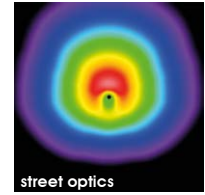
asymmetrical

### PL-LS LED

(clear glazing, with louvre)

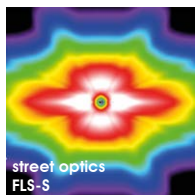


symmetrical



asymmetrical

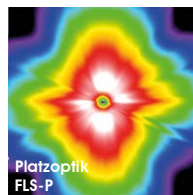
### FLS LED



oval  
wide beam

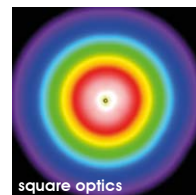


asymmetrical

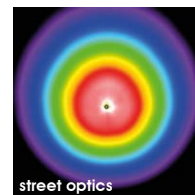


symmetrical

### LSL LED

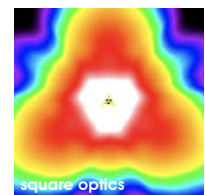


symmetrical



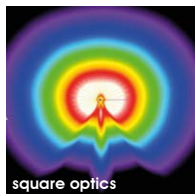
asymmetrical

### PL-CP LED

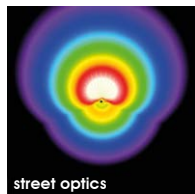


symmetrical  
wide beam

### TAB-LL LED

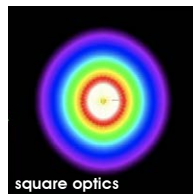


symmetrical



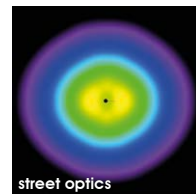
asymmetrical

### PAR LED



symmetrical

### LLM-DA LED



wide beam

## CHOOSING THE RIGHT APPROACH

SMALL AND LARGE SOLUTIONS - THE TAILOR-MADE CONCEPT FOR EVERYONE



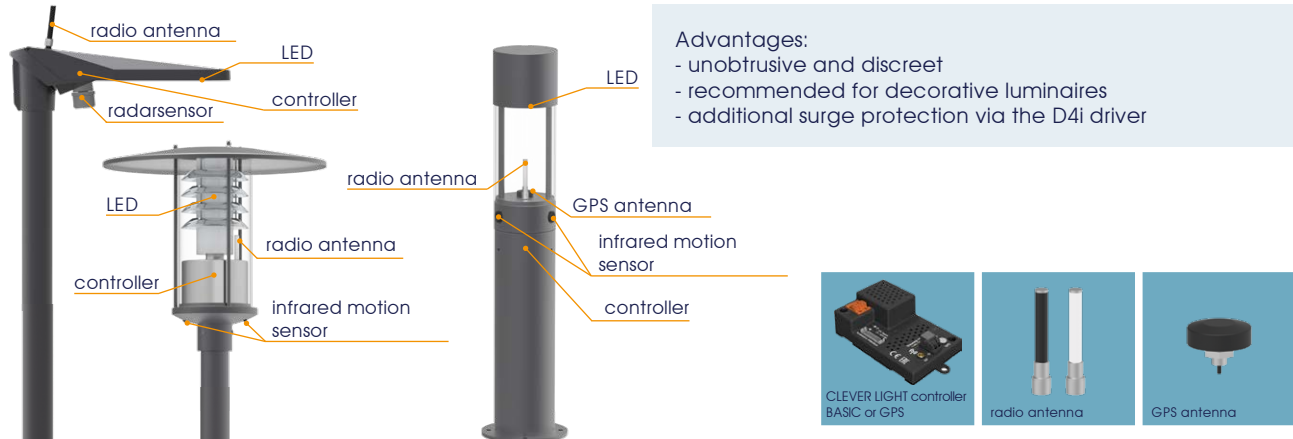
# THE CLEVER LIGHT CONCEPTS

## THE CLEVER WAY TO INTELLIGENT OUTDOOR LIGHTING

Requirements: CLEVER LIGHT COMPONENTS are installed in every luminaire. The CLEVER LIGHT components use wireless communication. By switching on the luminaires, the individual components network automatically. Therefore no extra data cables are needed. This saves a lot of time and money.

## THE CLEVER LIGHT COMPONENTS: OPTION 1: THE INTEGRATED SOLUTION

### COMPONENTS:



### SENSOREN:

#### WITHOUT SENSORS ONLY STATIC ENERGY SAVINGS

- User configures a project-specific usage and dimming profile by day of the week and time
- Application of the saved profile without exception
- Average energy savings of over 50%

#### WITH SENSORS MAXIMUM INTELLIGENT INTERACTION OF LIGHTING

- Situation dependent and needs based lighting: Use of light where and when it is needed
- Maximum energy savings of an average of 90%
- Contribution to reducing light pollution
- The luminaires can be set with an individual dimming profile for time, brightness and movement
- More comfort and safety on the streets, ways and squares

### SENSORS FOR RECOMMENDED USE:

4 infrared motion sensors to choose from:

#### CLEVER STIFT ST SENSOR

close-meshed detection up to a height of 6m



#### CLEVER STIFT HS SENSOR

close-meshed detection up to a height of 10m



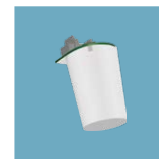
#### CLEVER PILZ SENSOR

large detection range up to a height of 10m



#### CLEVER SPOT V SENSOR

for small detection ranges up to a height of 5m



### 1 radar sensor for motion detection or classification:

#### CLEVER RADAR RE SENSOR

close-meshed detection up to a height of 10m



- Motion detection in the detection range up to 20m
- Measures the object classification speed (4 to 110 km/h) and direction of the detected objects
- Object classification (pedestrians, cyclists, car drivers, lorries, etc.)





## OPTION 2: THE ZHAGA SOCKET SOLUTION

### COMPONENTS:

#### Advantages:

- future proof
- Light control that can be easily retrofitted later using 1 or 2 D4i standardized HUBs
- Luminaire with standardized **ZD** interface, including 1 or 2 Zhaga sockets, ready to use with D4i HUBs
- for users who are still undecided regarding system and time



### SENSORS FOR RECOMMENDED USE:

2 CLEVER LIGHT infrared sensors to choose from:

2 combined CLEVER HUB BASIC with integrated infrared sensors to choose from:

#### CLEVER PIR5 ST Z-SENSOR

close-meshed detection up to a height of 6m



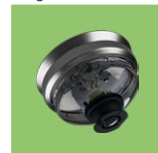
#### CLEVER PIR5 HS Z-SENSOR

large detection range up to height of 12m



#### COMBI CLEVER HUB BASIC WITH INTEGRATED ST Z-SENSOR

close-meshed detection up to a height of 6m



#### COMBI CLEVER HUB BASIC MIT INTEGRATED HS Z-SENSOR

close-meshed detection up to a height of 12m



### FURTHER POSSIBLE POSSIBLE INSTALLATIONS THE CLEVER LIGHT COMPONENTS:



# THE CLEVER LIGHT CONCEPTS

## THE CLEVER WAY TO INTELLIGENT OUTDOOR LIGHTING

### 2 WAYS TO ACCESS THE CLEVER LIGHT SYSTEM:

#### ON-SITE ACCESS USING A DONGLE AS A STAND-ALONE SOLUTION

##### INDEPENDENCE FOR THE USER

The CLEVER LIGHT lighting system can be accessed on site using a laptop or tablet and the CLEVER LIGHT USB dongle. This allows the CLEVER LIGHT luminaires to be configured, controlled or monitored. The intuitive Windows software enables the users to set configurations quickly and easily themselves.



##### Advantages:

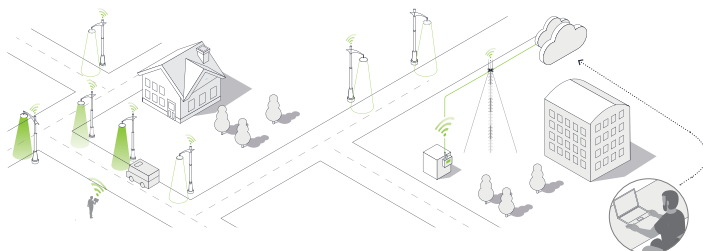
- One-time acquisition costs only, there are no additional license fees for the software and the CLEVER LIGHT USB dongle
- Regular automated software updates
- Encrypted data is stored in the luminaires, so no permanent internet connection is required
- The CLEVER LIGHT system can be configured independently by the users themselves

#### REMOTE ACCESS VIA GATEWAY

##### MAXIMUM BENEFIT AND ACCESS

Using a gateway, CLEVER LIGHT light can be monitored, managed and controlled from any location. The CLEVER LIGHT server collects the data from all connected gateway modules and makes it available in a user-friendly web application. In

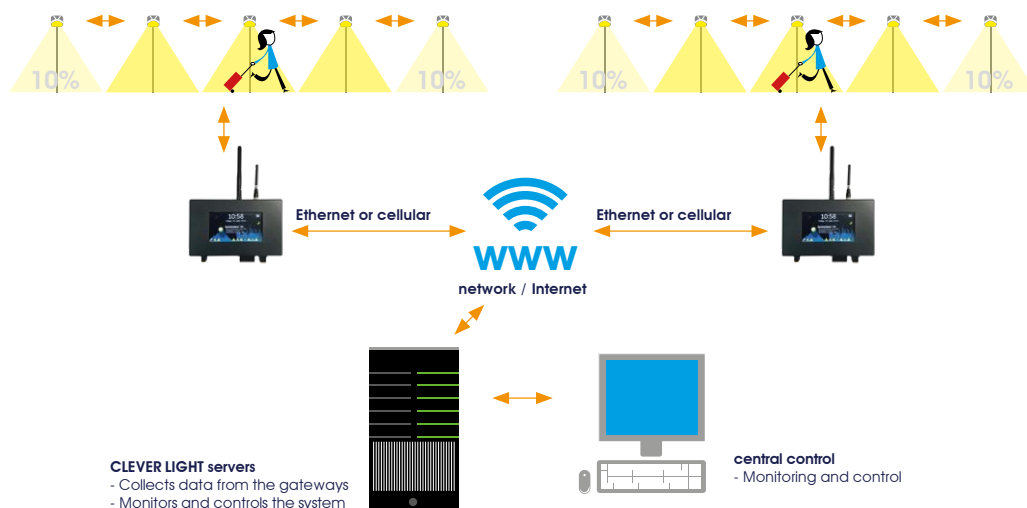
order to protect the data against unauthorized access, all transmission paths are encrypted and secured.



Internet access via a mobile phone connection or via an Ethernet cable is required for use and the gateway must be installed near the lighting system in order to connect to the CLEVER LIGHT radio network. An annual hosting fee is charged for using the cloud and for storing and retrieving system data.

##### Advantages:

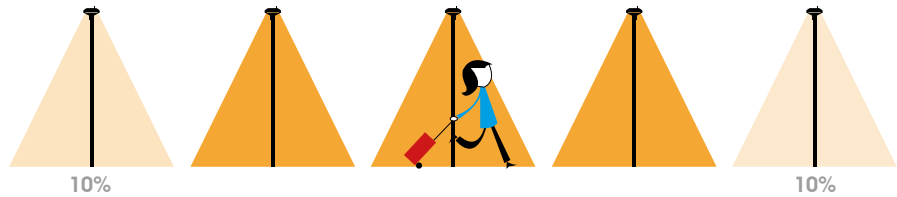
- Reading out the current luminaire status data at any time
- Light with traffic dimming possible
- Energy consumption protocols available
- Remote maintenance and quick reaction due to real-time monitoring, thereby operational cost savings
- More comfort and safety in streets, ways and squares
- Simplified luminaire configurations and updates





### More intelligence for more energy efficiency

Motion based light management for single luminaires or groups of luminaires

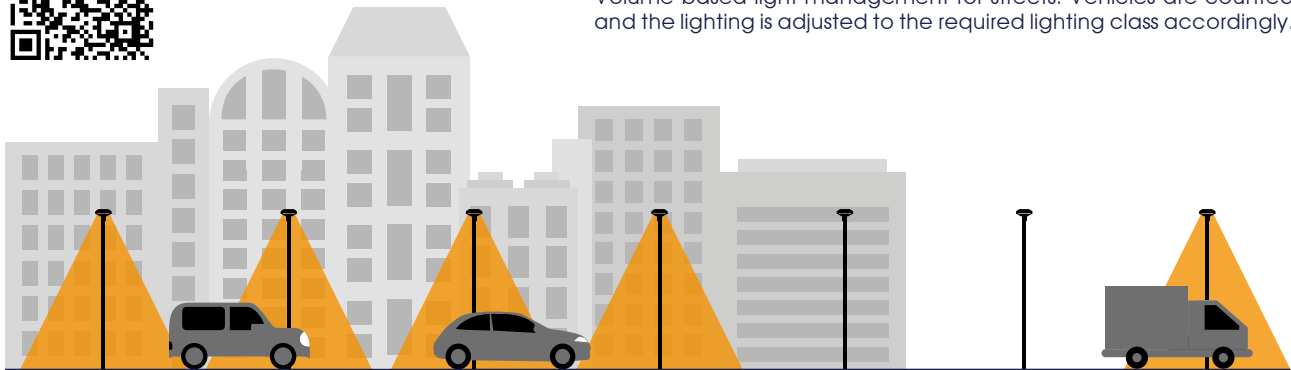


CLEVER LIGHT Video:



### Traffic flow analysis and automatic adjustment of the light level

Volume based light management for streets. Vehicles are counted and the lighting is adjusted to the required lighting class accordingly.



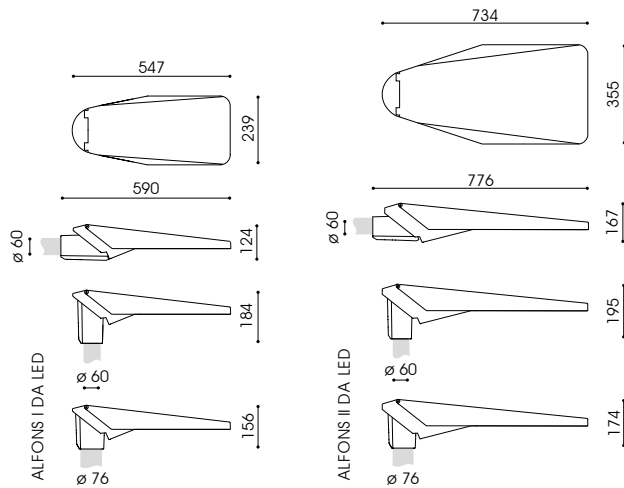
## LUMINAIRES WITH ZHAGA SOCKET

FUTURE-PROOF AND INTERACTIVE



All options remain open if, instead of ON/OFF lights, lights with one or two standardized Zhaga sockets are used. A large number of standardized additional components can be retrofitted easily and without tools via the Zhaga base. For example, the light control system CLEVER LIGHT or CityTouch, but also various sensors and traffic counting components. Start into the future with LEIPZIGER LEUCHTEN whenever you want!





- 
- CLO
- AC / DC
- 10kV
- CRI 70
- IP 66
- IK 10
- 220–240V  
50–60Hz
- WA  
ALFONS I / II  
0.03 / 0.06m<sup>2</sup>
- CE
- Zhaga
- LL stock
- on request:
- 3,000K
- other optics
- at extra cost:
- 
- 1,800K  
2,200K  
2,700K
- dimming
- 
- RAL / DB
- bracket
- cable



ALFONS I DA



ALFONS II DA

- recom. pole height: ALFONS I: 4.00m – 7.00m  
ALFONS II: 6.00m – 12.00m
- light standards: low, medium and high lighting requirements  
lamp: incl. 1, 2, 3 or 4 DA LED modules  
colour temperature: 4,000K neutral white  
LED gear: electronic driver up to 100,000 hours  
LED life expectancy: up to 100,000 hours  
optical system: lens technology  
light distribution: asymmetrical wide beam (**028**), narrow and wide beam (**268**) or asymmetrical deep wide beam (**138**)
- luminaire head: die cast aluminium; powder coated  
colour: DB 703  
glazing: flat, clear toughened glass glazing  
wiring: completely wired; via a plug and socket connector within the luminaire head; luminaire head to be hinged upward
- installation: for top or side entry; necessary accessory: adapter ASA 60 or ASA 76; made of cast aluminium; powder coated in DB 703 – to be ordered separately
- ASA 60 for side entry Ø 48mm up to 60mm (0°, -5°, -10°, -15°) or for top entry Ø 60mm (0°, 5°, 10°, 15°)
  - ASA 76 for top entry Ø 76mm (0°, 5°, 10°)
- accessory: ASA 60 or ASA 76, cable, pole, pole accessories, wall -, corner - or pole brackets (s. page 20), fixing material for the wall installation, back light shield for non-glare on the rear side – to be ordered separately

lamp	light distribution	product code	kg
<b>ALFONS I DA LED</b>			
DA+ <b>028</b> LED 13W/2,400lm/4,000K	asymmetrical wide beam	9.136.8118.028	6.8
DA+ <b>028</b> LED 22W/3,800lm/4,000K	asymmetrical wide beam	9.136.8128.028	6.8
DA+ <b>028</b> LED 45W/7,600lm/4,000K <sup>(2)</sup>	asymmetrical wide beam	9.136.8228.028	7.4
DA+ <b>268</b> LED 9W/1,650lm/4,000K	narrow and wide beam	9.136.8112.268	6.6
DA+ <b>268</b> LED 12W/2,050lm/4,000K	narrow and wide beam	9.136.8117.268	6.6
DA+ <b>268</b> LED 22W/3,800lm/4,000K	narrow and wide beam	9.136.8128.268	6.8
<b>ALFONS II DA LED</b>			
DA+ <b>028</b> LED 45W/7,600lm/4,000K <sup>(2)</sup>	asymmetrical wide beam	9.140.8228.028	12.1
DA+ <b>028</b> LED 67W/11,400lm/4,000K <sup>(3)</sup>	asymmetrical wide beam	9.140.8328.028	12.7
DA+ <b>028</b> LED 90W/15,200lm/4,000K <sup>(4)</sup>	asymmetrical wide beam	9.140.8428.028	13.3
DA+ <b>138</b> LED 45W/7,600lm/4,000K <sup>(2)</sup>	asymmetrical deep wide beam	9.140.8228.138	12.1
DA+ <b>138</b> LED 67W/11,400lm/4,000K <sup>(3)</sup>	asymmetrical deep wide beam	9.140.8328.138	12.7
DA+ <b>138</b> LED 90W/15,200lm/4,000K <sup>(4)</sup>	asymmetrical deep wide beam	9.140.8428.138	13.3
<b>necessary accessory - for top or side entry, DB 703</b>			
• ASA 60		9.924.0980.70	0.9
• ASA 76		9.924.0979.70	1.0
<b>accessory: wall bracket - hot-dip galvanised steel, DB 703</b>			
• WA 714-2		9.982.0015.714	2.1
<b>accessory: back light shield (1 piece per lens; max. 4 pieces per module)</b>			
• LS DA 1		2.914.8301.17	0.01

<sup>(2)</sup> 2 LED modules / <sup>(3)</sup> 3 LED modules / <sup>(4)</sup> 4 LED modules

#### residential road

requirements: **E<sub>m</sub> 3lx / E<sub>min</sub> 0,6lx** | lighting class: **P5**  
DA+ 268 LED 12W/2,050lm/4,000K  
inclination: 0°  
pole height: 4.50m  
street width: 5.00m  
pole spacing: 42.00m

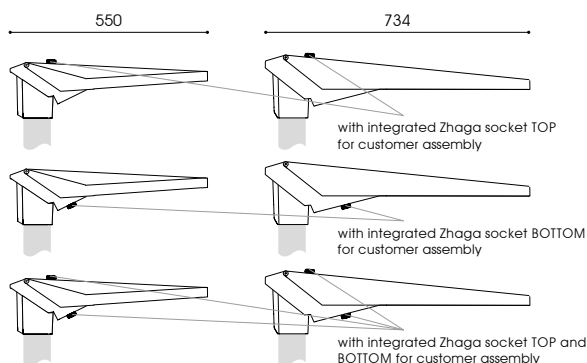
#### car park

area: 75.00m x 49.00m;  
30 parking lots; arranged in 6 rows  
requirements: **E<sub>m</sub> 20lx / g<sub>0,25</sub>**  
DA+ 138 LED 70W/11,400lm/4,000K<sup>(3)</sup>  
quantity: 4 luminaires 1 bracket and  
4 luminaires 2 brackets  
pole height: 8.00m  
pole spacing: 40.00m

#### wall luminaire for factory road

requirements: **E<sub>m</sub> 10lx / g<sub>0,25</sub>**  
DA+ 028 LED 22W/3,800lm/4,000K  
inclination: 2°  
mounting height: 6.00m  
street width: 8.00m  
pole spacing: 25.00m







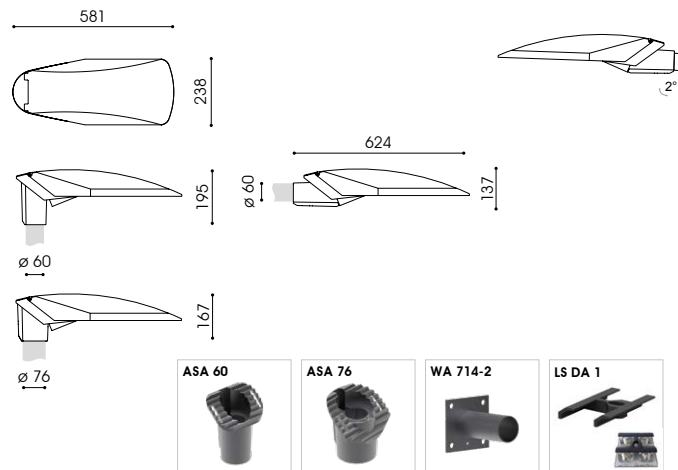
**recom. pole height:** ALFONS I: 4.00m – 7.00m  
 ALFONS II: 6.00m – 12.00m  
**light standards:** low, medium and high lighting requirements  
**lamp:** incl. 1, 2, 3 or 4 DA LED modules  
**colour temperature:** 4,000K neutral white  
**LED gear:** incl. programmable, Zhaga Book18 compliant and D4i-certified driver with DX or SR interface and data communication, **incl. integrated Zhaga sockets TOP and BOTTOM, TOP or BOTTOM in order to retrofit standardised light management systems, e.g. CLEVER LIGHT, CityTouch or Easy Air**, driver life expectancy: up to 100,000 hours  
**LED life expectancy:** up to 100,000 hours  
**optical system:** lens technology  
**light distribution:** asymmetrical wide beam (**028**), narrow and wide beam (**268**) or asymmetrical deep wide beam (**138**)  
**luminaire head:** die cast aluminium; powder coated DB 703  
**colour:** flat, clear toughened glass glazing  
**glazing:** completely wired; via a plug and socket connector within the luminaire head; luminaire head to be hinged upward  
**wiring:**  
**installation:** for top or side entry; necessary accessory: adapter ASA 60 or ASA 76; made of cast aluminum; powder coated in DB 703 – to be ordered separately  
 • ASA 60 for side entry  $\varnothing$  48mm up to 60mm (0°, -5°, -10°, -15°) or for top entry  $\varnothing$  60mm (0°, 5°, 10°, 15°)  
 • ASA 76 for top entry  $\varnothing$  76mm (0°, 5°, 10°)  
**accessory:** ASA 60 or ASA 76, cable, pole, pole accessories, wall -, corner - or pole brackets (s. page 20), fixing material for the wall installation, back light shield for non-glare on the rear side – to be ordered separately



lamp	light distribution	product code	kg
<b>ALFONS I DA LED ZS - Zhaga socket TOP and BOTTOM</b>			
DA+ <b>028</b> LED 22W/3,800lm/4,000K	asymmetrical wide beam	9.136.8128.028-ZS	6.8
DA+ <b>028</b> LED 45W/7,600lm/4,000K <sup>(2)</sup>	asymmetrical wide beam	9.136.8228.028-ZS	7.4
DA+ <b>268</b> LED 12W/2,050lm/4,000K	narrow and wide beam	9.136.8117.268-ZS	6.6
DA+ <b>268</b> LED 22W/3,800lm/4,000K	narrow and wide beam	9.136.8128.268-ZS	6.8
<b>ALFONS II DA LED ZS - Zhaga socket TOP and BOTTOM</b>			
DA+ <b>028</b> LED 67W/11,400lm/4,000K <sup>(3)</sup>	asymmetrical wide beam	9.140.8328.028-ZS	12.0
DA+ <b>028</b> LED 90W/15,200lm/4,000K <sup>(4)</sup>	asymmetrical wide beam	9.140.8428.028-ZS	12.5
DA+ <b>138</b> LED 67W/11,400lm/4,000K <sup>(3)</sup>	asymmetrical deep wide beam	9.140.8328.138-ZS	12.0
DA+ <b>138</b> LED 90W/15,200lm/4,000K <sup>(4)</sup>	asymmetrical deep wide beam	9.140.8428.138-ZS	12.5
price reduction for Zhaga socket TOP		9.xxx.xxxx.xxxx-ZSo	
price reduction for Zhaga socket BOTTOM		9.xxx.xxxx.xxxx-ZSu	
CityTouch conform		9.xxx.9xxx.xxxx-ZS(x)	
data transmission to the cloud		2.919.0100.21	
<b>accessory: CLEVER LIGHT</b>			
CLEVER LIGHT HUB BASIC		2.919.0100.17-B03	0.1
CLEVER LIGHT HUB BASIC incl. SENSOR ST		2.919.0100.17-B-ST03	0.1
CLEVER LIGHT HUB BASIC incl. SENSOR HS		2.919.0100.17-B-HS03	0.1
CLEVER LIGHT HUB GPS		2.919.0100.17-GPS	0.1
CLEVER LIGHT HUB GPS-C		2.919.0100.17-GPS-C	0.1
CLEVER LIGHT PIR5 ST Z-Sensor		2.919.0100.17-PIR-ST	0.1
CLEVER LIGHT PIR5 HS Z-Sensor		2.919.0100.17-PIR-HS	0.1
<b>necessary accessory - for top or side entry, DB 703</b>			
• ASA 60		9.924.0980.70	0.9
• ASA 76		9.924.0979.70	1.0
<b>accessory: wall bracket - hot-dip galvanised steel, DB 703</b>			
• WA 714-2		9.982.0015.714	2.1
<b>accessory: back light shield (1 piece per lens; max. 4 pieces per module)</b>			
• LS DA 1		2.914.8301.17	0.01

(<sup>2</sup>) 2 LED modules / (<sup>3</sup>) 3 LED modules / (<sup>4</sup>) 4 LED modules

- 
- CLO
- AC / DC
- 10kV
- CRI 70
- IP 66
- IK 10
- 220–240V  
50–60Hz
- WA  
ALFONS I / II  
0.03 / 0.06m²
- CE
- Zhaga
- LL stock
- on request:
- 3,000K
- other optics
- at extra cost:
- 
- 1,800K  
2,200K  
2,700K
- dimming
- 
- RAL / DB
- bracket
- cable



ASA 60

ASA 76

WA 714-2

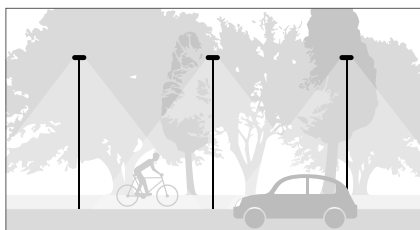
LS DA 1



recom. pole height: 4.00m – 8.00m  
 light standards: low and medium lighting requirements  
 lamp: incl. 1 or 2 DA LED module  
 colour temperature: 4,000K neutral white  
 LED gear: electronic driver up to 100,000 hours  
 LED life expectancy: up to 100,000 hours  
 optical system: lens technology  
 light distribution: asymmetrical wide beam (028) or narrow and wide beam (268)  
 luminaire head: die cast aluminium; powder coated  
 colour: DB 703  
 glazing: flat, clear toughened glass glazing  
 wiring: completely wired; via a plug and socket connector within the luminaire head; luminaire head to be hinged upward  
 installation: for top or side entry; necessary accessory: adapter ASA 60 or ASA 76; made of cast aluminum; powder coated in DB 703 – to be ordered separately  
 • ASA 60 for side entry  $\varnothing$  48mm up to 60mm (0°, -5°, -10°, -15°) or for top entry  $\varnothing$  60mm (0°, 5°, 10°, 15°)  
 • ASA 76 for top entry  $\varnothing$  76mm (0°, 5°, 10°)  
 accessory: ASA 60 or ASA 76, cable, pole, pole accessories, wall -, corner - or pole brackets (s. page 20), fixing material for the wall installation, back light shield for non-glare on the rear side – to be ordered separately

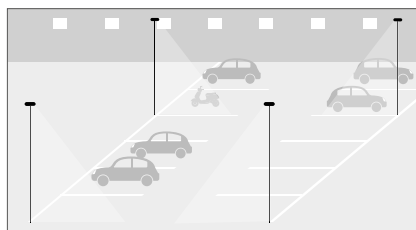
lamp	light distribution	product code	kg
<b>ARNE I DA LED</b>			
DA+ 028 LED 11W/2,100lm/4,000K	asymmetrical wide beam	9.146.8115.028	6.8
DA+ 028 LED 28W/4,500lm/4,000K	asymmetrical wide beam	9.146.8130.028	6.8
DA+ 028 LED 34W/6,000lm/4,000K <sup>(2)</sup>	asymmetrical wide beam	9.146.8224.028	7.4
• DA+ 028 LED 45W/7,600lm/4,000K <sup>(2)</sup>	asymmetrical wide beam	9.146.8228.028	7.4
DA+ 268 LED 9W/1,650lm/4,000K	narrow and wide beam	9.146.8112.268	6.8
DA+ 268 LED 12W/2,050lm/4,000K	narrow and wide beam	9.146.8117.268	6.8
DA+ 268 LED 22W/3,800lm/4,000K	narrow and wide beam	9.146.8128.268	6.8
<b>necessary accessory - for top or side entry, DB 703</b>			
• ASA 60		9.924.0980.70	0.9
• ASA 76		9.924.0979.70	1.0
<b>accessory: wall bracket - hot-dip galvanised steel, DB 703</b>			
• WA 714-2		9.982.0015.714	2.1
<b>accessory: back light shield (1 piece per lens; max. 4 pieces per module)</b>			
• LS DA 1		2.914.8301.17	0.01

<sup>(2)</sup> 2 LED modules



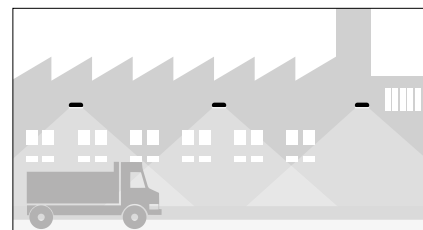
#### residential road

requirements:  $E_m$  3lx /  $E_{min}$  0,6lx | lighting class: P5  
 DA+ 028 LED 11W/2,100lm/4,000K  
 pole height: 4.50m  
 street width: 5.00m  
 pavement on one side: 1.50m  
 pole spacing: 35.00m



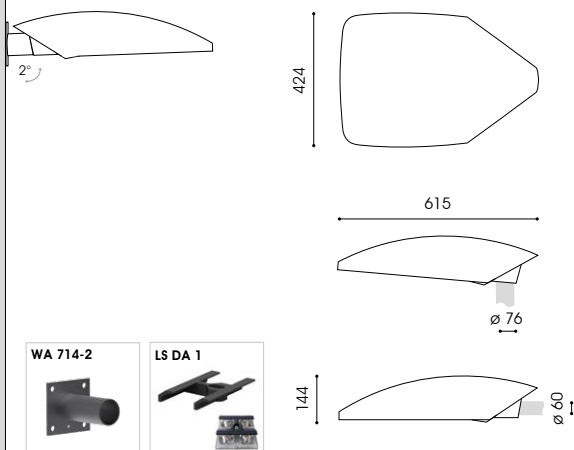
#### car park

area: 50.00m x 16.00m;  
 20 parking lots; arranged 2 rows  
 requirements:  $E_m$  5lx /  $g$  0,25  
 DA+ 028 LED 11W/2,100lm/4,000K  
 quantity / inclination: 4 luminaires / 5°  
 pole height: 5.00m  
 pole spacing: 27,50m



#### wall luminaire for factory road

requirements:  $E_m$  10lx /  $g$  0,40  
 DA+ 028 LED 23W/4,200lm/4,000K<sup>(2)</sup>  
 inclination: 2°  
 mounting height: 6.00m  
 street width: 8.00m  
 pole spacing: 24.00m



recom. pole height:	4.50m – 14.00m
light standards:	medium and high lighting requirements
lamp:	incl. 2 PL-CP LED modules incl. 1 - 6 DA LED modules
colour temperature:	4,000K neutral white
LED gear:	electronic driver up to 100,000 hours
LED life expectancy:	up to 100,000 hours
optical system:	PL-CP LED: computer-optimised reflector for Zhaga LED modules for directed light and wide spacings DA LED: lens technology
light distribution:	PL-CP: asymmetrical wide beam DA LED: asymmetrical deep wide beam (138)
luminaire head:	die-cast aluminium and aluminium; powder coated DB 703
colour:	flat, clear toughened glass glazing, abklappbar
glazing:	completely wired; incl. cable 8.00m
wiring:	for top entry $\varnothing$ 76mm or $\varnothing$ 60mm with inclination 5°, 10°; for side entry $\varnothing$ 60mm with inclination 0°; dispatch standard: top entry 5°
installation:	
accessory:	pole, pole accessories, wall-, corner- or pole brackets (s. page 20) – to be ordered separately



lamp	light distribution	product code	kg
<b>ARNO I LED</b>			
PL-CP LED 34W/5,000lm/4,000K	asymmetrical wide beam	9.134.9220.01	11.2
PL-CP LED 56W/8,000lm/4,000K	asymmetrical wide beam	9.134.9245.01	11.8
PL-CP LED 86W/12,000lm/4,000K	asymmetrical wide beam	9.134.9268.01	12.4
PL-CP LED 112W/16,000lm/4,000K	asymmetrical wide beam	9.134.9282.01	14.4
PL-CP LED 150W/20,000lm/4,000K	asymmetrical wide beam	9.134.9288.01	14.4
PL-CP LED 200W/28,000lm/4,000K	asymmetrical wide beam	9.134.9290.01	14.8
<b>ARNO I DA LED</b>			
DA+ 138 LED 17W/3,000lm/4,000K	asymmetrical deep wide beam	9.134.8124.138	11.2
DA+ 138 LED 34W/6,000lm/4,000K <sup>(2)</sup>	asymmetrical deep wide beam	9.134.8224.138	12.2
DA+ 138 LED 52W/9,000lm/4,000K <sup>(3)</sup>	asymmetrical deep wide beam	9.134.8324.138	13.2
DA+ 138 LED 69W/12,000lm/4,000K <sup>(4)</sup>	asymmetrical deep wide beam	9.134.8424.138	14.4
DA+ 138 LED 86W/15,000lm/4,000K <sup>(5)</sup>	asymmetrical deep wide beam	9.134.8524.138	15.2
DA+ 138 LED 144W/24,000lm/4,000K <sup>(6)</sup>	asymmetrical deep wide beam	9.134.8629.138	16.2
<b>accessory: wall bracket - hot-dip galvanised steel, DB 703</b>			
• WA 714-2		9.982.0015.714	2.1
<b>accessory: back light shield (1 piece per lens; max. 4 pieces per module)</b>			
• LS DA 1		2.914.8301.17	0.01

<sup>(2)</sup> 2 LED modules / <sup>(3)</sup> 3 LED modules / <sup>(4)</sup> 4 LED modules / <sup>(5)</sup> 5 LED modules / <sup>(6)</sup> 6 LED modules

#### main road

requirements:  $L_e$  0,50cd/m<sup>2</sup> /  $U_e$  0,35 /  $U_i$  0,40 | class: M5  
PL-CP LED 56W/8,000lm/4,000K  
arrangement / inclination: 1-fach / 10°  
pole height: 8.00m  
street width: 7.00m  
pole spacing: 44.00m

#### car park

area: 75.00m x 49.00m;  
30 parking lots; arranged in 6 rows  
requirements:  $E_m$  10lx /  $g$  0,25  
PL-CP LED 34W/5,000lm/4,000K  
quantity / inclination: 6 luminaires 1-fach / 5°;  
12 luminaires 2-fach / 2°  
pole height: 8.00m  
pole spacing: 45.00m

#### wall luminaire for factory road

requirements:  $E_m$  20lx  
PL-CP LED 56W/8,000lm/4,000K  
inclination: 2°  
mounting height: 6.00m  
street width: 8.00m  
pole spacing: 25.00m

- ⊕
- CLO
- AC / DC
- 10kV
- CRI 70
- IP 66
- IK 10
- 220 – 240V  
50 – 60Hz
- WA  
0.062m<sup>2</sup>
- CE
- Zhaga
- LL stock

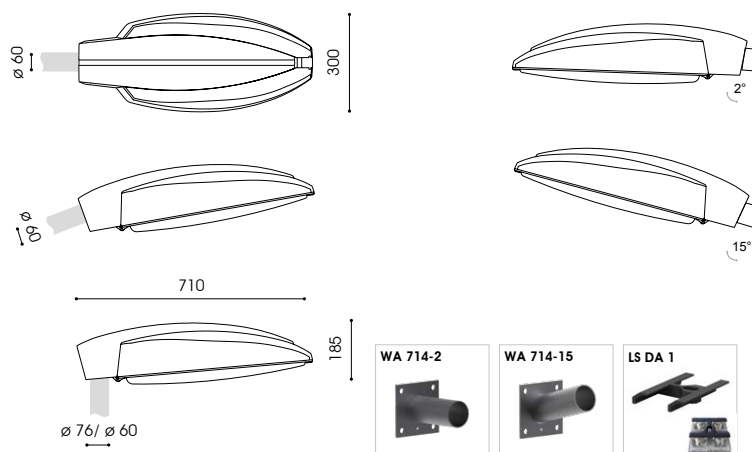
on request:

- 2,700K  
3,000K
- CRI 80
- other optics

at extra cost:

- 
- 1,800K  
2,200K  
2,700K
- dimming
- CLEVER LIGHT
- RAL / DB
- bracket
- Zhaga sockets





recom. pole height:	5.00m – 8.00m
light standards:	low and medium lighting requirements
lamp:	incl. 1 LLM-DA LED modul, glare-free incl. 1, 2 or 3 DA LED modules
colour temperature:	3,000K warm white or 4,000K neutral white
LED gear:	electronic driver up to 100,000 hours
LED life expectancy:	LLM LED: up to 80,000 hours; LLM-DA LED: up to 100,000 hours
optical system:	LLM-DA: reflector system for directed, horizontally mounted LLM LED or LLM-DA LED Module DA: lens technology
light distribution:	LLM-DA: wide beam – street optics DA: asymmetrical wide beam ( <b>028</b> ) or narrow and wide beam ( <b>268</b> )
luminaire head:	die-cast aluminium and aluminium; powder coated
colour:	DB 703
glazing:	polycarbonate, clear, impact-resistant, UV-stabilised, to be hinged down
wiring:	completely wired, via a plug and socket connector within the luminaire head
installation:	for top entry ø 76mm or ø 60mm with inclination 5°, 10°; for side entry ø 60mm with inclination 0°; dispatch standard: top entry 5°
accessory:	cable, pole, pole accessories, wall -, corner - or pole bracket (s. page 20), fixing material for the wall installation, back light shield for non-glare on the rear side – to be ordered separately

lamp	light distribution	product code	kg
<b>ASL 2010/1 LLM-DA LED</b>			
• LLM-DA LED 16W/1,800lm/3,000K	wide beam	9.135.8008.41-2	12.1
• LLM-DA LED 26W/3,000lm/3,000K	wide beam	9.135.8042.41-2	12.7
<b>ASL 2010/1 DA LED</b>			
DA+ <b>028</b> LED 13W/2,400lm/4,000K	asymmetrical wide beam	9.135.8118.028	9.5
DA+ <b>028</b> LED 22W/3,800lm/4,000K	asymmetrical wide beam	9.135.8128.028	10.0
DA+ <b>028</b> LED 45W/7,600lm/4,000K <sup>(2)</sup>	asymmetrical wide beam	9.135.8228.028	10.0
DA+ <b>028</b> LED 67W/11,400lm/4,000K <sup>(3)</sup>	asymmetrical wide beam	9.135.8328.028	10.5
DA+ <b>268</b> LED 9W/1,650lm/4,000K	narrow and wide beam	9.135.8112.268	9.0
DA+ <b>268</b> LED 12W/2,050lm/4,000K	narrow and wide beam	9.135.8117.268	9.0
<b>accessory: wall bracket - hot-dip galvanised steel, DB 703</b>			
• WA 714-2 - inclination 2°		9.982.0015.714	1.0
• WA 714-15 - inclination 15°		9.982.0009.714	1.0
<b>accessory: back light shield (1 piece per lens; max. 4 pieces per module)</b>			
• LS DA 1		2.914.8301.17	0.01

(2) 2 LED modules / (3) 3 LED modules

#### residential road

**requirements:  $E_m$  3lx /  $E_{min}$  0,6lx | lighting class: P5**  
 LLM-DA LED 16W/1,800lm/3,000K  
 inclination: 5°  
 pole height: 5.00m  
 street width: 5.00m  
 pavement on one side: 1.50m  
 pole spacing: 30.00m

#### car park

LLM-DA LED 26W/3,000lm/3,000K  
 area: 50.00m x 16.00m; 20 parking lots; arranged à 2 rows  
**requirements:  $E_m$  5lx /  $g_1$  0,25**  
 quantity: 4 luminaires  
 inclination: 5°  
 pole height: 5.00m  
 pole spacing: 30.00m

DA+ 028 LED 13W/2,400lm/4,000K  
 inclination: 5°  
 pole height: 6.00m  
 street width: 5.00m  
 pavement on one side: 1.50m  
 pole spacing: 40.00m

DA+ 028 LED 22W/3,800lm/4,000K  
 area: 75.00m x 49.00m; 30 parking lots; arranged in 6 rows  
**requirements:  $E_m$  10lx /  $g_1$  0,25**  
 quantity / inclination: 6 luminaires 1-fach / 5°;  
 12 luminaires 2-fach / 2°  
 pole height: 6.00m  
 pole spacing: 32.50m

#### pavement and cycle paths

**requirements:  $E_m$  3lx /  $E_{min}$  0,6lx**  
 DA+ 268 LED 9W/1,650lm/4,000K  
 inclination: 5°  
 pole height: 5.00m  
 pavement and cycle paths: 2.50m  
 pole spacing: 36.00m

- ±
- CLO
- AC / DC
- 10kV
- CRI 70
- IP 65
- IK 10
- 220–240V  
50–60Hz
- WA  
0.10m<sup>2</sup>
- CE
- Zhaga
- LL stock

on request:

- 3,000K  
4,000K
- other optics

at extra cost:

- 
- 1,800K  
2,200K  
2,700K

dimming

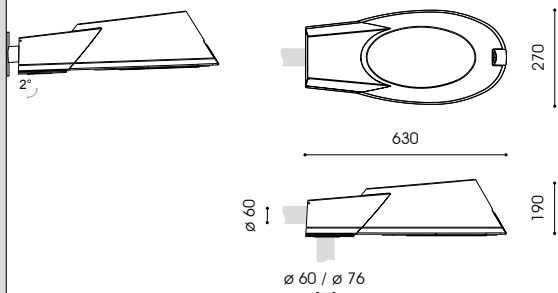


RAL / DB

bracket

cable

Zhaga sockets



WA 714-2

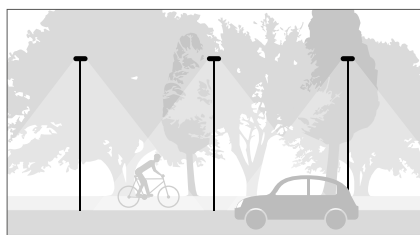
LS DA 1

- recom. pole height: 4.00m – 10.00m  
 light standards: low and medium lighting requirements  
 lamp: incl. 1 or 2 DA LED modules  
 colour temperature: 4,000K neutral white  
 LED gear: electronic driver up to 100,000 hours  
 LED life expectancy: up to 100,000 hours  
 optical system: lens technology  
 light distribution: asymmetrical wide beam (028) or narrow and wide beam (268)  
 luminaire head: made of die-cast aluminium; powder coated  
 colour: DB 703  
 glazing: flat, clear toughened glass glazing  
 wiring: completely wired; via a plug and socket connector within the luminaire head; luminaire head to be hinged upward  
 installation: for top entry  $\varnothing$  76mm or  $\varnothing$  60mm with inclination 2°, 5°, 8°, 10°, 13° or 15° or for side entry  $\varnothing$  60mm; dispatch standard: top entry, 2°  
 accessory: cable, pole, pole accessories, wall-, corner- or pole bracket (s. page 20), fixing material for the wall installation, back light shield for non-glare on the rear side – to be ordered separately



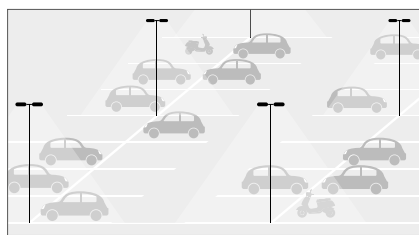
lamp	light distribution	product code	kg
<b>ASL 2050 DA LED</b>			
DA+ 028 LED 13W/2,400lm/4,000K	asymmetrical wide beam	9.138.8118.028	10.8
DA+ 028 LED 22W/3,800lm/4,000K	asymmetrical wide beam	9.138.8128.028	10.8
DA+ 028 LED 45W/7,600lm/4,000K <sup>(2)</sup>	asymmetrical wide beam	9.138.8228.028	11.4
DA+ 268 LED 9W/1,650lm/4,000K	narrow and wide beam	9.138.8112.268	10.6
DA+ 268 LED 12W/2,050lm/4,000K	narrow and wide beam	9.138.8117.268	10.6
<b>accessory: wall bracket - hot-dip galvanised steel, DB 703</b>			
• WA 714-2		9.982.0015.714	1.0
<b>accessory: back light shield (1 piece per lens; max. 4 pieces per module)</b>			
• LS DA 1		2.914.8301.17	0.01

<sup>(2)</sup> 2 LED modules



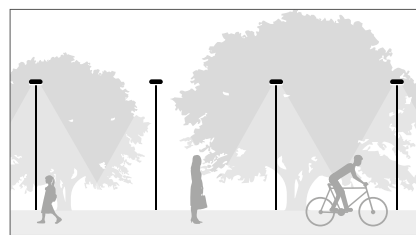
#### residential road

**requirements: E<sub>m</sub> 3lx / E<sub>min</sub> 0,6lx | lighting class: P5**  
 DA+ 028 LED 13W/2,400lm/4,000K  
 inclination: 2°  
 pole height: 5.00m  
 street width: 5.00m  
 pavement on one side: 1.50m  
 pole spacing: 37.00m



#### car park

area: 75.00m x 49.00m;  
 30 parking lots; arranged in 6 rows  
**requirements: E<sub>m</sub> 10lx / g<sub>r</sub> 0,25**  
 DA+ 028 LED 22W/3,800lm/4,000K  
 quantity / inclination: 6 luminaires single / 5°;  
 12 luminaires double / 2°  
 pole height: 6.00m  
 pole spacing: 27.00m



#### pavement and cycle paths

**requirements: E<sub>m</sub> 3lx / E<sub>min</sub> 0,6lx**  
 DA+ 268 LED 9W/1,650lm/4,000K  
 inclination: 2°  
 pole height: 5.00m  
 pavement and cycle paths: 2.50m  
 pole spacing: 40.00m



CLO

AC / DC

10kV

CRI 70

IP 65

IK 10

220–240V  
50–60HzWA  
0.12m<sup>2</sup>

Zhaga

• LL stock

on  
request:

3,000K

other  
opticsat extra  
cost:1,800K  
2,200K  
2,700K

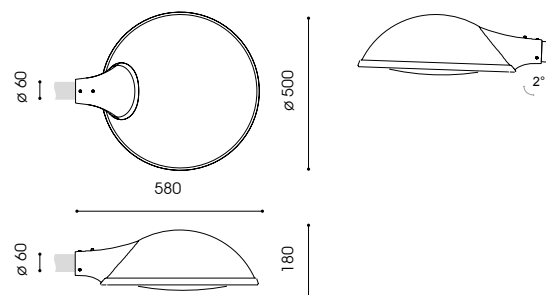
dimming



RAL / DB

bracket

cable



recom. pole height: 4.00m – 7.00m  
 light standards: low and medium lighting requirements  
 lamp: incl. 1 or 2 DA LED modules  
 colour temperature: 3,000K warm white or 4,000K neutral white  
 LED gear: electronic driver up to 100,000 hours  
 LED life expectancy: up to 100,000 hours  
 optical system: lens technology  
 light distribution: asymmetrical wide beam (028) or narrow and wide beam (268)  
 luminaire head: die-cast aluminium and aluminium; powder coated  
 colour: DB 703  
 glazing: slightly curved toughened safety glass, removeable with safety rope  
 wiring: completely wired; incl. cable until access door (please specify pole height when ordering)  
 installation: for side entry ø 60mm  
 accessory: pole, pole accessories, wall -, corner - or pole bracket (s. page 20), fixing material for the wall installation, back light shield for non-glare on the rear side – to be ordered separately

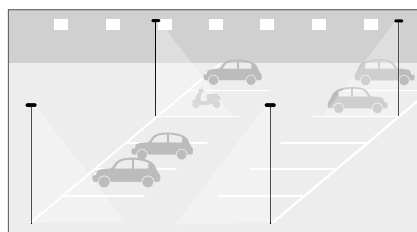
lamp	light distribution	product code	kg
<b>COSMA III DA LED</b>			
DA+ 028 LED 29W/4,400lm/3,000K	asymmetrical wide beam	9.103.8130.028-3	8.5
DA+ 028 LED 28W/4,500lm/4,000K	asymmetrical wide beam	9.103.8130.028	8.5
DA+ 028 LED 47W/7,400lm/3,000K <sup>(2)</sup>	asymmetrical wide beam	9.103.8228.028-3	9.1
DA+ 028 LED 45W/7,600lm/4,000K <sup>(2)</sup>	asymmetrical wide beam	9.103.8228.028	9.1
DA+ 268 LED 12W/2,000lm/3,000K	narrow and wide beam	9.103.8115.268-3	8.5
DA+ 268 LED 11W/2,100lm/4,000K	narrow and wide beam	9.103.8115.268	8.5
<b>accessory: single - / double bracket - hot-dip galvanised steel, DB 703</b>			
MA 1.3 NE - single bracket		0.910.1611.36	3.2
ZMA 1.3 NE - double bracket		0.910.1611.362	3.8
<b>accessory: wall bracket - hot-dip galvanised steel, DB 703</b>			
• WA 714-2		9.982.0015.714	1.0
<b>accessory: back light shield (1 piece per lens; max. 4 pieces per module)</b>			
• LS DA 1		2.914.8301.17	0.01

<sup>(2)</sup> 2 LED modules



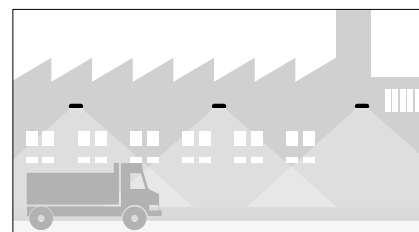
#### residential road

requirements:  $E_m$  3lx /  $E_{min}$  0,6lx | lighting class: P5  
 DA+ 268 LED 12W/2,000lm/3,000K  
 inclination: 0°  
 pole height: 4.50m  
 street width: 5.00m  
 pole spacing: 42.00m



#### car park

area: 75.00m x 49.00m;  
 30 parking lots; arranged in 6 rows  
 requirements:  $E_m$  20lx /  $g$  0,25  
 DA+ 028 LED 47W/7,600lm/4,000K<sup>(2)</sup>  
 quantity: 6 luminaires 1 bracket and 6 luminaires 2 brackets  
 pole height: 7.00m  
 pole spacing: 32.50m



#### wall luminaire for factory road

requirements:  $E_m$  10lx /  $g$  0,25  
 DA+ 028 LED 28W/4,500lm/4,000K  
 inclination: 2°  
 mounting height: 6.00m  
 street width: 8.00m  
 pole spacing: 26.00m

- ⊕
- CLO
- AC / DC
- 10kV
- CRI 70
- IP 65
- IK 09
- 220–240V  
50–60Hz
- WA  
0.08m²
- CE
- Zhaga
- LL stock

on request:

other optics

at extra cost:



1,800K  
2,200K  
2,700K

dimming



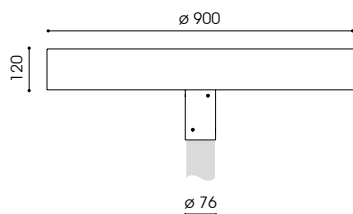
other optics

RAL / DB

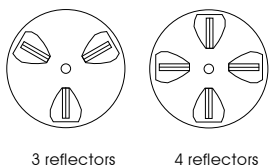
bracket



RONDO I LED



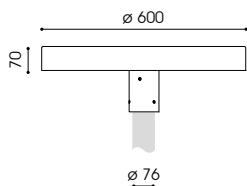
view from below:



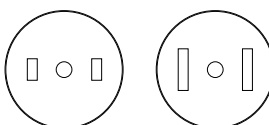
3 reflectors

4 reflectors

RONDO II DA LED



view from below:



2x DA+ 268 LED

2x DA+ 058 LED



RONDO I LED

RONDO II DA LED

- recom. pole height: RONDO I LED: 6.00m – 15.00m  
RONDO II DA LED: 3.00m – 7.00m
- light standards:  
lamp: medium and high lighting requirements  
incl. 6 or 8 PL-CP LED modules  
incl. 2 DA LED modules
- colour temperature: 4,000K neutral white
- LED gear: electronic driver up to 100,000 hours
- LED life expectancy: up to 100,000 hours
- optical system: RONDO I: computer-optimised reflector for Zhaga LED modules for directed light and wide spacings  
RONDO II: lens technology
- light distribution: RONDO I: symmetrical wide beam  
RONDO II: narrow and wide beam (268), symmetrical (058) or asymmetrical wide beam (028)
- luminaire head: stainless steel, heat sink made of aluminium; powder coated
- colour: DB 703
- glazing: PMMA RESIST, clear, high-impact-resistant
- wiring: completely wired; incl. cable until access door (please specify pole height when ordering)
- installation: for top entry  $\varnothing$  76mm
- accessory: pole, pole accessories – to be ordered separately



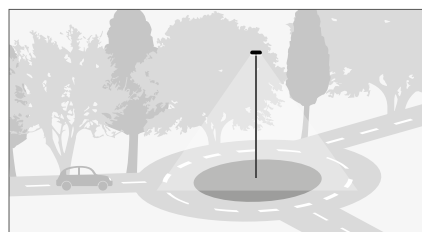
RONDO I



RONDO II

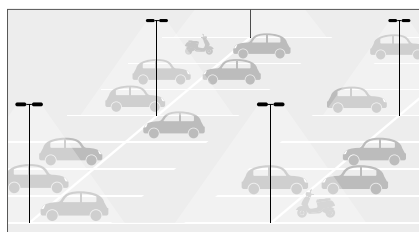
lamp	light distribution	product code	kg
<b>RONDO I LED</b>			
PL-CP LED 102W/15.000lm/4.000K <sup>(3)</sup>	symmetrical wide beam	9.144.9620.05	40.0
PL-CP LED 224W/32.000lm/4.000K <sup>(4)</sup>	symmetrical wide beam	9.144.9845.05	42.0
PL-CP LED 344W/48.000lm/4.000K <sup>(4)</sup>	symmetrical wide beam	9.144.9868.05	42.0
<b>RONDO II DA LED</b>			
DA+ 268 LED 12W/2.300lm/4.000K <sup>(2)</sup>	narrow and wide beam	9.145.8207.268	9.0
DA+ 058 LED 27W/4.800lm/4.000K <sup>(2)</sup>	symmetrical	9.145.8218.058	9.0
DA+ 028 LED 27W/4.800lm/4.000K <sup>(2)</sup>	asymmetrical wide beam	9.145.8218.028	9.0

<sup>(3)</sup> (3) 3 reflectors, each with 2 LED modules / <sup>(4)</sup> 4 reflectors, each with 2 LED modules / <sup>(2)</sup> 2 LED modules



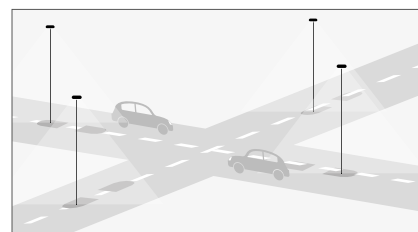
#### roundabout

requirements:  $E_m$  15lx /  $g$ , 0,40 | lighting class: C3  
RONDO I PL-CP LED 102W/15.000lm/4.000K<sup>(3)</sup>  
pole height: 10.00m  
street width: 7.00m



#### car park

area: 75.00m x 49.00m;  
30 parking lots; arranged in 6 rows  
requirements:  $E_m$  10lx /  $g$ , 0,25  
RONDO I PL-CP LED 102W/15.000lm/4.000K<sup>(3)</sup>  
quantity: 6 luminaires  
pole height: 12.00m  
pole spacing: 30.00m



#### crossroad of 4 streets

requirements:  $E_m$  7,5lx /  $g$ , 0,4 | lighting class: C5  
RONDO II DA+ 058 LED 27W/4.800lm/4.000K<sup>(2)</sup>  
pole height: 6.00m  
street width: 8.00m  
pole spacing: 27.00m

RONDO I  
RONDO II DA



CLO

AC / DC

10kV

CRI 70

IP 65

IK 10

220 – 240V  
50 – 60Hz

WA  
RONDO I:  
0.11m<sup>2</sup>

WA  
RONDO II:  
0.09m<sup>2</sup>

CE

Zhaga

on  
request:

3,000K

CRI 80

RONDO II:  
other optics

RAL / DB

at extra  
cost:

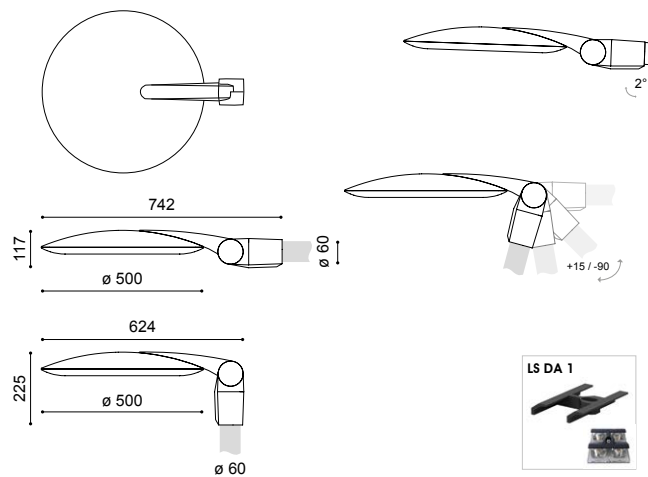


1,800K  
2,200K  
2,700K

dimming



Zhaga  
sockets



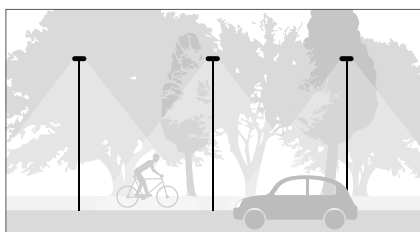
recom. pole height: 3.00m – 6.00m  
 light standards: low and medium lighting requirements  
 lamp: incl. 1 or 2 DA LED module  
 colour temperature: 4,000K neutral white  
 LED gear: electronic driver up to 100,000 hours  
 LED life expectancy: up to 100,000 hours  
 optical system: lens technology  
 light distribution: asymmetrical wide beam (028) or symmetrical (058)  
 luminaire head: made of aluminium and die-cast aluminium; powder coated  
 bracket: with flexible bracket for stepless inclination  
 colour: DB 703  
 glazing: polycarbonate, flat, clear, UV-stabilised  
 wiring: completely wired; incl. cable 5.00m  
 installation: for post top or side entry ø 60mm, inclination: +15° / -90°  
 accessory: pole accessory, wall bracket (s. page 20), back light shield for non-glare on the rear side – to be ordered separately

lamp	light distribution	product code	kg
<b>CARA II/2 DA LED</b>			
DA+ 028 LED 11W/2,100lm/4,000K	asymmetrical wide beam	9.202.8115.028	5.0
DA+ 028 LED 17W/3,000lm/4,000K	asymmetrical wide beam	9.202.8124.028	5.0
DA+ 028 LED 22W/3,800lm/4,000K	asymmetrical wide beam	9.202.8128.028	5.0
DA+ 028 LED 45W/7,600lm/4,000K	asymmetrical wide beam	9.202.8228.028	5.0
DA+ 058 LED 11W/2,100lm/4,000K	symmetrical	9.202.8115.058	5.0
DA+ 058 LED 17W/3,000lm/4,000K	symmetrical	9.202.8124.058	5.0
DA+ 058 LED 22W/3,800lm/4,000K	symmetrical	9.202.8128.058	5.0
<b>accessory: back light shield (1 piece per lens; max. 4 pieces per module)</b>			
• LS DA 1		2.914.8301.17	0.01

- ⊕
- CLO
- AC / DC
- 10 kV
- CRI 70
- IP 66
- IK 10
- 220–240V  
50–60Hz
- WA  
0.06m<sup>2</sup>
- CE
- Zhaga
- LL stock

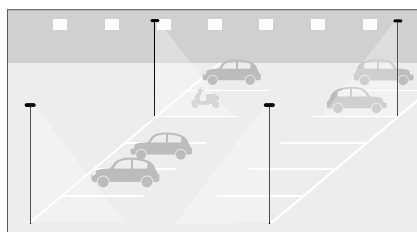
- on request:
- 3,000K
  - CRI 80
  - other optics

- at extra cost:
- - 1,800K  
2,200K  
2,700K
  - dimming
  - CLEVER LIGHT
  - RAL / DB
  - bracket
  - Zhaga sockets



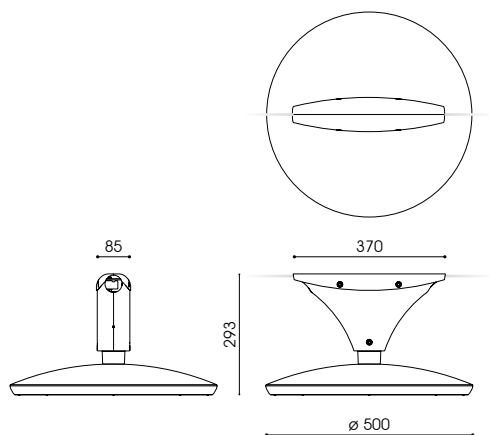
#### residential road

requirements: E<sub>m</sub> 3lx / E<sub>min</sub> 0,6lx | lighting class: P5  
 DA+ 028 LED 11W/2,100lm/4,000K  
 inclination: 5°  
 pole height: 4.50m  
 street width: 5.00m  
 pole spacing: 36.00m



#### car park

area: 50.00m x 16.00m;  
 20 parking lots; arranged à 2 rows  
 requirements: E<sub>m</sub> 5lx / g<sub>r</sub> 0,25  
 DA+ 028 LED 11W/2,100lm/4,000K  
 quantity / inclination: 4 luminaires / 0°  
 pole height: 5.00m  
 pole spacing: 30.00m

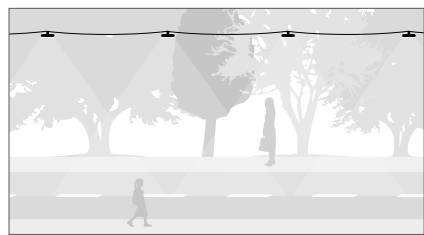


mounting height:	4,00m – 10,00m
light standards:	low, medium and high lighting requirements
lamp:	incl. 1, 2 or 3 DA LED modules
colour temperature:	4,000K neutral white
LED gear:	electronic driver up to 100,000 hours
LED life expectancy:	up to 100,000 hours
optical system:	lens technology
light distribution:	symmetrical <b>(058)</b> or symmetrical deep wide beam <b>(008)</b> for less light on the facades
luminaire head:	die-cast aluminium, stainless steel and hot-dip galvanised steel; powder coated
colour:	DB 703
glazing:	polycarbonate, flat, clear, UV-stabilised
wiring:	completely wired until connection compartment of the suspension device
installation:	incl. suspension device for installation-friendly fixing on steel cables $\varnothing$ 5mm - $\varnothing$ 10mm with the possibility for horizontal and vertical adjustment of the luminaire cable, back light shield for non-glare on the rear side – to be ordered separately
accessory:	



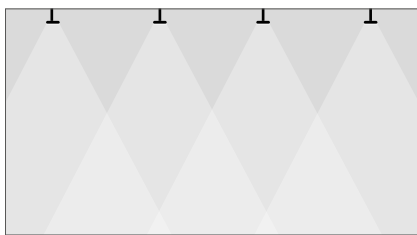
lamp	light distribution	product code	kg
<b>HL CARA I/1 DA LED</b>			
DA+ <b>058</b> LED 22W/3,800lm/4,000K	symmetrical	9.201.8128.01058	10.0
DA+ <b>058</b> LED 34W/6,000lm/4,000K <sup>(2)</sup>	symmetrical	9.201.8224.01058	10.3
DA+ <b>058</b> LED 52W/9,000lm/4,000K <sup>(3)</sup>	symmetrical	9.201.8324.01058	10.6
DA+ <b>008</b> LED 22W/3,800lm/4,000K	symmetrical deep wide beam	9.201.8128.01008	10.0
DA+ <b>008</b> LED 34W/6,000lm/4,000K <sup>(2)</sup>	symmetrical deep wide beam	9.201.8224.01008	10.3
DA+ <b>008</b> LED 52W/9,000lm/4,000K <sup>(3)</sup>	symmetrical deep wide beam	9.201.8324.01008	10.6
<b>accessory: back light shield (1 piece per lens; max. 4 pieces per module)</b>			
• LS DA 1		2.914.8301.17	0.01

<sup>(1)</sup> 1 LED Modul / <sup>(2)</sup> 2 LED modules / <sup>(3)</sup> 3 LED modules



#### local distribution road

**requirements: E<sub>m</sub> 5lx / E<sub>min</sub> 1lx | lighting class: P4**  
 DA+ 008 LED 22W/3,800lm/4,000K  
 mounting height: 6.00m  
 pavement on both sides: 2 x 1.50m  
 street width: 5.00m  
 pole spacing: 36.00m



#### hall

area: 30.00m x 18.00m; 4 luminaires à 7 rows  
**requirements: E<sub>m</sub> 300lx**  
 DA+ 008 LED 53W/9,000lm/4,000K  
 quantity: 28 Stück  
 ceiling height: 7.00m  
 luminaire height: 5.00m



on request:



at extra cost:



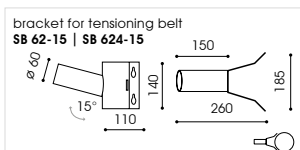
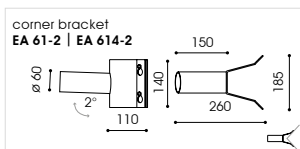
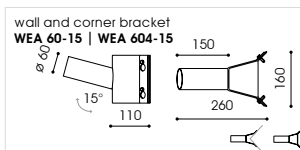
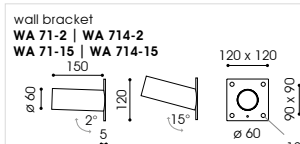
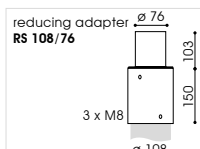
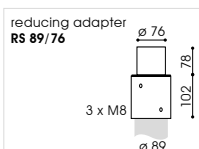
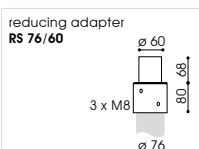
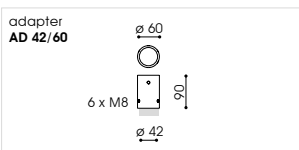
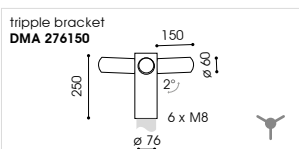
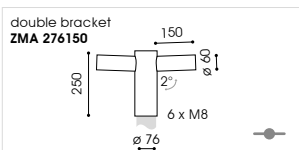
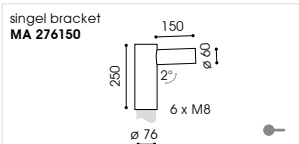




150mm

2° / 15°

● LL stock



## single, double, triple, wall and corner bracket:

length: 150mm  
inclination: 2° or 15°  
material: hot-dip galvanised steel or hot-dip galvanised steel, powder coated  
DB 703  
colour:  
installation:

**single, double, triple bracket:** to be set on top of a pole with top entry  $\varnothing$  76mm; side entry luminaires with  $\varnothing$  60mm; incl. grub screws

**wall bracket:** to be screwed on the wall; for side entry  $\varnothing$  60mm

**wall and corner bracket:** to be screwed on the wall or corner; for side entry  $\varnothing$  60mm

**corner bracket:** to be screwed on the corner; for side entry  $\varnothing$  60mm

**bracket for tensioning belt:** to be fixed on a wooden or concrete pole; for side entry  $\varnothing$  60mm  
fixing material for the wall installation, tensioning belt, hooks – to be ordered separately

accessory:

## reducing adapter / adapter:

material: hot-dip galvanised steel or hot-dip galvanised steel, powder coated  
DB 703  
colour:  
installation:

**reducing adapter RS:** to be set on top of a pole with top entry  $\varnothing$  76mm,  $\varnothing$  89mm or  $\varnothing$  108mm; for top entry  $\varnothing$  60mm or  $\varnothing$  76mm; incl. grub screws

**adapter AD:** to be put into a bracket  $\varnothing$  42mm; for side entry  $\varnothing$  60mm; incl. grub screws  
fixing material for the wall installation, tensioning belt, hooks – to be ordered separately

accessory:

on request:

10°

RAL / DB

at extra cost:

500mm

1000mm

1500mm

andere Winkel

product name	features	finish	product code	kg
<b>single bracket</b>				
• MA 276150	2°, 150mm, $\varnothing$ 76mm	hot-dip galvanised steel	9.925.0007.76	2.4
• MA 276150	2°, 150mm, $\varnothing$ 76mm	powder coated in DB 703	9.925.0007.764	2.5
<b>double bracket</b>				
• ZMA 276150	2°, 150mm, $\varnothing$ 76mm	hot-dip galvanised steel	9.925.0026.76	3.0
• ZMA 276150	2°, 150mm, $\varnothing$ 76mm	powder coated in DB 703	9.925.0026.764	3.1
<b>triple bracket</b>				
• DMA 276150	2°, 150mm, $\varnothing$ 76mm	hot-dip galvanised steel	9.925.0990.76	3.9
• DMA 276150	2°, 150mm, $\varnothing$ 76mm	powder coated in DB 703	9.925.0990.764	4.0
<b>wall bracket</b>				
• WA 71-2	2°, 150mm	hot-dip galvanised steel	9.982.0015.71	2.0
• WA 714-2	2°, 150mm	powder coated in DB 703	9.982.0015.714	2.1
• WA 71-15	15°, 150mm	hot-dip galvanised steel	9.982.0009.71	2.0
• WA 714-15	15°, 150mm	powder coated in DB 703	9.982.0009.714	2.1
<b>corner bracket</b>				
• EA 61-2	2°, 150mm	hot-dip galvanised steel	9.982.0010.61	2.0
• EA 614-2	2°, 150mm	powder coated in DB 703	9.982.0010.614	2.1
<b>wall- and corner bracket</b>				
• WEA 60-15	15°, 150mm	hot-dip galvanised steel	9.982.0009.60	2.0
• WEA 604-15	15°, 150mm	powder coated in DB 703	9.982.0009.604	2.1
<b>bracket for tensioning belt</b>				
• SB 62-15	15°, 150mm	hot-dip galvanised steel	9.982.0009.62	1.9
• SB 624-15	15°, 150mm	powder coated in DB 703	9.982.0009.624	2.0
<b>reducing adapter RS</b>				
• RS 76/60	$\varnothing$ 76mm	hot-dip galvanised steel	9.950.0991.07-56	1.1
• RS 76/60	$\varnothing$ 76mm	powder coated in DB 703	9.950.0991.07	1.2
• RS 89/76	$\varnothing$ 89mm	hot-dip galvanised steel	9.950.0987.56	1.4
• RS 89/76	$\varnothing$ 89mm	powder coated in DB 703	9.950.0987.00	1.5
• RS 108/76	$\varnothing$ 108mm	hot-dip galvanised steel	9.950.0991.13-56	2.4
• RS 108/76	$\varnothing$ 108mm	powder coated in DB 703	9.950.0991.13	2.5
<b>adapter AD</b>				
• AD 42/60	$\varnothing$ 42mm	hot-dip galvanised steel	9.950.0990.56	0.5
• AD 42/60	$\varnothing$ 42mm	powder coated in DB 703	9.950.0990.00	0.6

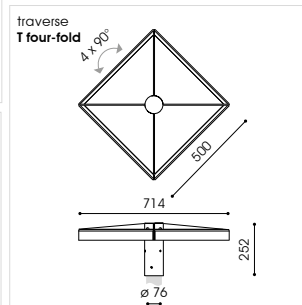
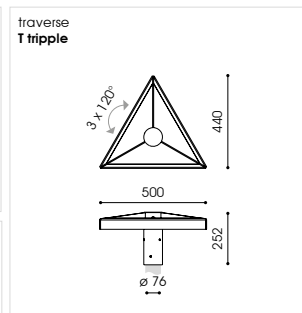
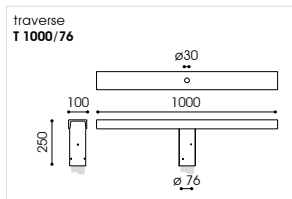
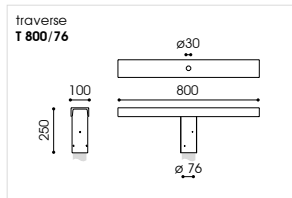
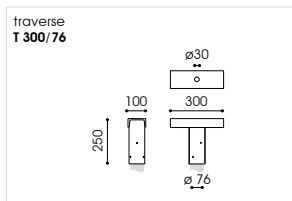


**traverse:** for 1 - 4 flood lights  
**length:** 300mm / 500mm / 800mm / 1000mm  
**material:** hot-dip galvanised steel  
**installation:** to be set on top of a pole with top entry  $\varnothing$  76mm; pre-cautions for fastening the luminaires and cable entries must be provided on site  
**fixing material:** not included in the delivery

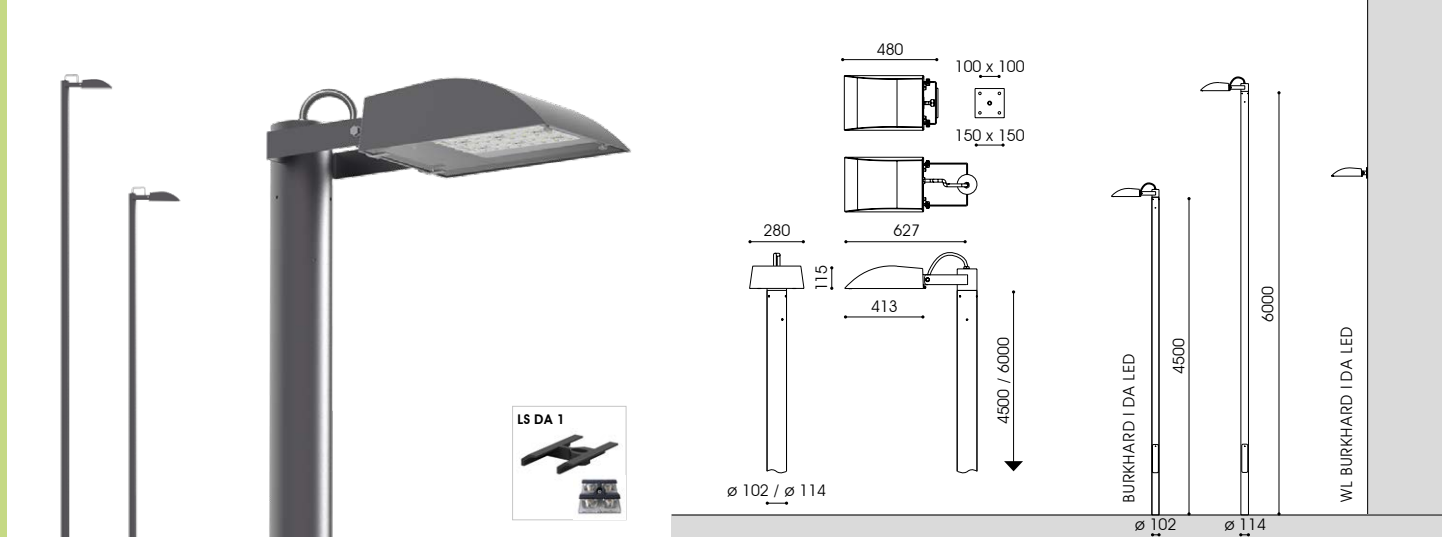
**accessory:**

**accessory rings:** to cover fixing screws for bollards, pillars or columns  
**material:** stainless steel V2A, powder coated or stainless steel V2A (304), brushed and passivated  
**colour:** DB 703  
**installation:** to be pulled over a tube and to be fixed to the flange plate with invisible countersunk screws M6 x 40

**bolt-on roots:** installation aid and fixing pedestal for bollard, pillars or columns  
**material:** made of hot-dip galvanised steel, incl. twisting protection  
**installation:** in-ground, with thread on a hole circle, incl. screws, to screw on bollard, pillars or columns



product name	suitable for	dimension	finish	product code	kg
<b>traverse</b>					
• T 300/76	flood lights	width = 300mm, $\varnothing$ 76mm	hot dip galvanised	9.908.0001.56-76	5.1
• T 800/76	flood lights	width = 800mm, $\varnothing$ 76mm	hot dip galvanised	9.908.0002.56-76	10.4
• T 1000/76	flood lights	width = 1,00m, $\varnothing$ 76mm	hot dip galvanised	9.908.0003.56-76	12.5
• T tripple	flood lights	120°, 500mm, $\varnothing$ 76mm	hot dip galvanised	9.908.0993.56-76	8.0
• T four-fold	flood lights	90°, 500mm, $\varnothing$ 76mm	hot dip galvanised	9.908.0994.56-76	10.6
<b>accessory ring</b>					
• Z 180/2	PETRA P, ME	width = $\varnothing$ 185mm, height= 30mm	powder coated DB 703	9.900.0010.25	0.3
• Z 180/2	PETRA P, ME	width = $\varnothing$ 185mm, height= 30mm	brushed and passivated	9.900.0010.45	0.3
• Z 248/1	PETRA, MIKA L, STELLA P, LILLI P	width = $\varnothing$ 250mm, height= 30mm	powder coated DB 703	9.900.0008.70	0.4
• Z 248/1	PETRA P, E	width = $\varnothing$ 250mm, height= 30mm	brushed and passivated	9.900.0008.45	0.4
• Z 305/2	STELLA P I/13, L	width = $\varnothing$ 307mm, height= 30mm	powder coated DB 703	9.900.0008.73	0.5
• Z 429	PETRA E VI/1, E VIII	width = $\varnothing$ 431mm, height= 30mm	powder coated DB 703	9.900.0008.71	0.8
• Z 429	PETRA E VI/1, E VIII	width = $\varnothing$ 431mm, height= 30mm	brushed and passivated	9.900.0008.46	0.8
<b>bolt-on root</b>					
• G 180/400	PETRA P, PETRA ME, MIA P	$\varnothing$ 180mm, depth: 400mm	hot dip galvanised	9.900.0011.00	3.5
• G 240/500	PETRA P, E, STELLA P, LILLI P	$\varnothing$ 240mm, depth: 500mm	hot dip galvanised	9.900.0012.00	7.1
• G 240/800	PETRA L, MIKA L, TESSA L	$\varnothing$ 240mm, depth: 800mm	hot dip galvanised	9.900.0012.00L	9.6
• G 300/500	STELLA P I/13	$\varnothing$ 300mm, depth: 500mm	hot dip galvanised	9.900.0022.00	7.8
• G 300/1000	STELLA L	$\varnothing$ 300mm, depth: 1000mm	hot dip galvanised	9.900.0022.02	10.0
• G 420D/500	PETRA E VI/1, VIII	$\varnothing$ 420mm, depth: 500mm	hot dip galvanised	9.900.0017.14ABW	17.5
• Q 120/400	LOTTA P, KORA P	120 x 120mm, depth 400mm	hot dip galvanised	9.900.0014.00	2.7
• Q 150/400	ALEX P	150 x 150mm, depth 400mm	hot dip galvanised	9.900.0015.02	3.5
• Q 180/400	LOTTA P I SCHUKO	180 x 180mm, depth 400mm	hot dip galvanised	9.900.0018.02	4.8
• Q 250/500	LOTTA E I/1	250 x 250mm, depth 500mm	hot dip galvanised	9.900.0016.00	7.8
• Q 300/LS250/500	DAHLIA P	300 x 300mm, depth: 500mm	hot dip galvanised	9.900.0016.041	10.6
• Q 300/800	SASKIA I, II	300 x 300mm, depth 800mm	hot dip galvanised	9.900.0018.00-50	14.5
• Q 300/LS240/800	DAHLIA L - 4.50m	300 x 300mm, depth: 800mm	hot dip galvanised	9.900.0016.138-50	18.0
• Q 300/LS240/1000	DAHLIA L - 6.00m	300 x 300mm, depth: 1,00m	hot dip galvanised	9.900.0016.131-50	25.8
• Q 330//800	ALBRECHT /9	330 x 330mm, depth: 800mm	hot dip galvanised	9.900.0012.44	15.9
• R 600/400/1000	PABLO	600 x 400mm, depth 1,00m	hot dip galvanised	9.900.0016.09	28.0



lamp height: 4.50m / 6.00m  
 light standards: low and medium lighting requirements  
 lamp: incl. 1 or 2 DA LED modules  
 colour temperature: 3,000K warm white  
 LED gear: electronic driver up to 100,000 hours  
 LED life expectancy: up to 100,000 hours  
 optical system: lens technology  
 light distribution: asymmetrical wide beam (028)  
 luminaire head: variable adjustable, made of die-cast aluminium with short bracket made of hot-dip galvanised steel; powder coated; post luminaires incl. elegant stainless steel hose for cable protection

pole / bracket: incl. straight tubular pole 4.50m /  $\varnothing$  102mm; 6.00m /  $\varnothing$  114mm made of hot-dip galvanised steel with access door for cable junction box; powder coated; wall luminaire with wall shield made of mit Wandschild hot-dip galvanised steel; powder coated

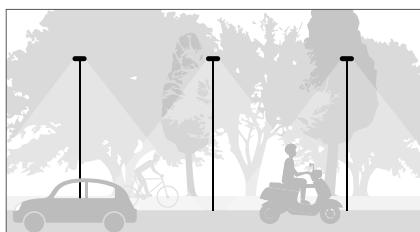
colour: DB 703  
 glazing: clear toughened glass glazing, to be hinged down  
 wiring: luminaire head completely wired; via a clamp within the luminaire head

installation: with root to be set into the ground 4.50m / 800mm; 6.00m / 1.00m; wall luminaires: to be screwed on the wall

accessory: cable, cable junction box, pole accessories, fixing material for the wall installation, back light shield for non-glare on the rear side – to be ordered separately

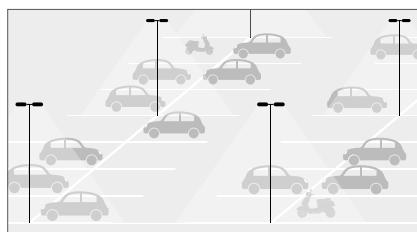
lamp	light distribution	product code	kg
<b>BURKHARD I DA LED – pole 4.50m / <math>\varnothing</math> 102mm</b>			
DA+ 028 LED 23W/3,700lm/3,000K	asymmetrical wide beam	6.217.8128.02028-3	*56.4
<b>BURKHARD I DA LED – pole 6.00m / <math>\varnothing</math> 114mm</b>			
DA+ 028 LED 35W/5,800lm/3,000K <sup>(2)</sup>	asymmetrical wide beam	6.217.8224.04028-3	*77.0
<b>WL BURKHARD I DA LED</b>			
DA+ 028 LED 23W/3,700lm/3,000K	asymmetrical wide beam	6.517.8128.028-3	17.7
<b>accessory: back light shield (1 piece per lens; max. 4 pieces per module)</b>			
• LS DA 1		2.914.8301.17	0.01

<sup>(2)</sup> 2 LED modules | \* incl. pole



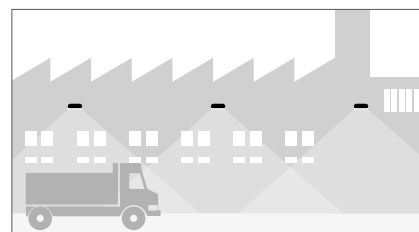
#### local distribution road

requirements:  $E_m$  5lx /  $E_{min}$  1lx | lighting class: S4  
 DA+ 028 LED 24W/3,700lm/3,000K  
 inclination: 0°  
 pole height: 4.50m  
 street width: 6.00m  
 pavement on one side: 1.50m  
 pole spacing: 36.00m



#### car park

area: 75.00m x 49.00m;  
 30 parking lots; arranged in 6 rows  
 requirements:  $E_m$  20lx /  $g$  0,25  
 DA+ 028 LED 36W/5,800lm/3,000K<sup>(2)</sup>  
 quantity / inclination: 6 luminaires single; 0°  
 6 luminaires double; 0°  
 pole height: 6.00m  
 pole spacing: 32.50m



#### wall luminaire for factory road

requirements:  $E_m$  10lx /  $g$  0,25  
 DA+ 028 LED 24W/3,700lm/3,000K  
 inclination: 0°  
 mounting height: 7.00m  
 street width: 8.00m  
 pole spacing: 25.00m

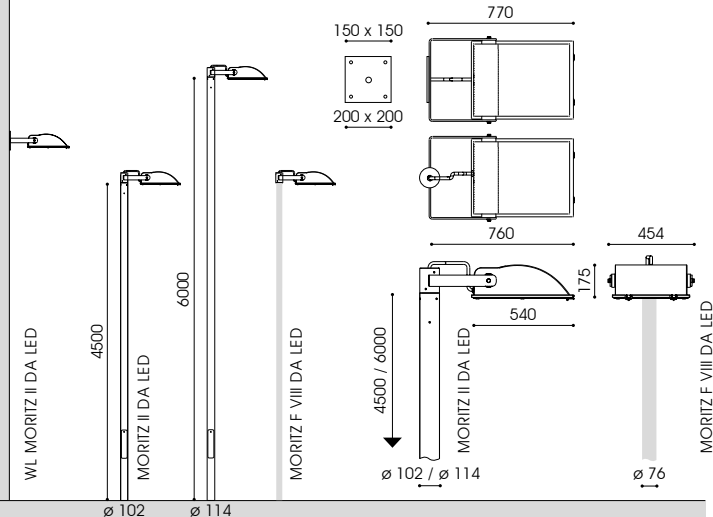
- ☐
- CLO
- AC / DC
- 10kV
- CRI 70
- IP 65
- IK 10
- 220–240V  
50–60Hz
- WA  
0.046m<sup>2</sup>
- pole
- CE
- ZZ Zhaga
- LL stock

on request:

- 4,000K
- RAL / DB
- other optics

at extra cost:

- ☐
- 1,800K  
2,200K  
2,700K
- dimming
- CLEVER LIGHT
- flange plate
- other pole heights
- cable



lamp height:	MORITZ II: 4.50m / 6.00m
recom. pole height:	MORITZ F VIII: 4.50m – 12.00m
light standards:	low, medium and high lighting requirements
lamp:	incl. 1, 2, 3 or 4 DA LED modules
colour temperature:	4,000K neutral white
LED gear:	electronic driver up to 100,000 hours
LED life expectancy:	up to 100,000 hours
optical system:	lens technology
light distribution:	asymmetrical wide beam (028) or asymmetrical deep wide beam (138)
luminaire head:	luminaire head: variable adjustable, made of die-cast aluminium with short bracket made of hot-dip galvanised steel; powder coated; post luminaires incl. elegant stainless steel hose for cable protection
pole / bracket:	incl. straight tubular pole 4.50m / $\varnothing$ 102mm; 6.00m / $\varnothing$ 114mm made of hot-dip galvanised steel with access door for cable junction box; powder coated; wall luminaire with wall shield made of hot-dip galvanised steel; powder coated DB 703
colour:	clear toughened glass glazing, to be hinged down
glazing:	luminaire head completely wired; via a clamp within the luminaire head installation: with root to be set into the ground: 4.50m / 800mm; 6.00m / 1.00m; MORITZ F VIII: for top entry $\varnothing$ 76mm; wall luminaire: to be screwed on the wall
wiring:	
accessory:	cable, cable junction box, pole accessories, fixing material for the wall installation, back light shield for non-glare on the rear side – to be ordered separately



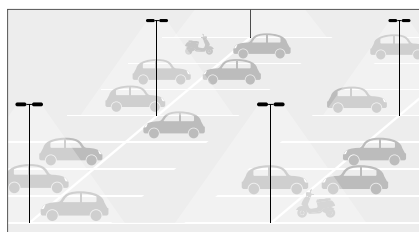
lamp	light distribution	product code	kg
<b>MORITZ II DA LED – pole 4.50m / <math>\varnothing</math> 102mm</b>			
DA+ 028 LED 22W/3,800lm/4,000K	asymmetrical wide beam	9.117.8128.02028	*58.3
<b>MORITZ II DA LED – pole 6.00m / <math>\varnothing</math> 114mm</b>			
DA+ 028 LED 22W/3,800lm/4,000K	asymmetrical wide beam	9.117.8128.04028	*88.0
DA+ 028 LED 45W/7,600lm/4,000K <sup>(2)</sup>	asymmetrical wide beam	9.117.8228.04028	*89.0
<b>WL MORITZ II DA LED</b>			
DA+ 028 LED 22W/3,800lm/4,000K	asymmetrical wide beam	9.542.8128.01028	25.0
<b>MORITZ F VIII DA LED – <math>\varnothing</math> 76mm</b>			
DA+ 138 LED 45W/7,600lm/4,000K <sup>(2)</sup>	asymmetrical deep wide beam	9.213.8228.01138	26.4
DA+ 138 LED 67W/11,400lm/4,000K <sup>(3)</sup>	asymmetrical deep wide beam	9.213.8328.01138	27.0
DA+ 138 LED 90W/15,200lm/4,000K <sup>(4)</sup>	asymmetrical deep wide beam	9.213.8428.01138	28.0
<b>accessory: back light shield (1 piece per lens; max. 4 pieces per module)</b>			
• LS DA 1		2.914.8301.17	0.01

<sup>(2)</sup> 2 LED modules / <sup>(3)</sup> 3 LED modules / <sup>(4)</sup> 4 LED modules | \* incl. pole



#### local distribution road

requirements:  $E_m$  5lx /  $E_{min}$  1lx | lighting class: P4  
DA+ 028 LED 22W/3,800lm/4,000K  
inclination: 0°  
pole height: 4.50m  
street width: 6.00m  
pavement on one side: 1.50m  
pole spacing: 36.00m



#### car park

area: 75.00m x 49.00m;  
30 parking lots; arranged in 6 rows  
requirements:  $E_m$  20lx /  $g_1$  0,25  
DA+ 028 LED 47W/7,600lm/4,000K<sup>(2)</sup>  
quantity / inclination: 6 luminaires single; 0°  
6 luminaires double; 0°  
pole height: 6.00m  
pole spacing: 32.50m



#### wall luminaire for factory road

requirements:  $E_m$  10lx /  $g_1$  0,25  
DA+ 028 LED 22W/3,800lm/4,000K  
inclination: 0°  
mounting height: 7.00m  
street width: 8.00m  
pole spacing: 25.00m



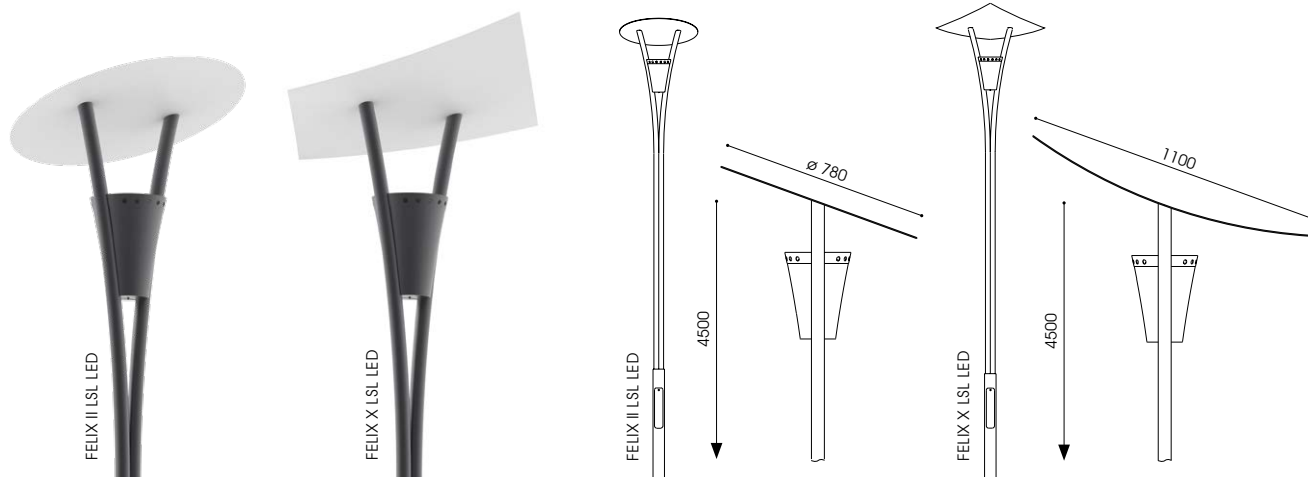
on request:



at extra cost:







CLO

AC / DC

10kV

CRI 80

IP 65

IK 08

220–240V  
50–60Hz

WA

FELIX II

0.66m<sup>2</sup>

WA

FELIX X

0.71m<sup>2</sup>

pole

CE

on  
request:

RAL / DB

at extra  
cost:



dimming

flange  
plate



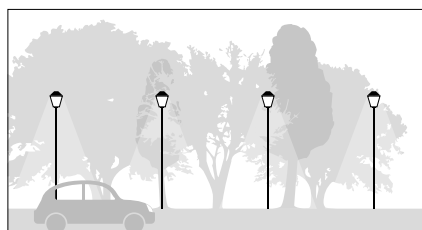
FELIX II LSL



FELIX X LSL

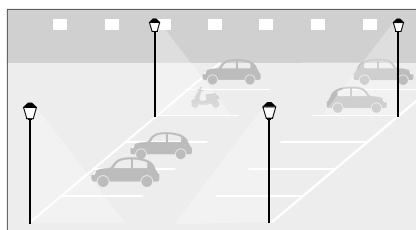
lamp height: 4,50m  
light standards: low and medium lighting requirements  
lamp: incl. 1 LSL LED module  
colour temperature: 3,000K warm white or 4,000K neutral white  
LED gear: electronic driver; 100,000 hours  
LED life expectancy: up to 80,000 hours  
optical system: directed light provided by reflector technology in conjunction with reflection by reflector surface in the roof  
lightlight distribution: indirect, asymmetrical  
luminaire head: tapered, with round perforated rim, fixed between the twin tubes below the sail, made of cast aluminium, incl. round flat or square curved, inclined sail made of solid aluminium with a special white, reflective underside finish  
pole: incl. tubular stepped column 4.50m/ ø 114mm with long twin tubes, with door, pointing to the street, for cable junction box; powder coated  
colour: DB 703  
glazing: flat, clear toughened glass glazing, thermal resistant  
wiring: completely wired; incl. cable until access door  
installation: with roof to be set into the ground; on request also available with flange plate  
accessory: cable junction box, pole accessories - to be ordered separately

lamp	light distribution	product code	kg
<b>FELIX II LSL LED – pole 4.50m / ø 114mm</b>			
LSL LED 33W/5,460lm/4,000K	asymmetrical	9.899.9098.02	45.2
LSL LED 33W/5,100lm/3,000K	asymmetrical	9.899.9098.02-3	45.2
<b>FELIX X LSL LED – pole 4.50m / ø 114mm</b>			
LSL LED 33W/5,460lm/4,000K	asymmetrical	9.899.9098.10	46.7
LSL LED 33W/5,100lm/3,000K	asymmetrical	9.899.9098.10-3	46.7



#### residential road

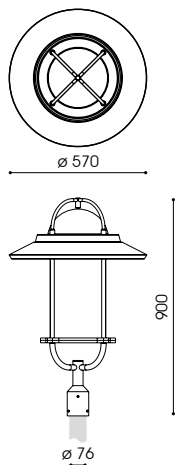
requirements:  $E_{\text{min}}$  3lx /  $E_{\text{max}}$  0,6lx | lighting class: P5  
FELIX II LSL LED 33W/5,100lm/3,000K  
lamp height: 4.50m  
street width: 5.00m  
pole spacing: 23.00m



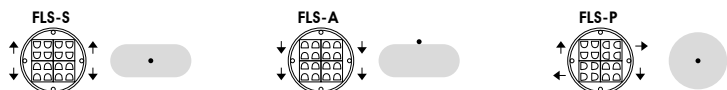
#### car park

area: 50.00m x 16.00m;  
20 parking lots; arranged à 2 rows

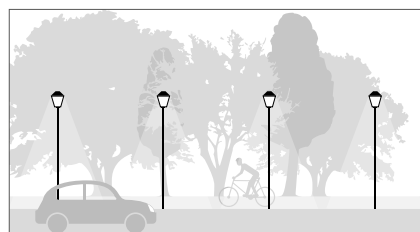
requirements:  $E_{\text{min}}$  5lx /  $g_{\text{min}}$  0,25  
FELIX II LSL LED 33W/5,100lm/3,000K  
quantity: 4 luminaires  
lamp height: 4.50m  
pole spacing: 20.00m



recom. pole height: 3.00m – 6.00m  
 light standards: low bis high lighting requirements  
 lamp: incl. 1 FLS LED module  
 colour temperature: 3,000K warm white  
 LED gear: electronic driver up to 100,000 hours  
 LED life expectancy: up to 100,000 hours  
 optical system: lens technology; dark sky  
 light distribution: FLS-**S** oval wide beam, FLS-**A** asymmetrical wide beam, FLS-**P** symmetrical  
 luminaire head: made of stainless steel and corrosion-resistant cast aluminium; canopy  $\varnothing$  570mm; powder coated DB 703  
 colour: PMMA RESIST, clear, high-impact resistant  
 glazing: completely wired; incl. cable until access door (please specify pole height when ordering)  
 wiring: for top entry  $\varnothing$  76mm  
 installation: pole, pole accessories – to be ordered separately  
 accessory:

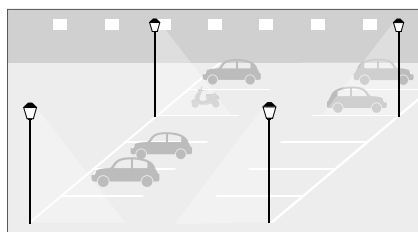


lamp	light distribution	product code	kg
<b>FIETE I FLS LED</b>			
FLS- <b>S</b> LED 22W/2,960lm/3,000K	oval wide beam	9.016.8071.017	22.5
FLS- <b>A</b> LED 22W/2,960lm/3,000K	asymmetrical wide beam	9.016.8073.017	22.5
FLS- <b>P</b> LED 22W/2,960lm/3,000K	symmetrical	9.016.8075.017	22.5
FLS- <b>S</b> LED 32W/3,414lm/3,000K	oval wide beam	9.016.8671.017	22.5
FLS- <b>A</b> LED 32W/3,414lm/3,000K	asymmetrical wide beam	9.016.8673.017	22.5
FLS- <b>P</b> LED 32W/3,414lm/3,000K	symmetrical	9.016.8675.017	22.5



#### local distribution road

requirements:  $E_m$  5lx /  $E_{min}$  1lx | lighting class: P4  
 FLS-A LED 22W/2,960lm/3,000K  
 pole height: 4.50m  
 street width: 6.00m  
 pavement on one side: 1.50m  
 pole spacing: 32.00m



#### car park

area: 50.00m x 16.00m;  
 20 parking lots; arranged à 2 rows  
 requirements:  $E_m$  5lx /  $g$  0,25  
 FLS-A LED 22W/2,960lm/3,000K  
 quantity: 4 luminaires  
 pole height: 5.00m  
 pole spacing: 32.50m



on request:



at extra cost:



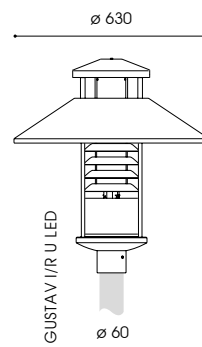
# GUSTAV I/R U GUSTAV I/R PL-LS ZSo



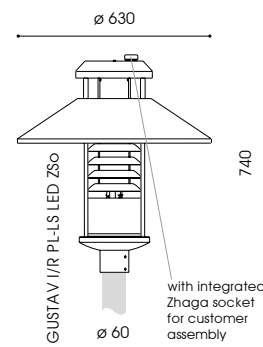
GUSTAV I/R U LED



GUSTAV I/R PL-LS LED ZSo



GUSTAV I/R U LED



GUSTAV I/R PL-LS LED ZSo

with integrated Zhaga socket for customer assembly



GUSTAV I/R U



GUSTAV I/R PL-LS ZSo

recom. pole height: 3.00m – 5.00m  
 light standards: low and medium lighting requirements  
 lamp: incl. 1 glare-free U LED or PL-LS LED module  
 colour temperature: 3,000K warm white  
 LED gear: incl. programmable, Zhaga Book18 compliant and D4i-certified driver with DX or SR interface and data communication, **incl. integrated Zhaga sockets TOP in order to retrofit standardised light management systems, e.g. CLEVER LIGHT, CityTouch or Easy Air**, driver life expectancy: up to 100,000 hours  
 LED life expectancy: up to 100,000 hours  
 optical system: louvre system for vertically mounted module, with extra inner laying satined anti-glare tube  
 light distribution: symmetrical or asymmetrical  
 luminaire head: canopy made of aluminium; with a special white, reflective underside finish; base made of corrosion-resistant cast aluminium; powder coated DB 703  
 colour: PMMA RESIST, clear, high-impact resistant  
 glazing: completely wired; via a plug and a socket connector below the luminaire head  
 wiring: for top entry ø 60mm  
 installation: pole, pole accessories – to be ordered separately  
 accessory:

- ±
- CLO
- 10kV
- CRI 70
- IP 65
- IK 08
- 220–240V  
50–60Hz
- WA  
0.17m²
- CE
- Zhaga

on request:

- 2,700K  
4,000K
- RAL / DB
- ø 76mm

at extra cost:

- dimming
- bracket
- asym. back shield
- cable

lamp	light distribution	product code	kg
<b>GUSTAV I/R U LED</b>			
U LED 11W/2,000lm/3,000K	symmetrical	4.681.9024.154-24	11.9
U LED 15W/3,000lm/3,000K	symmetrical	4.681.9033.154-24	11.9
U LED 11W/2,000lm/3,000K	asymmetrical	4.681.9024.154-44	11.9
U LED 15W/3,000lm/3,000K	asymmetrical	4.681.9033.154-44	11.9
<b>GUSTAV I/R PL-LS LED ZSo - Zhaga socket TOP</b>			
PL-LS LED 16W/3,000lm/3,000K	symmetrical	4.681.8733.154-2-9ZSo	11.4
PL-LS LED 22W/4,000lm/3,000K	symmetrical	4.681.8744.154-2-9ZSo	11.4
PL-LS LED 16W/3,000lm/3,000K	asymmetrical	4.681.8733.154-4-9ZSo	11.4
PL-LS LED 22W/4,000lm/3,000K	asymmetrical	4.681.8744.154-4-9ZSo	11.4
CityTouch conform data transmission to the cloud		4.681.9xxx.154-4-9ZSo 2.919.0100.21	
<b>accessory: CLEVER LIGHT</b>			
CLEVER LIGHT HUB BASIC		2.919.0100.17-B03	0.1
CLEVER LIGHT HUB GPS		2.919.0100.17-GPS	0.1
CLEVER LIGHT HUB GPS-C		2.919.0100.17-GPS-C	0.1

## residential road

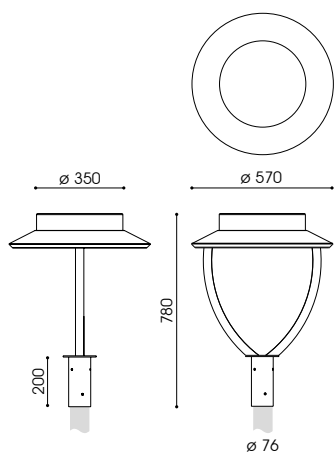
requirements:  $E_{\text{min}}$  3lx /  $E_{\text{min}}$  0,6lx | lighting class: P5  
 PL-LS LED 22W/4,000lm/3,000K, asymmetrical  
 pole height: 4.50m  
 street width: 5.00m  
 pole spacing: 32.00m

## car park

area: 50.00m x 16.00m;  
 20 parking lots; arranged à 2 rows

requirements:  $E_{\text{min}}$  5lx /  $g_{\text{min}}$  0,25  
 PL-LS LED 22W/4,000lm/3,000K, asymmetrical  
 quantity: 6 luminaires  
 pole height: 4.50m  
 pole spacing: 22.50m



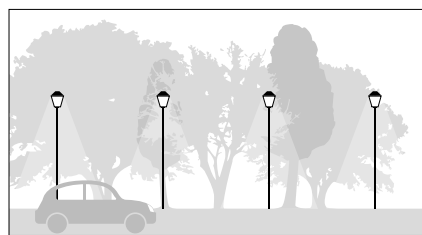


recom. pole height:	3.00m – 6.00m
light standards:	low and medium lighting requirements
lamp:	incl. 1 or 2 DA LED modules
colour temperature:	3,000K warm white
LED gear:	electronic driver up to 100,000 hours
LED life expectancy:	up to 100,000 hours
optical system:	lens technology
light distribution:	asymmetrical wide beam (028) or symmetrical (058)
luminaire head:	cast aluminum, aluminium and stainless steel; powder coated
bracket:	incl. fork bracket, made of stainless steel; powder coated
colour:	DB 703
glazing:	flat, clear toughened glass glazing
wiring:	completely wired; via a clamp within the luminaire head for top entry ø 76mm
installation:	cable, pole, pole accessories, back light shield for non-glare on the rear side – to be ordered separately
accessory:	



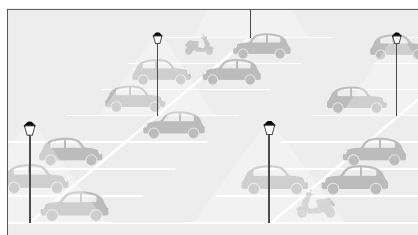
lamp	light distribution	product code	kg
<b>EMMA I DA LED</b>			
DA+ 028 LED 18W/2,900lm/3,000K	asymmetrical wide beam	9.303.8124.028-3	13.9
DA+ 028 LED 35W/5,800lm/3,000K <sup>(2)</sup>	asymmetrical wide beam	9.303.8224.028-3	14.5
DA+ 058 LED 18W/2,900lm/3,000K	symmetrical	9.303.8124.058-3	13.9
DA+ 058 LED 35W/5,800lm/3,000K <sup>(2)</sup>	symmetrical	9.303.8224.058-3	14.5
<b>accessory: back light shield (1 piece per lens; max. 4 pieces per module)</b>			
• LS DA 1		2.914.8301.17	0.01

<sup>(2)</sup> 2 LED modules



#### residential road

**requirements: E<sub>m</sub> 3lx / E<sub>min</sub> 0,6lx | lighting class: P5**  
 DA+ 028 LED 18W/2,900lm/3,000K  
 pole height: 4.50m  
 street width: 5.00m  
 pavement on one side: 1.50m  
 pole spacing: 38.00m



#### car park

area: 75.00m x 49.00m;  
 30 parking lots; arranged in 6 rows

**requirements: E<sub>m</sub> 5lx / g, 0,25**  
 DA+ LED 18W/2,900lm/3,000K  
 quantity: 6 luminaires: with optics 028  
 6 luminaires: with optics 058  
 pole height: 4.50m  
 pole spacing: 27.50m



CLO

AC / DC

10kV

CRI 70

IP 65

IK 10

220–240V  
50–60HzWA  
0.11m<sup>2</sup>

CE

Zhaga

• LL stock

on  
request:

4,000K

RAL / DB

other  
opticsat extra  
cost:1,800K  
2,200K  
2,700K

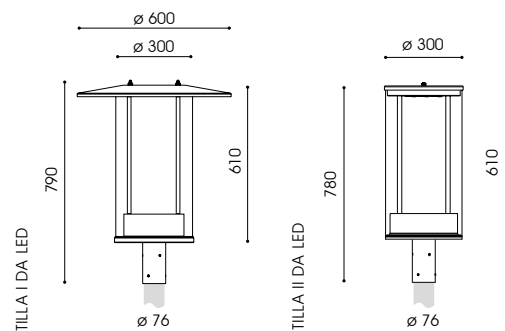
dimming



bracket

cable





TILLA II DA LED

TILLA II DA LED



TILLA I DA



TILLA II DA

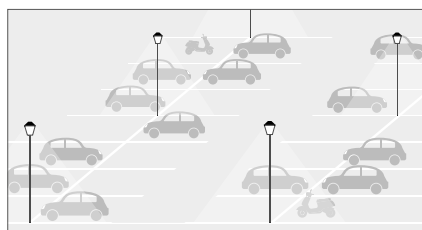
recom. pole height: 4.00m – 7.00m  
 light standards: medium and high lighting requirements  
 lamp: incl. 1, 2 or 3 DA LED modules  
 colour temperature: 3,000K warm white  
 LED gear: electronic driver up to 100,000 hours  
 LED life expectancy: up to 100,000 hours  
 optical system: lens technology  
 light distribution: asymmetrical wide beam (028) or symmetrical (058)  
 luminaire head: incl. canopy or cap made of aluminium with a special white reflective underside finish; base made of aluminium; powder coated  
 colour: DB 703  
 glazing: PMMA RESIST, clear, high-impact resistant  
 wiring: completely wired; via a plug and socket connector below the luminaire head  
 installation: for post top ø 76mm  
 accessory: cable, pole, pole accessories, back light shield for non-glare on the rear side – to be ordered separately

lamp	light distribution	product code	kg
<b>TILLA I DA LED</b>			
DA+ 028 LED 23W/3,700lm/3,000K	asymmetrical wide beam	9.502.8128.07028-3	11.0
DA+ 028 LED 47W/7,400lm/3,000K <sup>(2)</sup>	asymmetrical wide beam	9.502.8228.07028-3	11.0
DA+ 028 LED 53W/8,700lm/3,000K <sup>(3)</sup>	asymmetrical wide beam	9.502.8324.07028-3	11.0
DA+ 058 LED 47W/7,400lm/3,000K <sup>(2)</sup>	symmetrical	9.502.8228.07058-3	11.0
DA+ 058 LED 53W/8,700lm/3,000K <sup>(3)</sup>	symmetrical	9.502.8324.07058-3	11.0
<b>TILLA II DA LED</b>			
DA+ 028 LED 23W/3,700lm/3,000K	asymmetrical wide beam	9.503.8128.07028-3	10.0
DA+ 028 LED 47W/7,400lm/3,000K <sup>(2)</sup>	asymmetrical wide beam	9.503.8228.07028-3	10.0
DA+ 028 LED 53W/8,700lm/3,000K <sup>(3)</sup>	asymmetrical wide beam	9.503.8324.07028-3	10.0
DA+ 058 LED 47W/7,400lm/3,000K <sup>(2)</sup>	symmetrical	9.503.8228.07058-3	10.0
DA+ 058 LED 53W/8,700lm/3,000K <sup>(3)</sup>	symmetrical	9.503.8324.07058-3	10.0

**accessory: back light shield (1 piece per lens; max. 4 pieces per module)**

• LS DA 1	2.914.8301.17	0.01
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<sup>(2)</sup> 2 LED modules / <sup>(3)</sup> 3 LED modules



**car park**

area: 75.00m x 49.00m;  
30 parking lots; arranged in 6 rows

requirements: E<sub>m</sub> 10lx / g<sub>1</sub> 0,25

TILLA I DA+ LED 49W/7,400lm/3,000K<sup>(2)</sup>

quantity: 6 luminaires with optics 028  
6 luminaires with optics 058

pole height: 5.00m  
pole spacing: 30.00m

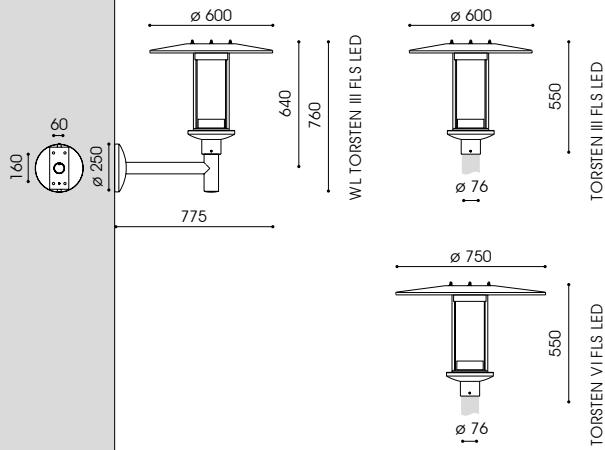
- ☐
- CLO
- AC / DC
- 10kV
- CRI 70
- IP 65
- IK 08
- 220–240V  
50–60Hz
- WA  
TILLA I:  
0.19m<sup>2</sup>
- WA  
TILLA II:  
0.18m<sup>2</sup>
- CE
- Zhaga
- LL stock

on request:

- 4,000K
- RAL / DB
- other optics

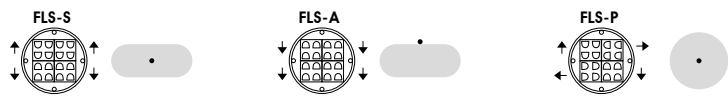
at extra cost:

- ☐
- 1,800K  
2,200K  
2,700K
- dimming
- CLEVER LIGHT
- bracket
- cable

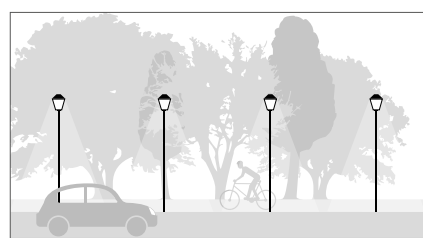


# TORSTEN III FLS TORSTEN VI FLS

- recom. pole height: 3.00m – 6.00m  
 light standards: low and medium lighting requirements  
 lamp: incl. 1 FLS LED module  
 colour temperature: 3,000K warm white  
 LED gear: electronic driver up to 100,000 hours  
 LED life expectancy: up to 100,000 hours  
 optical system: lens technology; dark sky  
 light distribution: FLS-**S** oval wide beam; FLS-**A** asymmetrical wide beam; FLS-**P** symmetrical  
 luminaire head: incl. canopy made of aluminium with a special white, reflective underside finish and aluminium inset for LED module; base made of corrosion-resistant cast aluminium; powder coated; incl. covering ring for driver; powder coated  
 bracket: incl. wall bracket with wall shield made of hot-dip galvanized steel with cap made of aluminium; powder coated  
 colour: DB 703  
 glazing: PMMA RESIST, clear, high-impact-resistant  
 wiring: completely wired; via a plug and socket connector below the luminaire head  
 installation: for post top  $\varnothing$  76mm; wall luminaire: to be screwed on the wall  
 accessory: cable, cable junction box, pole, pole accessories, fixing material for the wall installation – to be ordered separately

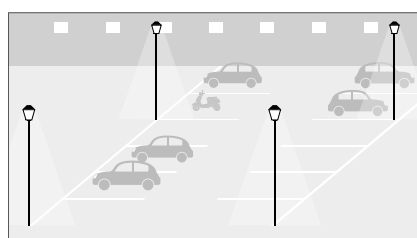


lamp	light distribution	product code	kg
<b>TORSTEN III FLS LED</b>			
FLS- <b>S</b> LED 22W/2,960lm/3,000K	oval wide beam	9.003.9071.17	8.9
FLS- <b>A</b> LED 22W/2,960lm/3,000K	asymmetrical wide beam	9.003.9073.17	8.9
FLS- <b>P</b> LED 22W/2,960lm/3,000K	symmetrical	9.003.9075.17	8.9
<b>WL TORSTEN III FLS LED</b>			
FLS- <b>S</b> LED 11W/1,660lm/3,000K	oval wide beam	9.043.9371.17	12.1
FLS- <b>A</b> LED 11W/1,660lm/3,000K	asymmetrical wide beam	9.043.9373.17	12.1
FLS- <b>P</b> LED 11W/1,660lm/3,000K	symmetrical	9.043.9375.17	12.1
<b>TORSTEN VI FLS LED</b>			
FLS- <b>S</b> LED 22W/2,960lm/3,000K	oval wide beam	9.006.9071.17	10.0
FLS- <b>A</b> LED 22W/2,960lm/3,000K	asymmetrical wide beam	9.006.9073.17	10.0
FLS- <b>P</b> LED 22W/2,960lm/3,000K	symmetrical	9.006.9075.17	10.0



## local distribution road

requirements:  $E_m$  5lx /  $E_{min}$  1lx | lighting class: P4  
 TORSTEN III FLS-A LED 22W/2,960lm/3,000K  
 pole height: 4.50m  
 street width: 6.00m  
 pavement on one side: 1.50m  
 pole spacing: 32.00m



## car park

area: 75.00m x 49.00m;  
 30 parking lots; arranged in 6 rows  
 requirements:  $E_m$  5lx /  $g$  0,25  
 TORSTEN III FLS-P LED 22W/2,960lm/3,000K  
 quantity: 16 luminaires  
 pole height: 5.00m  
 pole spacing: 22.50m



- 
- CLO
- AC / DC
- 10kV
- CRI 70
- IP 65
- IK 08
- 220 – 240V  
50 – 60Hz
- WA  
TORSTEN III:  
0.11m²
- WA  
TORSTEN VI:  
0.12m²
- CE

on request:

2.220lm  
3.414lm

2,700K  
4,000K

RAL / DB

$\varnothing$  60mm

at extra cost:



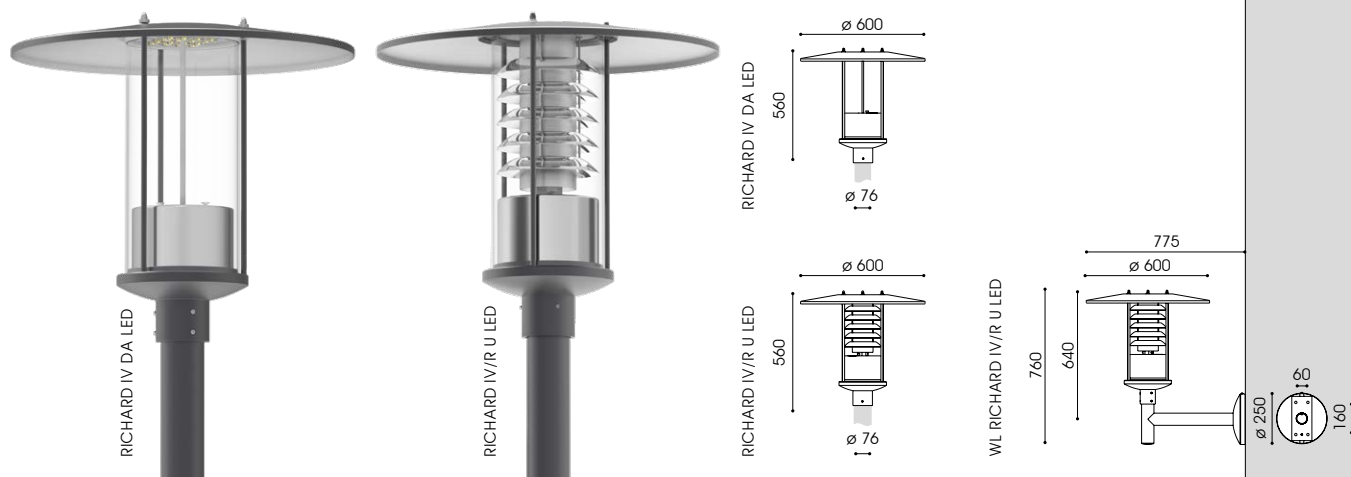
dimming



bracket

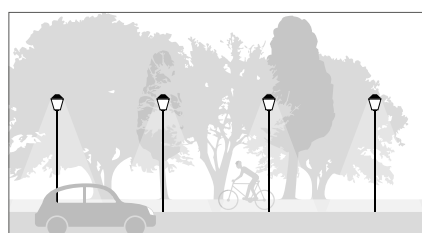
cable

Zhaga sockets



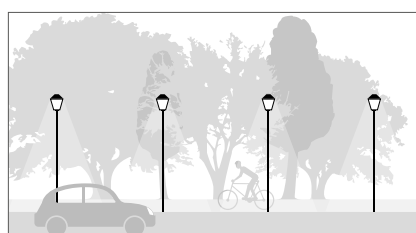
recom. pole height: 3.00m – 6.00m  
light standards: low and medium lighting requirements  
lamp: incl. 2 DA LED modules  
incl. 1 glare-free U LED module  
colour temperature: 3,000K warm white  
LED gear: electronic driver, up to 100,000 hours  
LED life expectancy: up to 100,000 hours  
optical system: U LED: vertically mounted module, louvre system with interior satined anti-glare tube  
DA LED: lens technology  
light distribution: U LED: symmetrical or asymmetrical  
DA LED: asymmetrical wide beam (028), symmetrical (058) or narrow and wide beam (268)  
luminaire head: incl. canopy made of aluminium; with a special white, reflective underside finish; base made of corrosion-resistant cast aluminium; powder coated  
bracket: incl. wall bracket with wall shield made of hot-dip galvanised steel; powder coated  
DB 703  
colour: PMMA RESIST, clear, high-impact resistant  
glazing: completely wired; via a plug and a socket connector below the luminaire head; wall luminaire: via a plug and socket connector within the wall shield  
wiring: for post top  $\varnothing$  76mm; wall luminaire: to be screwed on the wall  
installation: cable, pole, pole accessories, fixing material for the wall installation, back light shield for non-glare on the rear side – to be ordered separately  
accessory:

lamp	light distribution	product code	kg
<b>RICHARD IV DA LED</b>			
DA+ 028 LED 15W/2,500lm/3,000K <sup>(2)</sup>	asymmetrical wide beam	4.892.8210.184028-3	8.9
DA+ 058 LED 15W/2,500lm/3,000K <sup>(2)</sup>	symmetrical	4.892.8210.184058-3	8.9
DA+ 268 LED 15W/2,500lm/3,000K <sup>(2)</sup>	narrow and wide beam	4.892.8210.184268-3	8.9
<b>accessory: back light shield (1 piece per lens; max. 2 pieces per module)</b>			
• LS DA 1		2.914.8301.17	0.01
<b>RICHARD IV/R U LED</b>			
• U LED 15W/3,000lm/3,000K	symmetrical	4.892.9033.184-24	9.7
• U LED 21W/4,000lm/3,000K	symmetrical	4.892.9044.184-241	9.7
• U LED 15W/3,000lm/3,000K	asymmetrical	4.892.9033.184-44	9.7
• U LED 21W/4,000lm/3,000K	asymmetrical	4.892.9044.184-441	9.7
<b>WL RICHARD IV/R U LED</b>			
U LED 15W/3,000lm/3,000K	asymmetrical	4.844.9033.154-44	13.6



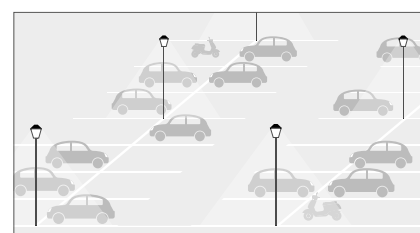
residential road

requirements:  $E_m$  3lx /  $E_{min}$  0,6lx | lighting class: P5  
RICHARD IV DA+ 268 LED 15W/2,500lm/3,000K<sup>(2)</sup>  
pole height: 4.00m  
street width: 5.00m  
pole spacing: 44.00m



residential road

requirements:  $E_m$  3lx /  $E_{min}$  0,6lx | lighting class: P5  
RICHARD IV/R U LED 15W/3,000lm/3,000K, sym.  
pole height: 4.00m  
street width: 5.00m  
pole spacing: 30.00m



car park

area: 75.00m x 49.00m;  
30 parking lots; arranged in 6 rows  
requirements:  $E_m$  5lx / g, 0.25  
RICHARD IV/R U LED 21W/4,000lm/3,000K  
quantity: 8 luminaires symmetrical  
8 luminaires asymmetrical  
pole height: 4.00m  
pole spacing: 20.00m

- ±
- CLO
- DA:  
AC / DC
- U: 2x 20kV  
DA: 10kV
- U: CRI 80  
DA: CRI 70
- IP 65
- IK 08
- 220–240V  
50–60Hz
- WA  
0.12m<sup>2</sup>
- CE
- LL stock

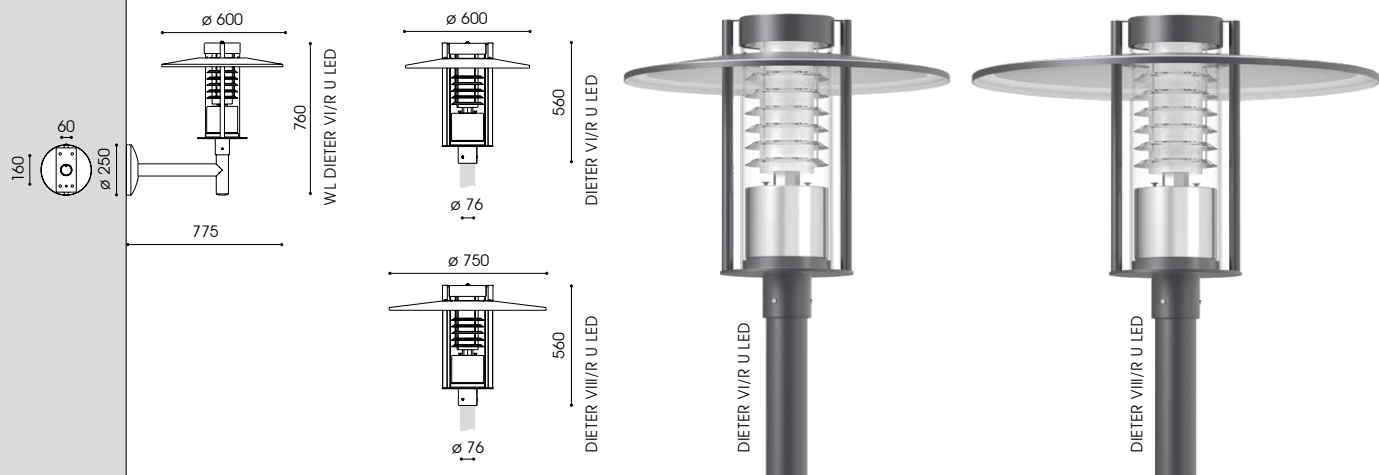
on request:

- U LED:  
2,000lm
- 2,700K  
4,000K
- RAL / DB
- $\varnothing$  60mm
- satined glazing

at extra cost:

- 
- dimming
- CLEVER LIGHT
- bracket
- asym. back shield
- cable





recom. pole height: 3.00m – 6.00m  
 light standards: low and medium lighting requirements  
 lamp: incl. 1 glare-free U LED module  
 colour temperature: 3,000K warm white  
 LED gear: electronic driver up to 100,000 hours  
 LED life expectancy: up to 100,000 hours  
 optical system: vertically mounted module, louvre system with interior satined anti-glare tube  
 light distribution: symmetrical or asymmetrical  
 luminaire head: canopy made of aluminium with special white paint on the underside; base and frame made of stainless steel; powder coated  
 bracket: incl. wall bracket with wall shield made of hot-dip galvanised steel; powder coated  
 colour: DB 703  
 glazing: PMMA RESIST, clear, high-impact resistant  
 wiring: completely wired; incl. cable until access door (please specify pole height when ordering)  
 installation: for post top  $\varnothing$  76mm; wall luminaire: to be screwed on the wall  
 accessory: pole, pole accessories, fixing material for the wall installation – to be ordered separately

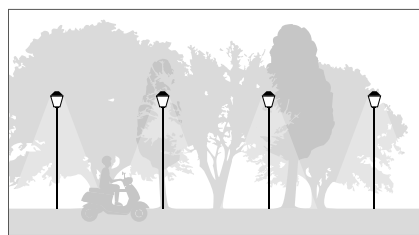


lamp	light distribution	product code	kg
<b>DIETER VI/R U LED</b>			
U LED 11W/2,000lm/3,000K	symmetrical	9.618.9024.174-24	10.7
U LED 15W/3,000lm/3,000K	symmetrical	9.618.9033.174-24	10.7
U LED 11W/2,000lm/3,000K	asymmetrical	9.618.9024.174-44	10.7
U LED 15W/3,000lm/3,000K	asymmetrical	9.618.9033.174-44	10.7
<b>WL DIETER VI/R U LED</b>			
U LED 11W/2,000lm/3,000K	asymmetrical	9.446.9024.154-44	14.8
U LED 15W/3,000lm/3,000K	asymmetrical	9.446.9033.154-44	14.8
<b>DIETER VIII/R U LED</b>			
U LED 11W/2,000lm/3,000K	symmetrical	9.618.9024.178-24	12.0
U LED 15W/3,000lm/3,000K	symmetrical	9.618.9033.178-24	12.0



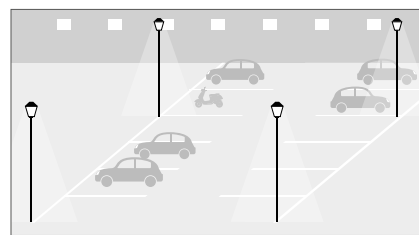
#### residential road

requirements:  $E_m$  3lx /  $E_{min}$  0,6lx | lighting class: P5  
 DIETER VI/R U LED 15W/3,000lm/3,000K, asymmetrical  
 pole height: 4.50m  
 street width: 5.00m  
 pole spacing: 32.00m



#### residential road

requirements:  $E_m$  3lx /  $E_{min}$  0,6lx | lighting class: P5  
 DIETER VIII/R U LED 15W/3,000lm/3,000K, symmetrical  
 pole height: 4.50m  
 street width: 5.00m  
 pole spacing: 31.00m



#### car park

area: 75.00m x 49.00m;  
 30 parking lots; arranged in 6 rows  
 requirements:  $E_m$  5lx /  $g$  0,25  
 DIETER VI/R U LED 15W/3,000lm/3,000K, symmetrical  
 quantity: 16 luminaires  
 pole height: 4.50m  
 pole spacing: 20.00m

DIETER VI/R U  
DIETER VIII/R U



CLO

2 x 20kV

CRI 80

IP 65

IK 08

220 – 240V  
50 – 60Hz

WA  
DIETER VI:  
0,13m<sup>2</sup>

WA  
DIETER VIII:  
0,14m<sup>2</sup>

CE

on  
request:

2,700K  
4,000K

4,000lm

RAL / DB

$\varnothing$  60mm

satined  
glazing

at extra  
cost:



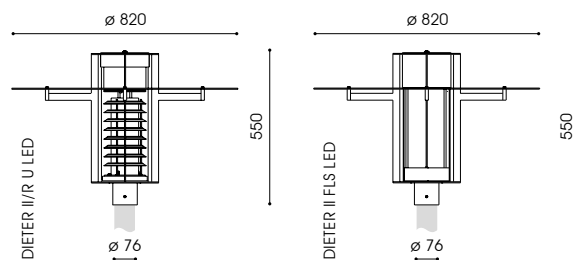
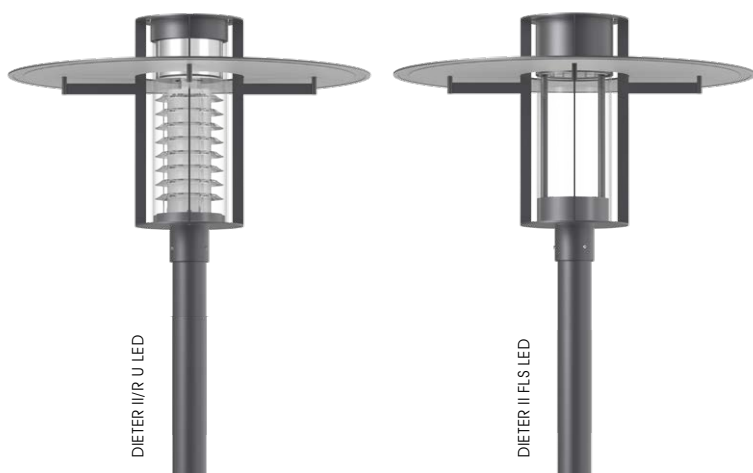
dimming



bracket

asym. back  
shield

cable



- ⊕
- CLO
- U: 2 x 20kV  
FLS: 10kV
- U: CRI 80  
FLS: CRI 70
- IP 65
- IK 08
- 220–240V  
50–60Hz
- WA  
0.14m<sup>2</sup>
- CE

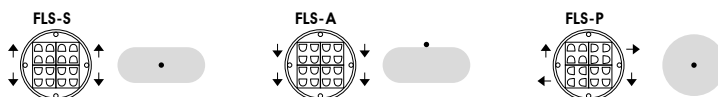


DIETER II/R U



DIETER II FLS

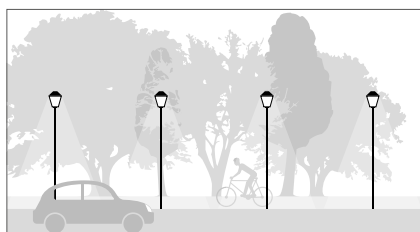
- recom. pole height: 3.00m – 6.00m  
light standards: low and medium lighting requirements  
lamp: incl. 1 glare-free U LED module or incl. 1 FLS LED module  
colour temperature: 3,000K warm white  
LED gear: electronic driver up to 100,000 hours  
LED life expectancy: up to 100,000 hours  
optical system: U LED: vertically mounted module, louvre system with interior satin-finished anti-glare tube  
light distribution: FLS LED: lens technology; dark sky  
luminaire head: U LED: symmetrical or asymmetrical  
FLS-S oval wide beam; FLS-A asymmetrical wide beam; FLS-P symmetrical  
incl. large canopy made of aluminium with special white paint on the underside; base and frame made of stainless steel; powder coated  
colour: DB 703  
glazing: PMMA RESIST, clear, high-impact resistant  
wiring: completely wired; incl. cable until access door (please specify pole height when ordering)  
installation: for post top Ø 76mm  
accessory: pole, pole accessories – to be ordered separately



on request:

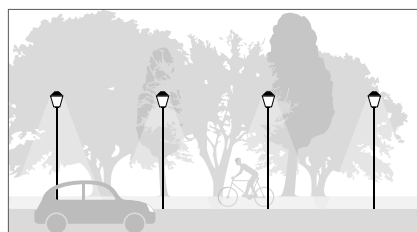
- 2,700K  
4,000K
- U LED:  
4,000lm
- RAL / DB
- Ø 60mm
- at extra cost:
- dimming
- CLEVER LIGHT
- bracket
- asym. back shield

lamp	light distribution	product code	kg
<b>DIETER II/R U LED</b>			
U LED 11W/2,000lm/3,000K	symmetrical	9.894.9024.054-24	19.3
U LED 15W/3,000lm/3,000K	symmetrical	9.894.9033.054-24	19.3
U LED 11W/2,000lm/3,000K	asymmetrical	9.894.9024.054-44	19.3
U LED 15W/3,000lm/3,000K	asymmetrical	9.894.9033.054-44	19.3
<b>DIETER II FLS LED</b>			
FLS-S LED 11W/1,660lm/3,000K	oval wide beam	9.894.9371.054	15.4
FLS-A LED 11W/1,660lm/3,000K	asymmetrical wide beam	9.894.9373.054	15.4
FLS-P LED 11W/1,660lm/3,000K	symmetrical	9.894.9375.054	15.4
FLS-S LED 22W/2,960lm/3,000K	oval wide beam	9.894.9071.054	15.4
FLS-A LED 22W/2,960lm/3,000K	asymmetrical wide beam	9.894.9073.054	15.4
FLS-P LED 22W/2,960lm/3,000K	symmetrical	9.894.9075.054	15.4



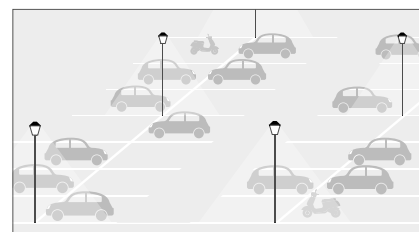
residential road

requirements:  $E_m$  3lx /  $E_{min}$  0,6lx | lighting class: P5  
DIETER II/R U LED 15W/3,000lm/3,000K, asymmetrical  
pole height: 3.00m  
pavement on one side: 1.50m  
street width: 5.00m  
pole spacing: 25.00m



residential road

requirements:  $E_m$  3lx /  $E_{min}$  0,6lx | lighting class: P5  
DIETER II FLS-A LED 11W/1,660lm/3,000K  
pole height: 4.50m  
pavement on one side: 1.50m  
street width: 5.00m  
pole spacing: 32.00m



car park

area: 75.00m x 49.00m;  
30 parking lots; arranged in 6 rows  
requirements:  $E_m$  5lx /  $g$  0,25  
DIETER II FLS LED 11W/1,660lm/3,000K  
quantity: 6 luminaires FLS-P  
6 luminaires FLS-A  
pole height: 5.00m  
pole spacing: 28.00m



recom. pole height: 3.00m – 6.00m  
 light standards: low and medium lighting requirements  
 lamp: incl. 1 glare-free U LED module  
 colour temperature: 3,000K warm white  
 LED gear: electronic driver up to 100,000 hours  
 LED life expectancy: up to 100,000 hours  
 optical system: U LED: mounted module; R U LED: vertically mounted module, louvre system with interior satinised anti-glare tube  
 light distribution: symmetrical or asymmetrical  
 luminaire head: incl. canopy made of aluminium with a special white, reflective underside finish; base made of corrosion-resistant cast aluminium; powder coated  
 bracket: incl. wall bracket with wall shield made of hot-dip galvanised steel and cap made of aluminium, powder coated  
 colour: DB 703  
 glazing: EVA I/U LED: polyethylene, opal, impact-resistant  
 EVA II/R U LED: polycarbonate, clear, impact-resistant, UV-stabilised  
 wiring: completely wired; via a plug and a socket connector below the luminaire head  
 installation: for post top  $\varnothing$  60mm; wall luminaire: to be screwed on the wall  
 accessory: cable, pole, pole accessories, fixing material for the wall installation – to be ordered separately

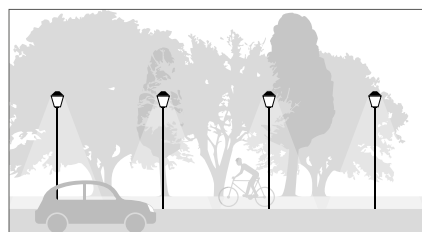


EVA I/U



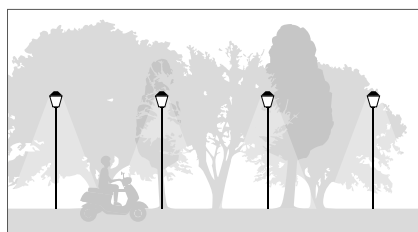
EVA II/R U

lamp	light distribution	product code	kg
<b>EVA I/U LED</b>			
U LED 15W/3,000lm/3,000K	symmetrical	4.898.9033.00-14	8.2
U LED 21W/4,000lm/3,000K	symmetrical	4.898.9044.00-141	8.2
<b>WL EVA I/U LED</b>			
U LED 15W/3,000lm/3,000K	asymmetrical	4.829.9033.00-54	12.3
<b>EVA II/R U LED</b>			
U LED 15W/3,000lm/3,000K	symmetrical	4.898.9033.05-24	8.5
U LED 21W/4,000lm/3,000K	symmetrical	4.898.9044.05-241	8.5
U LED 15W/3,000lm/3,000K	asymmetrical	4.898.9033.05-44	8.5
U LED 21W/4,000lm/3,000K	asymmetrical	4.898.9044.05-441	8.5
<b>WL EVA II/R U LED</b>			
U LED 15W/3,000lm/3,000K	asymmetrical	4.829.9033.05-44	12.6



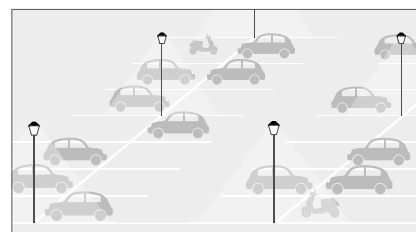
residential road

requirements:  $E_m$  3lx /  $E_{min}$  0,6lx | lighting class: P5  
 EVA I/U LED 21W/4,000lm/3,000K, symmetrical  
 pole height: 4.50m  
 street width: 5.00m  
 pole spacing: 34.00m



residential road

requirements:  $E_m$  3lx /  $E_{min}$  0,6lx | lighting class: P5  
 EVA II/R U LED 21W/4,000lm/3,000K, asymmetrical  
 pole height: 4.50m  
 street width: 5.00m  
 pole spacing: 34.00m



car park

area: 75.00m x 49.00m;  
 30 parking lots; arranged in 6 rows  
 requirements:  $E_m$  5lx /  $g$  0,25  
 EVA II/R U LED 21W/4,000lm/3,000K, symmetrical  
 quantity: 16 luminaires  
 pole height: 4.50m  
 pole spacing: 22.50m



CLO

2 x 20kV

CRI 80

IP 65

IK 08

220 – 240V  
50 – 60Hz

WA  
0.16m<sup>2</sup>


on request:

2,000lm

2,700K  
4,000K

RAL / DB

 $\varnothing$  76mm

at extra cost:



10kV

dimming



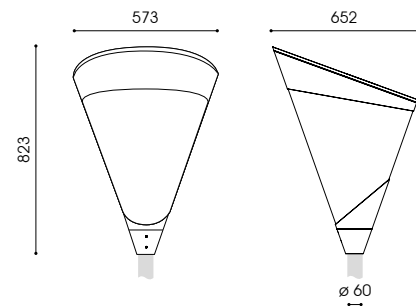
bracket

asym. back shield

satinised glazing

cable





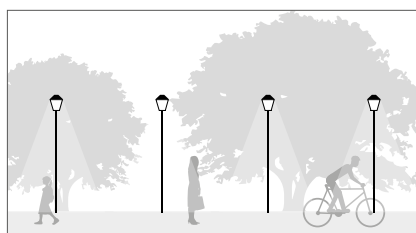
recom. pole height: 3.00m – 5.00m  
 light standards: low and medium lighting requirements  
 lamp: incl. 1 DA LED module  
 colour temperature: 3,000K warm white  
 LED gear: CLEO I DA: electronic driver up to 100,000 hours  
 CLEO I DA ZSo: incl. programmable, Zhaga Book18 compliant and D4i-certified driver with DX or SR interface and data communication, **incl. integrated Zhaga sockets TOP in order to retrofit standardised light management systems, e.g. CLEVER LIGHT, CityTouch or Easy Air**, driver life expectancy: up to 100,000 hours  
 LED life expectancy: up to 100,000 hours  
 optical system: lens technology; incl. anti-glare protection  
 light distribution: oval wide beam (**068**)  
 luminaire head: incl. canopy made of cast aluminium and aluminium; base made of die cast aluminium; powder coated DB 703  
 colour: polycarbonate, impact resistant, UV-stabilised; clear with additional satined diffuser inside for soft light  
 glazing: completely wired; incl. cable 5.00m max. 3 x 1mm<sup>2</sup> for top entry ø 60mm  
 wiring: pole, pole accessories, back light shield for non-glare on the rear side – to be ordered separately  
 installation: accessory:

lamp	light distribution	product code	kg
<b>CLEO I DA LED</b>			
DA <b>068</b> LED 13W/2,000lm/3,000K	oval wide beam	5.904.9115.05068-3	19.0
DA <b>068</b> LED 15W/2,300lm/3,000K	oval wide beam	5.904.9118.05068-3	19.0
DA <b>068</b> LED 20W/2,900lm/3,000K	oval wide beam	5.904.9124.05068-3	19.0
<b>CLEO I DA LED ZSo - Zhaga socket OBEN, CityTouch conform</b>			
DA <b>068</b> LED 13W/2,000lm/3,000K	oval wide beam	5.904.9115.05068-3-9ZSo	19.0
DA <b>068</b> LED 15W/2,300lm/3,000K	oval wide beam	5.904.9118.05068-3-9ZSo	19.0
DA <b>068</b> LED 20W/2,900lm/3,000K	oval wide beam	5.904.9124.05068-3-9ZSo	19.0
data transmission to the cloud		2.919.0100.21	
<b>accessory: CLEVER LIGHT</b>			
CLEVER LIGHT HUB BASIC		2.919.0100.17-B03	0.1
CLEVER LIGHT HUB GPS		2.919.0100.17-GPS	0.1
CLEVER LIGHT HUB GPS-C		2.919.0100.17-GPS-C	0.1
<b>accessory: back light shield (1 piece per lens; max. 4 pieces per module)</b>			
• LS DA 1		2.914.8301.17	0.01



#### residential road

requirements:  $E_{\text{av}}$  3lx /  $E_{\text{min}}$  0,6lx | lighting class: P5  
 DA 068 LED 15W/2,300lm/3,000K  
 pole height: 3.50m  
 street width: 5.00m  
 pole spacing: 28.00m



#### pavement

requirements:  $E_{\text{av}}$  2lx /  $E_{\text{min}}$  0,4lx | lighting class: P6  
 DA 068 LED 13W/2,000lm/3,000K  
 pole height: 3.50m  
 pavement on one side: 2.50m  
 pole spacing: 34.00m

- ±
- CLO
- AC / DC
- 10kV
- CRI 70
- IP 65
- IK 10
- 220–240V  
50–60Hz
- WA  
0.25m
- Zhaga
- CE
- LL stock

on request:

- 4,000K
- RAL / DB

at extra cost:



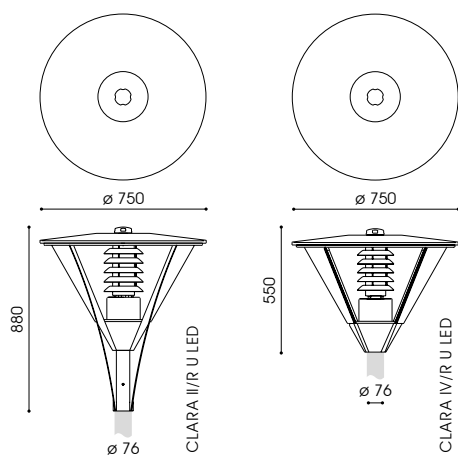
dimming

- 1,800K
- 2,200K
- 2,700K



Zhaga sockets

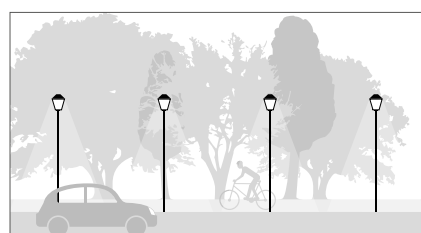
satined glazing



recom. pole height: 4.00m – 6.00m  
 light standards: low and medium lighting requirements  
 lamp: incl. 1 glare-free U LED module  
 colour temperature: 3,000K warm white  
 LED gear: electronic driver up to 100,000 hours  
 LED life expectancy: up to 100,000 hours  
 optical system: vertically mounted module, louvre system with interior satinised anti-glare tube  
 light distribution: symmetrical or asymmetrical  
 luminaire head: incl. canopy made of aluminium with a special white, reflective underside finish; base made of corrosion-resistant cast aluminium; powder coated; CLARA II: with decor blades made of stainless steel; powder coated DB 703  
 colour: PMMA RESIST, clear, high-impact resistant  
 glazing: completely wired; via a plug and a socket connector below the luminaire head  
 wiring: for post top  $\varnothing 76$ mm  
 installation: cable, pole, pole accessories – to be ordered separately  
 accessory:

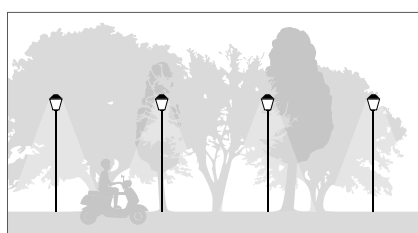


lamp	light distribution	product code	kg
<b>CLARA II/R U LED</b>			
U LED 15W/3,000lm/3,000K	symmetrical	9.762.9033.05-24	24.2
U LED 21W/4,000lm/3,000K	symmetrical	9.762.9044.05-241	24.2
U LED 15W/3,000lm/3,000K	asymmetrical	9.762.9033.05-44	24.2
U LED 21W/4,000lm/3,000K	asymmetrical	9.762.9044.05-441	24.2
<b>CLARA IV/R U LED</b>			
U LED 15W/3,000lm/3,000K	symmetrical	9.764.9033.05-24	17.8
U LED 21W/4,000lm/3,000K	symmetrical	9.764.9044.05-241	17.8
U LED 15W/3,000lm/3,000K	asymmetrical	9.764.9033.05-44	17.8
U LED 21W/4,000lm/3,000K	asymmetrical	9.764.9044.05-441	17.8



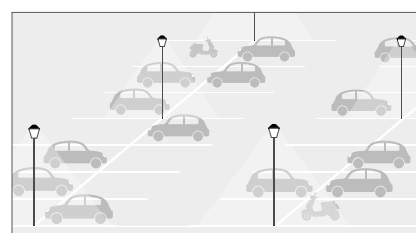
#### residential road

requirements:  $E_m$  3lx /  $E_{min}$  0.6lx | lighting class: P5  
 CLARA II/R U LED 21W/4,000lm/3,000K, asymmetrical  
 pole height: 4.50m  
 street width: 5.00m  
 pole spacing: 34.00m



#### residential road

requirements:  $E_m$  3lx /  $E_{min}$  0.6lx | lighting class: P5  
 CLARA IV/R U LED 21W/4,000lm/3,000K, asymmetrical  
 pole height: 4.50m  
 street width: 5.00m  
 pole spacing: 34.00m



#### car park

area: 75.00m x 49.00m;  
 30 parking lots; arranged in 6 rows  
 requirements:  $E_m$  5lx / g, 0.25  
 CLARA IV/R U LED 21W/4,000lm/3,000K, symmetrical  
 quantity: 16 luminaires  
 pole height: 4.50m  
 pole spacing: 22.50m

CLARA II/R U  
CLARA IV/R U



CLO

2 x 20kV

CRI 80

IP 65

IK 09

220 – 240V  
50 – 60Hz

WA  
CLARA II:  
0.41m<sup>2</sup>

WA  
CLARA IV:  
0.26m<sup>2</sup>



on  
request:

2,000lm

2,700K  
4,000K

RAL / DB

opal  
glazing

at extra  
cost:



dimming



bracket

asym. back  
shield

cable

# MIA VII, VIII LSL MIA P II LSL



- 10kV
- CRI 80
- IP 65
- IK 09
- 220–240V  
50–60Hz
- WA  
MIA VII:  
0.45m<sup>2</sup>
- WA  
MIA VIII:  
0.52m<sup>2</sup>
- WA  
MIA P II:  
0.14m<sup>2</sup>
- CE



total height: 4.21m / 4.11m / 1.00m  
light standards: low and medium lighting requirements  
lamp: incl. 1 LSL LED module  
colour temperature: 3,000K warm white  
LED gear: electronic driver, up to 50.000 hours  
LED life expectancy: up to 80.000 hours  
optical system: directed light provided by reflector technology in conjunction with reflection by an integrated aluminium cone symmetrical, indirect  
light distribution: symmetrical, indirect  
luminaire head: incl. canopy made of aluminium with a special white, reflective underside finish and base made of corrosion-resistant cast aluminium  
bollard: cylindrical tube with door, Ø 89mm/6M8; made of hot-dip galvanised steel; powder coated  
pole: straight tubular column 3.50m / Ø 89mm made of hot-dip galvanised steel, with 1 door  
colour: DB 703  
glazing: PMMA RESIST, clear, high-impact resistant; MIA P II: satinised luminaire head completely wired; MIA VII, MIA VIII: incl. cable until access door 3.50m; MIA P II: incl. cable junction box for max. 2 cables up to 5 x 10mm<sup>2</sup> / 3 cables up to 5 x 6mm<sup>2</sup>  
wiring: MIA VII, VIII: with root (600mm) to be set into the ground; MIA P II: with flange plate to be screwed on a concrete foundation on site or on an additional bolt-on root (G180/400)  
installation: MIA VII, VIII: with root (600mm) to be set into the ground; MIA P II: with flange plate to be screwed on a concrete foundation on site or on an additional bolt-on root (G180/400)  
accessory: cable junction box except bollard, pole accessories, bolt-on root with screws (s. page 21) – to be ordered separately

lamp	light distribution	product code	kg
<b>MIA VII LSL LED – pole 3.50m / Ø 89mm</b>			
LSL LED 33W/5,100lm/3,000K	symmetrical	6.127.9098.721-3AZ	44.0
LSL LED 33W/5,100lm/3,000K with DALI	symmetrical	6.127.9098.721-3-DALI-AZ	44.0
<b>MIA VIII LSL LED – pole 3.50m / Ø 89mm</b>			
LSL LED 33W/5,000lm/3,000K	symmetrical	6.128.9098.721-3AZ	46.0
LSL LED 33W/5,100lm/3,000K with DALI	symmetrical	6.128.9098.721-3-DALI-AZ	46.0
<b>MIA P II LSL LED – 1.00m, tube Ø 89mm</b>			
LSL LED 18W/2,640lm/3,000K	symmetrical	6.127.9198.72108-3	15.0
LSL LED 18W/2,640lm/3,000K with DALI	symmetrical	6.127.9198.72108-3-DALI	15.0

on request:

- 4,000K
- RAL / DB

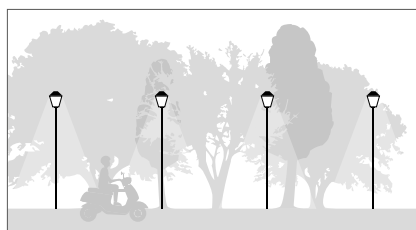
at extra cost:

- DALI
- flange plate



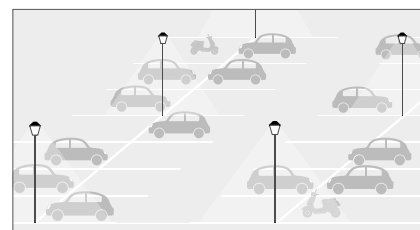
## residential road

requirements:  $E_m$  3lx /  $E_{min}$  0,6lx | lighting class: P5  
MIA VII LSL LSL LED 33W/5,100lm/3,000K  
pole height: 3.50m  
street width: 5.00m  
pole spacing: 28.00m



## residential road

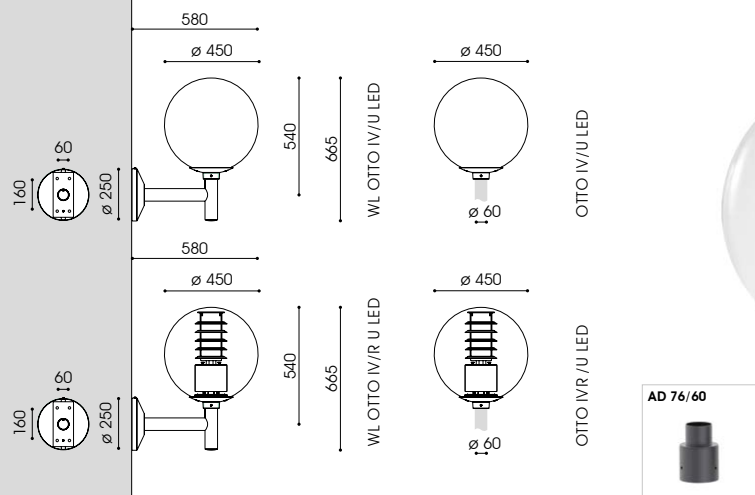
requirements:  $E_m$  3lx /  $E_{min}$  0,6lx | lighting class: P5  
MIA VIII LSL LSL LED 33W/5,100lm/3,000K  
pole height: 3.50m  
street width: 5.00m  
pole spacing: 28.00m



## car park

area: 50.00m x 16.00m;  
20 parking lots; arranged à 2 rows  
requirements:  $E_m$  5lx /  $g$  0,25  
MIA P II LSL LSL LED 33W/5,100lm/3,000K  
quantity: 4 luminaires  
pole height: 3.50m  
pole spacing: 27.50m





AD 76/60



OTTO IV/U LED



OTTO IV/R U LED

recom. pole height: 3.00m – 6.00m  
light standards: low and medium lighting requirements  
lamp: incl. 1 glare-free U LED module  
colour temperature: 3,000K warm white  
LED gear: electronic driver up to 100,000 hours  
LED life expectancy: up to 100,000 hours  
optical system: OTTO IV/U LED: vertically mounted module  
OTTO IV/R U LED: vertically mounted module, louvre system with interior satin anti-glare tube  
light distribution: symmetrical  
luminaire head: base made of die cast aluminium, powder coated  
bracket: incl. wall bracket with wall shield made of hot-dip galvanised steel and cap made of aluminium; powder coated  
colour: DB 703  
glazing: OTTO IV/U LED: polyethylene, opal, high-impact  
OTTO IV/R U LED: PMMA RESIST, clear, high-impact resistant  
wiring: completely wired; incl. cable until access door (please specify pole height when ordering)  
installation: for post top  $\varnothing$  60mm; wall luminaire: to be screwed on the wall  
accessory: pole, pole accessories, adapter for post top  $\varnothing$  76mm, fixing material for the wall installation – to be ordered separately

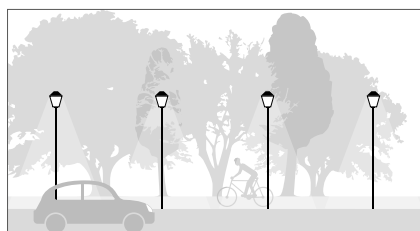


OTTO IV/U



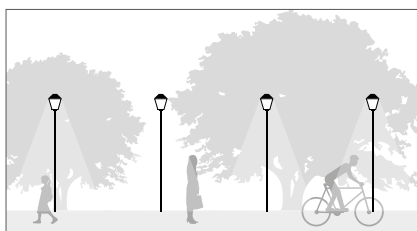
OTTO IV/R U

lamp	light distribution	product code	kg
<b>OTTO IV/U LED - opal glazing</b>			
U LED 11W/2,000lm/3,000K	symmetrical	9.888.9024.074-14	7.3
U LED 15W/3,000lm/3,000K	symmetrical	9.888.9033.074-14	7.3
<b>WL OTTO IV/U LED - opal glazing</b>			
U LED 11W/2,000lm/3,000K	symmetrical	9.813.9024.074-14	14.6
U LED 15W/3,000lm/3,000K	symmetrical	9.813.9033.074-14	14.6
<b>OTTO IV/R U LED - clear glazing</b>			
U LED 11W/2,000lm/3,000K	symmetrical	9.888.9024.074-24	7.8
U LED 15W/3,000lm/3,000K	symmetrical	9.888.9033.074-24	7.8
<b>WL OTTO IV/R U LED - clear glazing</b>			
U LED 11W/2,000lm/3,000K	symmetrical	9.813.9024.074-24	15.1
U LED 15W/3,000lm/3,000K	symmetrical	9.813.9033.074-24	15.1
<b>adapter for post top <math>\varnothing</math> 76mm - hot-dip galvanised steel, DB 703</b>			
AD 76/60		9.950.0997.50	0.8



residential road

requirements:  $E_m$  2lx /  $E_{min}$  0,4lx | lighting class: P6  
OTTO IV/U LED 15W/3,000lm/3,000K, symmetrical  
pole height: 3.00m  
street width: 5.00m  
pole spacing: 24.00m



pavement

requirements:  $E_m$  2lx /  $E_{min}$  0,4lx | lighting class: P6  
OTTO IV/U LED 15W/3,000lm/3,000K, symmetrical  
pole height: 4.00m  
pavement on one side: 2.50m  
pole spacing: 29.00m



CLO

2 x 20kV

CRI 80

IP 65

IK 08

220 – 240V  
50 – 60Hz

WA  
0.16m<sup>2</sup>



on request:

2,700K  
4,000K

RAL / DB

other optics

at extra cost:



dimming

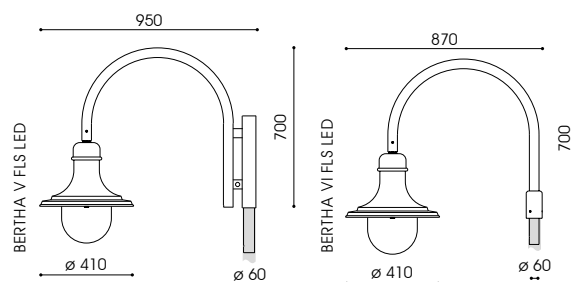


bracket

asym. back shield



# BERTHA V FLS BERTHA VI FLS



CLO

AC / DC

10kV

CRI 70

IP 65

IK 08

220–240V  
50–60Hz

WA  
BERTHA V:  
0.18m<sup>2</sup>

WA  
BERTHA VI:  
0.15m<sup>2</sup>



luminaire head BERTHA FLS



luminaire head BERTHA FLS

recom. pole height: 3.00m – 6.00m  
light standards: low and medium lighting requirements  
lamp: incl. 1 FLS LED module  
colour temperature: 3,000K warm white  
LED gear: electronic driver up to 100,000 hours  
LED life expectancy: up to 100,000 hours  
optical system: lens technology; dark sky  
light distribution: FLS-S oval wide beam; FLS-A asymmetrical wide beam; FLS-P symmetrical

luminaire head: aluminium with connecting piece, with a special white, reflective underside finish; powder coated  
bracket: incl. decorative semicircular bracket; powder coated DB 703  
colour: polycarbonate, pearl structured, impact-resistant, UV-stabilised  
wiring: completely wired; incl. cable 2.00m, via a plug and socket connector below the bracket  
installation: for post top ø 60mm; BERTHA V: for post top ø 60mm for pole with 6 threads M8  
accessory: cable, pole, pole accessories – to be ordered separately



lamp	light distribution	product code	kg
<b>BERTHA V FLS LED</b>			
FLS-S LED 22W/2,960lm/3,000K	oval wide beam	9.679.9071.06	8.8
FLS-A LED 22W/2,960lm/3,000K	asymmetrical wide beam	9.679.9073.06	8.8
FLS-P LED 22W/2,960lm/3,000K	symmetrical	9.679.9075.06	8.8
<b>BERTHA VI FLS LED</b>			
FLS-S LED 22W/2,960lm/3,000K	oval wide beam	9.680.9071.06	8.8
FLS-A LED 22W/2,960lm/3,000K	asymmetrical wide beam	9.680.9073.06	8.8
FLS-P LED 22W/2,960lm/3,000K	symmetrical	9.680.9075.06	8.8

on request:

2,700K  
4,000K

RAL / DB

ø 76mm

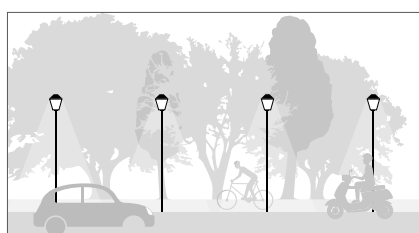
at extra cost:



dimming

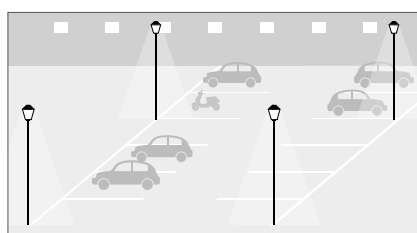


cable



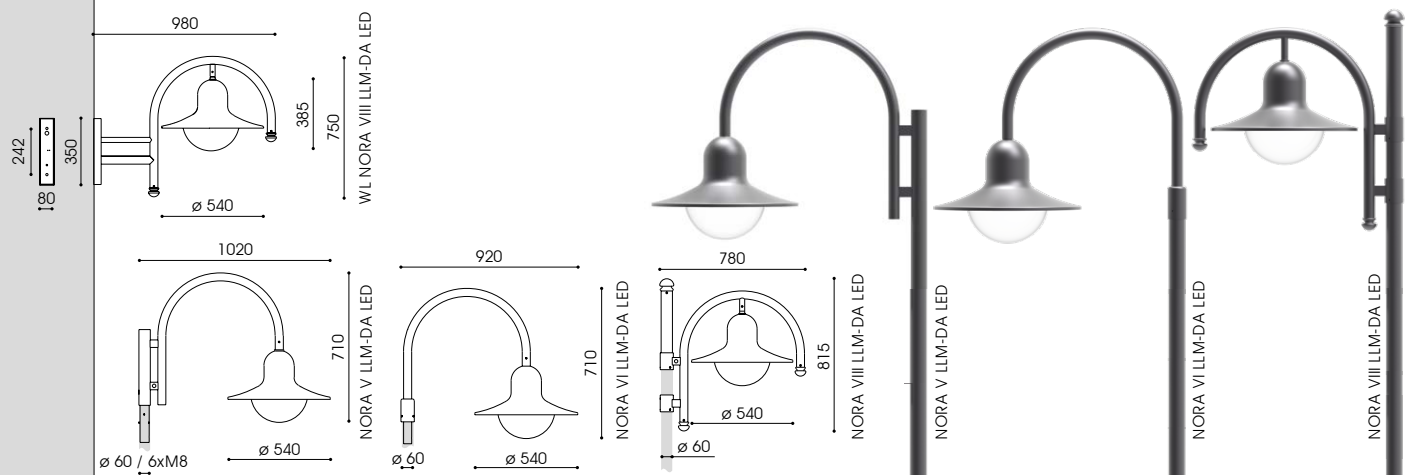
## local distribution road

requirements:  $E_m$  5lx /  $E_{min}$  1lx | lighting class: P4  
BERTHA V FLS-A LED 22W/2,960lm/3,000K  
pole height: 4.50m  
street width: 6.00m  
pole spacing: 36.00m



## car park

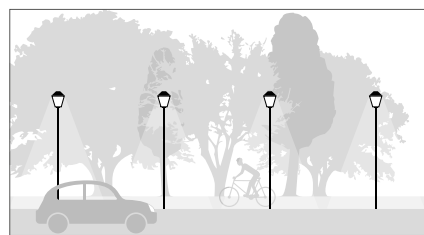
area: 50.00m x 16.00m;  
20 parking lots; arranged à 2 rows  
requirements:  $E_m$  5lx /  $g$  0.25  
BERTHA VI FLS-A LED 22W/2,960lm/3,000K  
quantity: 4 luminaires  
pole height: 5.00m  
pole spacing: 35.00m



recom. pole height:	3.00m – 6.00m
light standards:	low and medium lighting requirements
lamp:	incl. 1 glare-free LLM-DA LED module
colour temperature:	3,000K warm white
LED gear:	electronic driver up to 100,000 hours
LED life expectancy:	up to 100,000 hours
optical system:	mirror plate for horizontally mounted LLM-DA LED modules
light distribution:	wide beam - street optics
luminaire head:	made of aluminium with a special white, reflective underside finish; powder coated
bracket:	incl. decorative semicircular bracket, made of stainless steel, powder coated
colour:	DB 703
glazing:	polycarbonate, clear, impact resistant, UV-stabilised
wiring:	completely wired; incl. cable, 2.00m; via a plug and socket connector below the bracket
installation:	for post top $\varnothing$ 60mm; NORA V: for pole with 6 threads M8; NORA VIII: tubular column only; wall luminaire: to be screwed on the wall
accessory:	cable, pole, pole accessories, fixing material for the wall installation – to be ordered separately

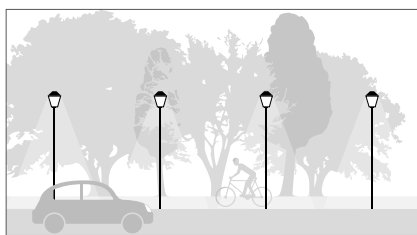


lamp	light distribution	product code	kg
<b>NORA V LLM-DA LED</b>			
LLM-DA LED 16W/1,800lm/3,000K	wide beam	9.775.9008.05-2	10.5
LLM-DA LED 26W/3,000lm/3,000K	wide beam	9.775.9042.05-2	10.5
<b>NORA VI LLM-DA LED</b>			
LLM-DA LED 16W/1,800lm/3,000K	wide beam	9.776.9008.05-2	10.2
LLM-DA LED 26W/3,000lm/3,000K	wide beam	9.776.9042.05-2	10.2
<b>NORA VIII LLM-DA LED</b>			
LLM-DA LED 16W/1,800lm/3,000K	wide beam	9.778.9008.05-2	12.5
LLM-DA LED 26W/3,000lm/3,000K	wide beam	9.778.9042.05-2	12.5
<b>WL NORA VIII LLM-DA LED</b>			
LLM-DA LED 16W/1,800lm/3,000K	wide beam	9.748.9008.05-2	13.2
LLM-DA LED 26W/3,000lm/3,000K	wide beam	9.748.9042.05-2	13.2



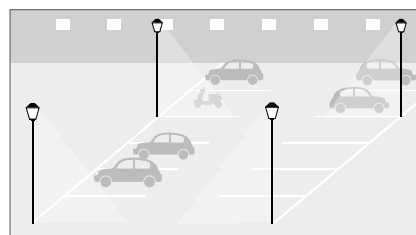
#### residential road

requirements:  $E_m$  3lx /  $E_{min}$  0.6lx | lighting class: P5  
 NORA V LLM-DA LED 16W/1,800lm/3,000K  
 pole height: 4.00m  
 street width: 5.00m  
 pole spacing: 33.00m



#### residential road

requirements:  $E_m$  3lx /  $E_{min}$  0.6lx | lighting class: P5  
 NORA V LLM-DA LED 26W/3,000lm/3,000K  
 pole height: 4.50m  
 street width: 5.00m  
 pole spacing: 42.00m



#### car park

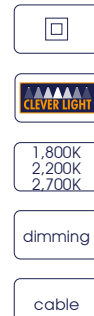
area: 50.00m x 16.00m;  
 20 parking lots; arranged à 2 rows  
 requirements:  $E_m$  5lx /  $g$  0.25  
 NORA VIII LLM-DA LED 26W/3,000lm/3,000K  
 quantity: 4 luminaires  
 pole height: 4.00m  
 pole spacing: 35.00m

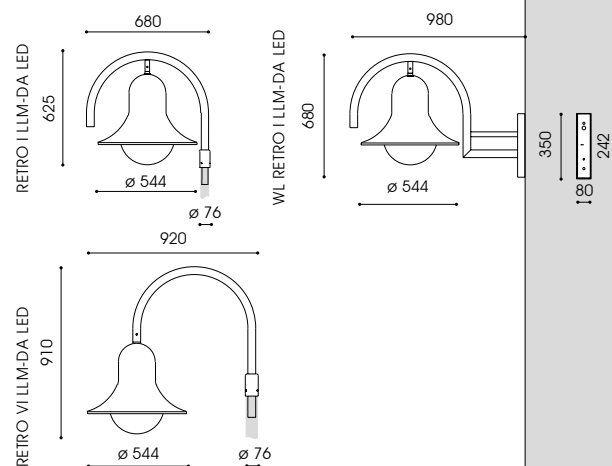


on request:



at extra cost:





- ⊕
- CLO
- AC / DC
- 10kV
- CRI 70
- IP 65
- IK 08
- 220–240V  
50–60Hz
- WA  
0.20m<sup>2</sup>
- CE



recom. pole height: 3,50m – 6,00m  
 light standards: low and medium lighting requirements  
 lamp: incl. 1 glare-free LLM-DA LED module  
 colour temperature: 3,000K warm white  
 LED gear: electronic driver up to 100,000 hours  
 LED life expectancy: up to 100,000 hours  
 optical system: reflector system for horizontally mounted LLM-DA LED modules  
 light distribution: wide beam - street optics  
 luminaire head: made of aluminium with a special white, reflective underside finish; powder coated  
 bracket: incl. decorative semicircular bracket; wall luminaire: incl. wall bracket with wall shield; made of stainless steel; powder coated  
 colour: DB 703  
 glazing: polycarbonate, clear, impact resistant, UV-stabilised  
 wiring: completely wired, incl. cable, 2.00m; via a plug and socket connector below the bracket, 2.00m, via a plug and socket connector within the wall shield  
 installation: for post top  $\varnothing$  76mm; wall luminaire: to be screwed on the wall  
 accessory: cable, pole, pole accessories, fixing material for the wall installation – to be ordered separately

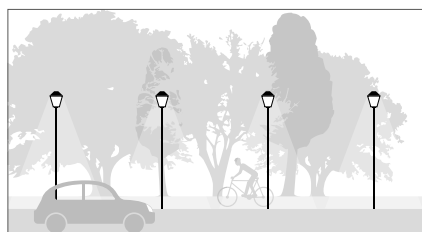
on request:

- 4,000K
- RAL / DB
- $\varnothing$  60mm
- pearl structured glazing

at extra cost:

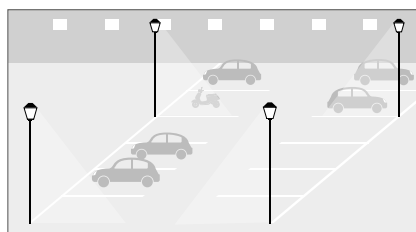
- 1,800K  
2,200K  
2,700K
- dimming
- CLEVER LIGHT
- cable

lamp	light distribution	product code	kg
<b>RETRO I LLM-DA LED</b>			
LLM-DA LED 16W/1,800lm/3,000K	wide beam	4.771.9008.07-2	11.2
LLM-DA LED 26W/3,000lm/3,000K	wide beam	4.771.9042.07-2	11.2
<b>WL RETRO I LLM-DA LED</b>			
LLM-DA LED 16W/1,800lm/3,000K	wide beam	4.741.9008.05-2	11.9
LLM-DA LED 26W/3,000lm/3,000K	wide beam	4.741.9042.05-2	11.9
<b>RETRO VI LLM-DA LED</b>			
LLM-DA LED 16W/1,800lm/3,000K	wide beam	4.776.9008.07-2	13.5
LLM-DA LED 26W/3,000lm/3,000K	wide beam	4.776.9042.07-2	13.5



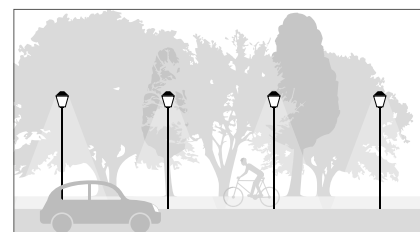
#### residential road

requirements:  $E_m$  3lx /  $E_{min}$  0,6lx | lighting class: P5  
 RETRO I LLM-DA LED 16W/1,800lm/3,000K  
 pole height: 4.00m  
 street width: 5.00m  
 pole spacing: 31.00m



#### car park

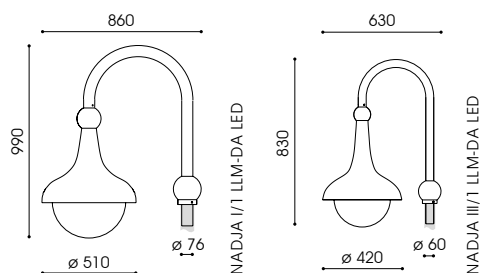
area: 50.00m x 16.00m;  
 20 parking lots; arranged à 2 rows  
 requirements:  $E_m$  5lx /  $g$  0,25  
 RETRO I LLM-DA LED 26W/3,000lm/3,000K  
 quantity: 4 luminaires  
 pole height: 4.50m  
 pole spacing: 30.00m



#### residential road

requirements:  $E_m$  3lx /  $E_{min}$  0,6lx | lighting class: P5  
 RETRO VI LLM-DA LED 26W/3,000lm/3,000K  
 pole height: 6.00m  
 street width: 5.00m  
 pole spacing: 43.00m

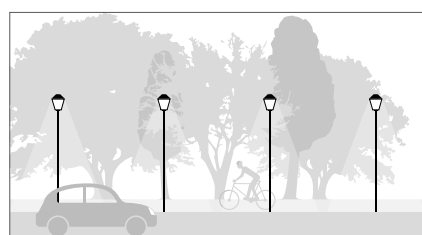




recom. pole height:	NADJA I: 4.00m – 7.00m NADJA III: 3.00m – 5.00m
light standards:	low and medium lighting requirements
lamp:	incl. 1 glare-free LLM-DA LED module
colour temperature:	3,000K warm white
LED gear:	electronic driver up to 100,000 hours
LED life expectancy:	up to 100,000 hours
optical system:	mirror reflector (NADJA I/1) or mirror plate (NADJA III/1) for horizontally mounted LLM-DA LED modules
light distribution:	wide beam - street optics
luminaire head:	made of aluminium with a special white, reflective underside finish; powder coated
bracket:	incl. decorative semicircular bracket; wall luminaire: incl. wall bracket with wall shield; made of stainless steel; powder coated
colour:	DB 703
glazing:	polycarbonate, clear, impact resistant, UV-stabilised
wiring:	completely wired; via a plug and socket connector outside the luminaire head
installation:	NADJA I/1: for post top $\varnothing$ 76mm, NADJA III/1: for post top $\varnothing$ 60mm
accessory:	cable, pole, pole accessories – to be ordered separately

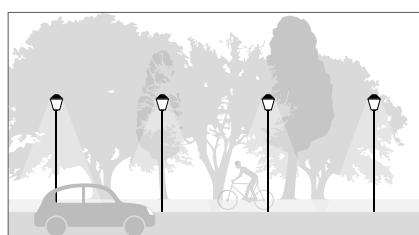


lamp	light distribution	product code	kg
<b>NADJA I/1 LLM-DA LED</b>			
LLM-DA LED 16W/1,800lm/3,000K	wide beam	9.870.9008.059-2	16.7
LLM-DA LED 26W/3,000lm/3,000K	wide beam	9.870.9042.059-2	16.7
<b>NADJA III/1 LLM-DA LED</b>			
LLM-DA LED 16W/1,800lm/3,000K	wide beam	9.876.9008.059-2	10.4
LLM-DA LED 26W/3,000lm/3,000K	wide beam	9.876.9042.059-2	10.4



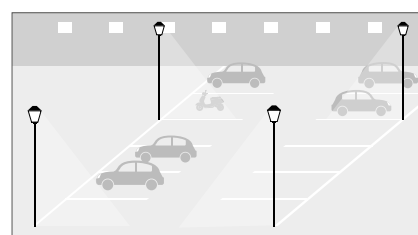
#### residential road

requirements:  $E_m$  3lx /  $E_{min}$  0,6lx | lighting class: P5  
NADJA I/1 LLM-DA LED 26W/3,000lm/3,000K  
pole height: 4.50m  
street width: 5.00m  
pole spacing: 42.00m



#### residential road

requirements:  $E_m$  3lx /  $E_{min}$  0,6lx | lighting class: P5  
NADJA III/1 LLM-DA LED 16W/1,800lm/3,000K  
pole height: 4.00m  
street width: 5.00m  
pole spacing: 33.00m



#### car park

area: 50.00m x 16.00m;  
20 parking lots; arranged à 2 rows

requirements:  $E_m$  5lx /  $g$  0,25  
NADJA I/1 LLM-DA LED 26W/3,000lm/3,000K  
quantity: 4 luminaires  
pole height: 4.00m  
pole spacing: 35.00m

±
CLO
AC / DC
10kV
CRI 70
IP 65
IK 08
220 – 240V 50 – 60Hz
WA 0.12m <sup>2</sup>
CE

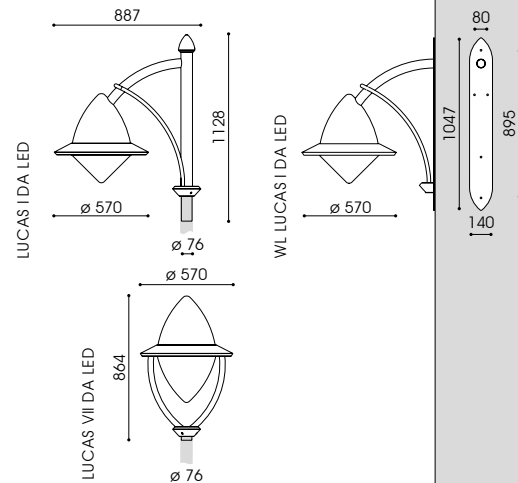
on request:

4,000K
RAL / DB
NADJA III: $\varnothing$ 76mm
pearl structured glazing

at extra cost:

□
1,800K 2,200K 2,700K
dimming
CLEVER LIGHT
bracket
cable

# LUCAS I DA LUCAS VII DA



- ±
- CLO
- AC / DC
- 10kV
- CRI 70
- IP 65
- IK 08
- 220–240V  
50–60Hz
- WA  
I: 0.25m<sup>2</sup>  
VII: 0.21m<sup>2</sup>
- Zhaga
- CE
- LL stock

on request:

4,000K

other optics

RAL / DB

pearl structured glazing

at extra cost:

□

1,800K  
2,200K  
2,700K

dimming

CLEVER LIGHT!

Zhaga sockets

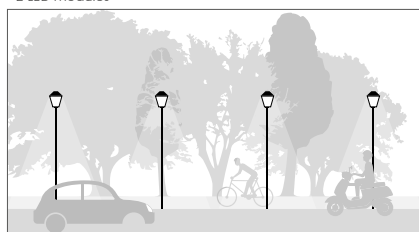
cable



recom. pole height: 4.00m – 6.00m  
light standards: low and medium lighting requirements  
lamp: incl. 1 or 2 DA LED modules  
colour temperature: 3,000K warm white  
LED gear: electronic driver up to 100,000 hours  
LED life expectancy: up to 100,000 hours  
optical system: lens technology  
light distribution: asymmetrical wide beam (028)  
luminaire head: made of cast aluminium with a special white, reflective underside finish; powder coated  
incl. decorative semicircular bracket; wall luminaire: incl. wall bracket with wall shield; made of stainless steel; powder coated  
DB 703  
colour: polycarbonate, clear, impact resistant, UV-stabilised  
glazing: completely wired; via a plug and socket connector outside the luminaire head  
wiring: for post top ø 76mm; wall luminaire: to be screwed on the wall  
installation: cable, pole, pole accessories, fixing material for the wall  
accessory: installation, back light shield for non-glare on the rear side – to be ordered separately

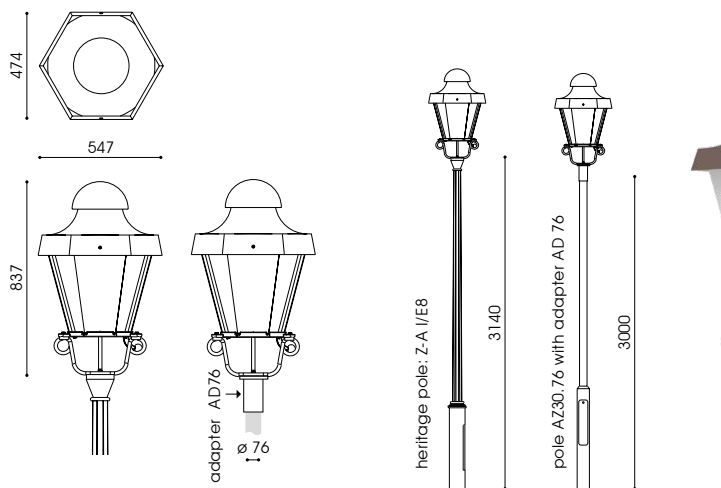
lamp	light distribution	product code	kg
<b>LUCAS I DA LED</b>			
DA+ 028 LED 12W/2,000lm/3,000K	asymmetrical wide beam	9.851.8115.15028-3	21.5
DA+ 028 LED 27W/4,600lm/3,000K <sup>(2)</sup>	asymmetrical wide beam	9.851.8218.15028-3	21.9
DA+ 028 LED 49W/7,400lm/3,000K <sup>(2)</sup>	asymmetrical wide beam	9.851.8228.15028-3	21.9
<b>WL LUCAS I DA LED</b>			
DA+ 028 LED 12W/2,000lm/3,000K	asymmetrical wide beam	9.835.8115.15028-3	18.7
DA+ 028 LED 24W/3,700lm/3,000K	asymmetrical wide beam	9.835.8128.15028-3	18.7
<b>LUCAS VII DA LED</b>			
DA+ 028 LED 12W/2,000lm/3,000K	asymmetrical wide beam	9.857.8115.15028-3	21.5
DA+ 028 LED 27W/4,600lm/3,000K <sup>(2)</sup>	asymmetrical wide beam	9.857.8218.15028-3	21.9
DA+ 028 LED 49W/7,400lm/3,000K <sup>(2)</sup>	asymmetrical wide beam	9.857.8228.15028-3	21.9
<b>accessory: back light shield (1 piece per lens; max. 4 pieces per module)</b>			
● LS DA 1		2.914.8301.17	0.01

<sup>(2)</sup> 2 LED modules



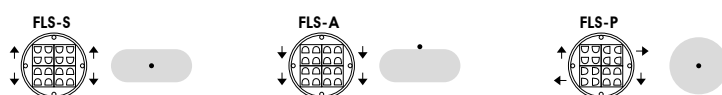
## local distribution road

requirements: E<sub>min</sub> 5lx / E<sub>max</sub> 11lx | lighting class: P4  
LUCAS I DA+ 028 LED 12W/2,000lm/3,000K  
pole height: 4.50m  
street width: 5.00m  
pole spacing: 31.00m

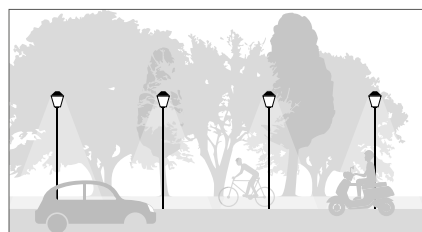


MARIE / 1 FLS

total height:	4.00m
lamp height:	3.70m
light standards:	medium lighting requirements
lamp:	incl. 1 FLS LED module
colour temperature:	3,000K warm white
LED gear:	electronic driver up to 100,000 hours
LED life expectancy:	up to 100,000 hours
optical system:	lens technology; dark sky
light distribution:	FLS-S oval wide beam, FLS-A asymmetrical wide beam, FLS-P symmetrical
luminaire head:	made according to a historical original: hexagonal shape, with rounded dome made of copper or copper with artificial green patina, frame and base made of cast aluminium, powder coated
heritage pole:	Z-A I/E8: made of cast aluminium, powder coated
colour:	DB 703
glazing:	glass, satined
wiring:	completely wired, incl. cable 3.00m
installation:	luminaire head to be screwed on pole; Z-A I/E8 with root to be set into the ground (800mm)
accessory:	heritage pole or standard pole, adapter AD 76 for top entry $\varnothing$ 76mm, wall bracket – to be ordered separately



lamp	light distribution	product code	kg
<b>MARIE / 1 FLS – canopy made of copper</b>			
FLS-S LED 22W/2,960lm/3,000K	oval wide beam	5.712.9071.03LK1	14.5
FLS-A LED 22W/2,960lm/3,000K	asymmetisch wide beam	5.712.9073.03LK1	14.5
FLS-P LED 22W/2,960lm/3,000K	symmetrical	5.712.9075.03LK1	14.5
<b>MARIE / 1 FLS – canopy made of copper with artificial green patina</b>			
FLS-S LED 22W/2,960lm/3,000K	oval wide beam	5.712.9071.00LK1	14.5
FLS-A LED 22W/2,960lm/3,000K	asymmetisch wide beam	5.712.9073.00LK1	14.5
FLS-P LED 22W/2,960lm/3,000K	symmetrical	5.712.9075.00LK1	14.5
<b>heritage pole with root - cast aluminium, powder coated in DB 703</b>			
Z-A I/E		9.955.3112.701EM8	45.0
<b>accessory: adapter AD 76 for top entry <math>\varnothing</math> 76mm - cast aluminium, powder coated in DB 703</b>			
AD76		9.950.0999.12	0.9



#### local distribution road

requirements: E<sub>51x</sub> / E<sub>min</sub> 11x | lighting class: P4  
 FLS-A LED 22W/2,960lm/3,000K  
 pole height: 4.50m  
 pavement on one side: 1.50m  
 street width: 6.00m  
 pole spacing: 34.00m



MARIE / 1 FLS – canopy with green patina



CLO

AC / DC

10kV

CRI 70

IP 65

IK 07

220–240V  
50–60Hz

WA:  
0.24m²

CE

on request:

2,700K  
4,000K

2,200lm  
3,400lm

RAL / DB

opale, klare  
Abdeckung

flange  
plate

at extra cost:



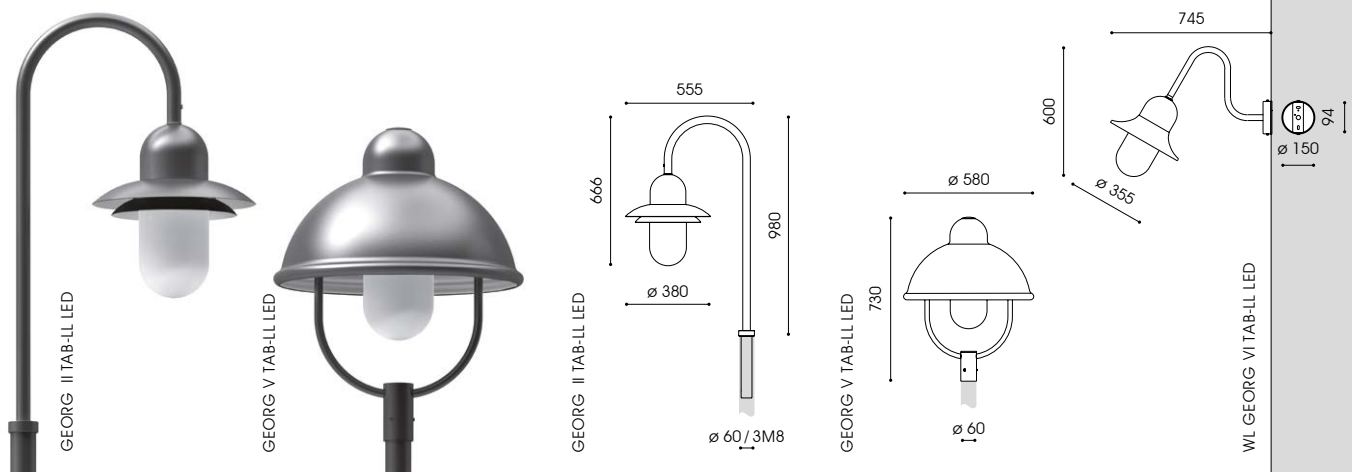
dimming



bracket



# GEORG II, V TAB-LL WL GEORG VI TAB-LL



- ⊕
- CRI 70
- IP 54
- IK 08
- 220–240V  
50–60Hz
- WA  
GEORG II:  
0.11m<sup>2</sup>
- WA  
GEORG V:  
0.2m<sup>2</sup>
- WA  
WL GEORG VI:  
0.11m<sup>2</sup>
- CE



GEORG II TAB-LL



WL GEORG VI TAB-LL

- recom. pole height: 2,50m – 4,00m  
 light standards: low lighting requirements  
 lamp: incl. 1 TAB-LL LED Modul  
 colour temperature: 3,000K warm white  
 LED gear: up to 50.000 hours; DIP-switch  
 LED life expectancy: up to 50.000 hours  
 optical system: diffuse  
 light distribution: symmetrical  
 luminaire head: incl. canopy made of aluminium with a special white, reflective underside finish; base and tubes made of hot-dip galvanised steel; powder coated  
 bracket: WL GEORG VI: incl. wall bracket made of hot-dip galvanised steel; powder coated  
 colour: DB 703  
 glazing: polyethylene, opal, resistant  
 wiring: completely wired; incl. cable ca. 2.00m via a plug and socket connector below the luminaire head; wall luminaire: via a clamp within the wall shield  
 installation: GEORG II: for post top ø 60mm with 3 threads M8; GEORG V: for post top ø 60mm; wall luminaire: to be screwed on the wall  
 accessory: pole, pole accessories, fixing material for the wall installation – to be ordered separately

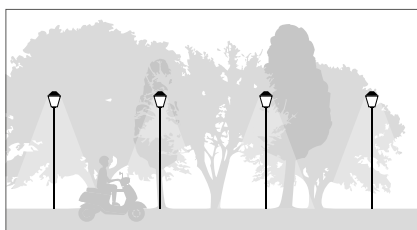
on request:

- 4,000K
- RAL / DB

at extra cost:

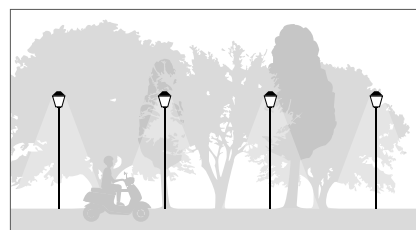
- 
- 2,200K  
2,700K
- 10kV

lamp	light distribution	product code	kg
<b>GEORG II TAB-LL LED</b>			
TAB-LL LED 23.5W/2,369lm/3,000K	symmetrical	9.870.9023.02-N30	7.0
<b>GEORG V TAB-LL LED</b>			
TAB-LL LED 23.5W/2,369lm/3,000K	symmetrical	9.870.9023.04-N30	8.8
<b>WL GEORG VI TAB-LL LED</b>			
TAB-LL LED 23.5W/2,369lm/3,000K	symmetrical	9.814.9023.00-N30	2.5



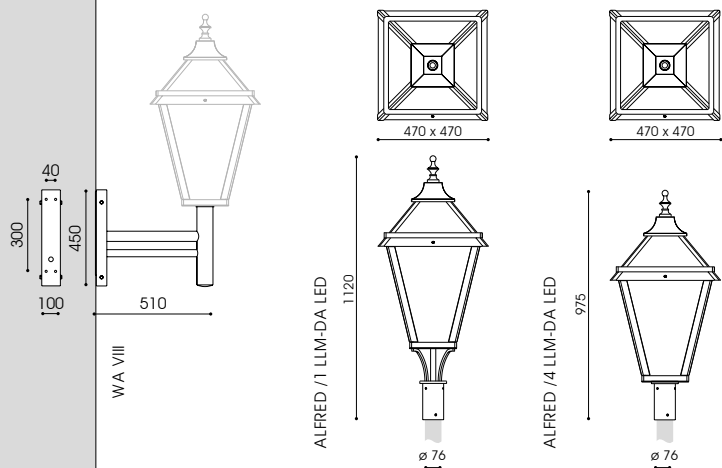
## residential road

requirements:  $E_m$  3lx /  $E_{min}$  0,6lx | lighting class: P5  
 GEORG II TAB-LL LED 23.5W/2,369lm/3,000K  
 pole height: 3.50m  
 street width: 5.00m  
 pole spacing: 23.00m



## residential road

requirements:  $E_m$  3lx /  $E_{min}$  0,6lx | lighting class: P5  
 GEORG V TAB-LL LED 23.5W/2,369lm/3,000K  
 pole height: 3.50m  
 street width: 5.00m  
 pole spacing: 25.00m

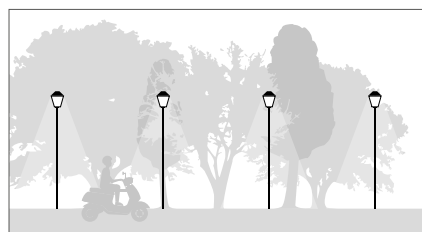


ALFRED /1 LLM-DA  
ALFRED /4 LLM-DA

- recom. pole height: 3.00m – 6.00m  
light standards: low and medium lighting requirements  
lamp: incl. 1 glare-free LLM-DA LED module  
colour temperature: 3,000K warm white  
LED gear: electronic driver up to 100,000 hours  
LED life expectancy: up to 100,000 hours  
optical system: system for horizontally mounted LLM-DA LED modules  
light distribution: wide beam - street optics  
luminaire head: incl. canopy with hinge made of stainless steel and decorative top made of cast aluminium; powder coated  
wall bracket WA VIII made of stainless steel, powder coated
- colour: DB 703  
glazing: PMMA RESIST, clear, high-impact resistant  
wiring: completely wired; incl. cable until access door (please specify pole height when ordering)
- installation: for post top  $\varnothing$  76mm; wall luminaire: to be screwed on the wall
- accessory: pole, wall bracket, pole accessories, fixing material for the wall installation – to be ordered separately

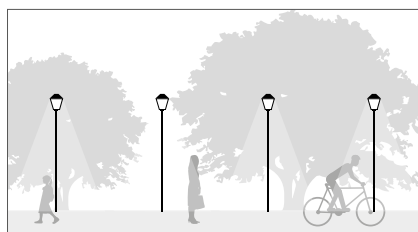


lamp	light distribution	product code	kg
<b>ALFRED /1 LLM-DA LED</b>			
LLM-DA LED 16W/1,800lm/3,000K	wide beam	5.705.9008.05-2LK1	20.2
LLM-DA LED 26W/3,000lm/3,000K	wide beam	5.705.9042.05-2LK1	20.2
<b>ALFRED /4 LLM-DA LED</b>			
LLM-DA LED 16W/1,800lm/3,000K	wide beam	5.705.9008.05-2LK4	18.6
LLM-DA LED 26W/3,000lm/3,000K	wide beam	5.705.9042.05-2LK4	18.6
<b>accessory: wall bracket - stainless steel, powder coated in DB 703</b>			
WA VIII		9.800.1008.70	7.9



#### residential road

requirements:  $E_m$  3lx /  $E_{min}$  0,6lx | lighting class: P5  
LLM-DA LED 16W/1,800lm/3,000K  
pole height: 3.50m  
street width: 5.00m  
pole spacing: 20.00m



#### pavement

requirements:  $E_m$  2lx /  $E_{min}$  0,4lx | lighting class: P6  
LLM-DA LED 16W/1,800lm/3,000K  
pole height: 3.00m  
pavement on one side: 2.50m  
pole spacing: 30.00m

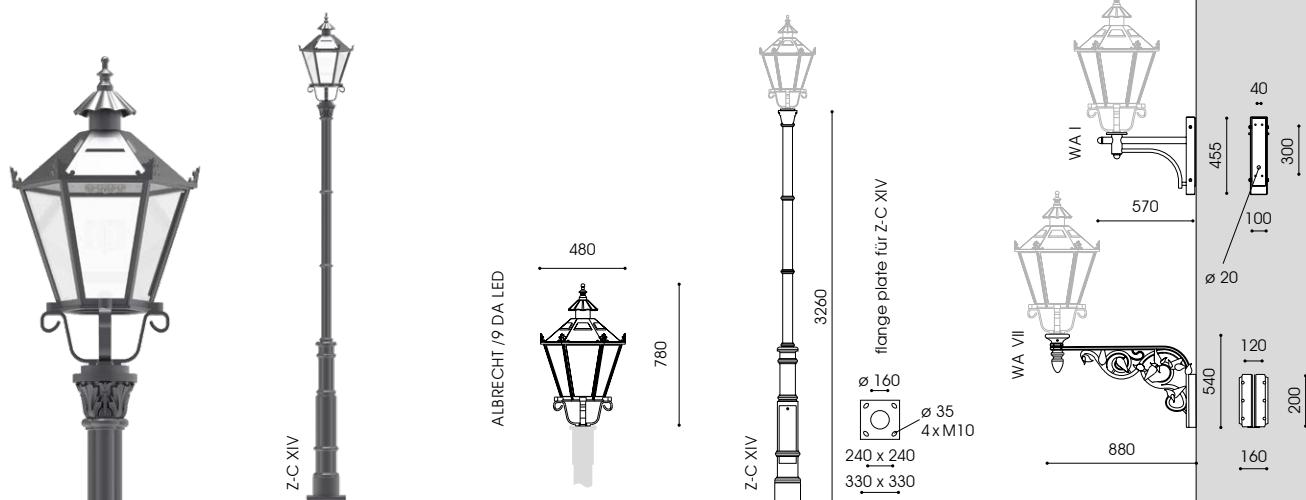


on request:



at extra cost:

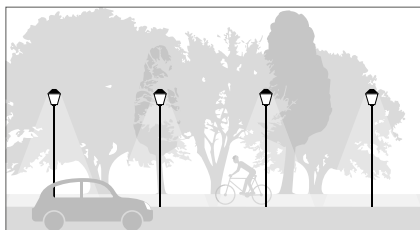




recom. pole height: 2,00m – 5,00m  
 light standards: low and medium lighting requirements  
 lamp: incl. 2 DA LED modules  
 colour temperature: 3,000K warm white  
 LED gear: electronic driver up to 100,000 hours  
 LED life expectancy: up to 100,000 hours  
 optical system: lens technology, dark sky  
 light distribution: asymmetrical wide beam (028) or symmetrical (058)  
 luminaire head: incl. canopy with top and 6 decor elements; canopy with hinge; made of cast aluminium; powder coated  
 bracket: Wandausleger WA I made of hot-dip galvanised steel or WA VII made of cast aluminum; powder coated  
 heritage pole: Z-C XIV: made of cast aluminium with door, powder coated; with square flange plate to pave over  
 colour: DB 703  
 glazing: PMMA RESIST, clear, high-impact resistant  
 wiring: completely wired; incl. cable until access door (please specify pole height when ordering)  
 installation: to be screwed on heritage pole with adapter AD XIV or wall bracket or with dapter AD 76/9 for post top ø 76mm; pole with flange plate to be screwed on a concrete foundation on site or on an additional bolt-on root (Q330/800)  
 accessory: heritage pole or standard pole, wall bracket, adapter, pole accessories, fixing material for the wall installation, back light shield for non-glare on the rear side – to be ordered separately

lamp	light distribution	product code	kg
<b>ALBRECHT /9 DA LED</b>			
DA+ 058 LED 15W/2,500lm/3,000K <sup>(2)</sup>	symmetrical	5.706.8210.05058-3LK9	13.2
DA+ 028 LED 15W/2,500lm/3,000K <sup>(2)</sup>	asymmetisch wide beam	5.706.8210.05028-3LK9	13.2
<b>accessory: back light shield (1 piece per lens; max. 2 pieces per module)</b>			
• LS DA 1		2.914.8301.17	0.01
<b>accessory: wall bracket - powder coated in DB 703</b>			
WA I - hot-dip galvanised steel		9.800.1001.71	6.8
WA VII - cast aluminium		9.800.1000.70	10.0
<b>accessory: adapter - powder coated in DB 703</b>			
AD 76/9 - steel, for post top ø 76mm		9.950.0999.13	0.9
AD XIV - stainless steel for heritage pole		0.910.0103.85	1.4
<b>heritage pole - cast aluminium, powder coated in DB 703</b>			
Z-C XIV		9.955.2214.70AFQ	45.5

<sup>(2)</sup> 2 LED modules



#### local distribution road

requirements:  $E_m$  5lx /  $E_{min}$  1lx | lighting class: P4  
 ALBRECHT /9 DA+ 028 LED 15W/2,500lm/3,000K<sup>(2)</sup>  
 pole height: 4.00m  
 street width: 6.00m  
 pavement on one side: 1.50m  
 pole spacing: 32.00m



CLO

AC / DC

10kV

CRI 70

IP 65

IK 08

220–240V  
50–60HzWA:  
0.17m<sup>2</sup>

Zhaga

• LL stock

on  
request:

4,000K

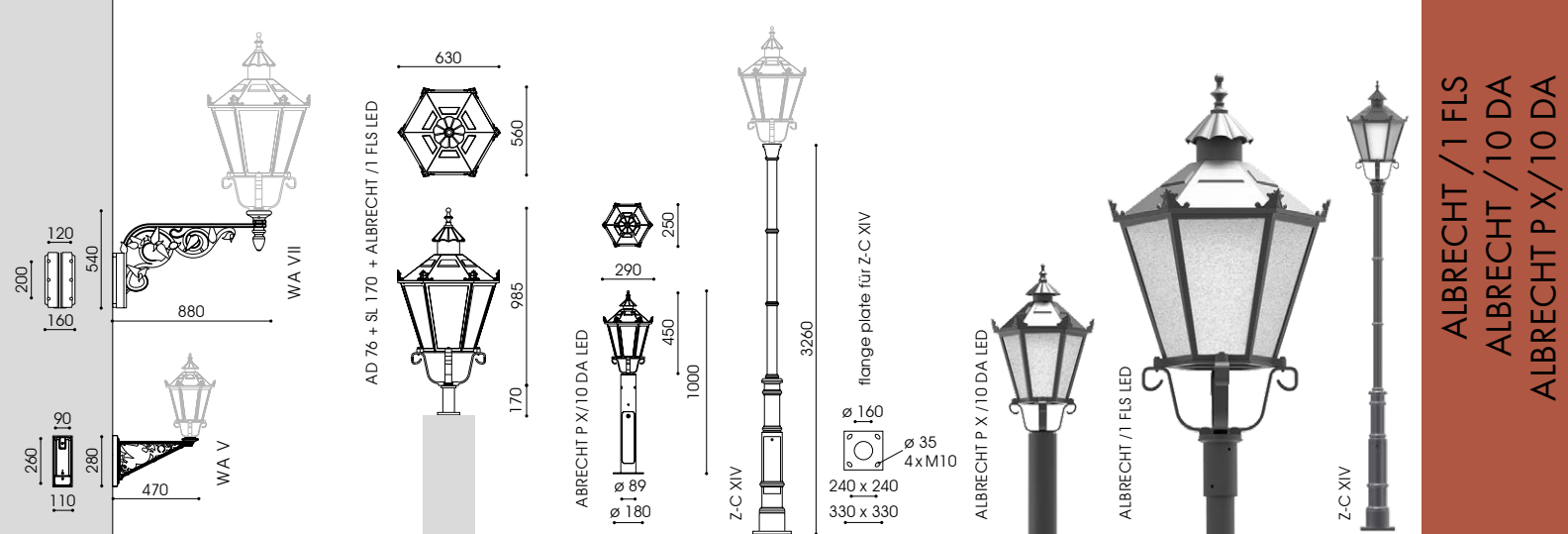
RAL / DB

satinet,  
pearl structu-  
red glazingat extra  
cost:1,800K  
2,200K  
2,700K

dimming







ALBRECHT /1 FLS  
ALBRECHT /10 DA  
ALBRECHT P X/10 DA

recom. pole height:  
total height:  
light standards:  
lamp:  
colour temperature:  
LED gear:  
LED life expectancy:  
optical system:  
light distribution:

ALBRECHT /1: 3,00m – 6,00m; ALBRECHT /10: 1,00m – 3,00m  
ALBRECHT P X/10: 1,00m  
low and medium lighting requirements  
incl. 1 FLS LED Modul or 1 DA LED module  
3,000K warm white  
electronic driver up to 100,000 hours  
up to 100,000 hours  
lens technology; FLS LED: dark sky  
FLS-**S** oval wide beam; FLS-**A** asymmetrical wide beam; FLS-**P** symmetrical; DA LED: narrow and wide beam (**268**); symmetrical (**058**)  
incl. canopy with top and 6 decor elements, ALBRECHT /1: canopy with hinge; ALBRECHT /10: canopy detachable; made of cast aluminium; powder coated  
wall bracket WA V, VII: made of cast aluminium; powder coated  
Z-C XIV: made of cast aluminum with door, powder coated; with square flange plate to pave over  
incl. tube  $\varnothing$  89mm with door made of hot-dip galvanised steel; powder coated  
DB 703  
PMMA RESIST, pearled, high-impact-resistant  
completely wired, incl. cable until access door (please specify pole height when ordering); bollard: incl. cable junction box for max. 2 cables up to 5 x 10mm<sup>2</sup> / 3 cables up to 5 x 6mm<sup>2</sup>  
to be screwed on heritage pole, pedestal SL 170 or wall bracket or with adapter AD 76 for top entry  $\varnothing$  76mm; pole and tube with flange plate to be screwed on a concrete foundation on site or on an additional bolt-on root (Z-C XIV: Q330/800; bollard: G180/400)  
heritage pole or standard pole, wall bracket, adapter, pedestal, pole accessories, fixing material for the wall installation – to be ordered separately

luminaire head:

bracket:

heritage pole:

bollard:

colour:  
glazing:  
wiring:

installation:

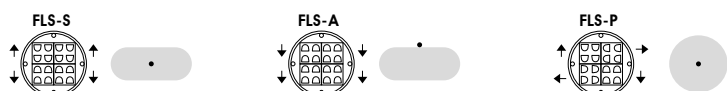
accessory:



ALBRECHT XIV/1

ALBRECHT V/10

lamp	light distribution	product code	kg
<b>ALBRECHT /1 FLS LED</b>			
FLS- <b>S</b> LED 22W/2,960lm/3,000K	oval wide beam	5.706.9071.06LK1	28.5
FLS- <b>A</b> LED 22W/2,960lm/3,000K	asymmetrical wide beam	5.706.9073.06LK1	28.5
FLS- <b>P</b> LED 22W/2,960lm/3,000K	symmetrical	5.706.9075.06LK1	28.5
<b>ALBRECHT /10 DA LED</b>			
DA+ <b>268</b> LED 13W/2,000lm/3,000K	narrow and wide beam	5.746.8117.06268-3LK10	3.2
<b>ALBRECHT P X/10 DA LED – 1.00m, tube <math>\varnothing</math> 89mm</b>			
DA+ <b>058</b> LED 13W/2,000lm/3,000K	symmetrical	5.746.8117.06058-3LK1010	13.5
<b>accessory: wall bracket made of cast aluminium - powder coated in DB 703</b>			
WA V für ALBRECHT /10		9.800.1000.60	8.0
WA VII für ALBRECHT /1		9.800.1000.70	10.0
<b>accessory: adapter for ALBRECHT /1 - powder coated DB 703</b>			
AD 76 - cast aluminium for post top $\varnothing$ 76mm		9.950.0999.12	4.4
SL 170 - hot-dip galvanised steel		9.900.0000.10	1.8
<b>heritage pole for ALBRECHT /1 - cast aluminium, powder coated DB 703</b>			
Z-C XIV		9.955.2214.70AFQ	45.5



#### local distribution road

requirements:  $E_m$  5lx /  $E_{min}$  1lx | lighting class: P4  
ALBRECHT /1 FLS-A LED 22W/2,960lm/3,000K  
pole height: 4.50m  
pavement on one side: 1.50m  
street width: 6.00m  
pole spacing: 35.00m



CLO

AC / DC

10kV

CRI 70

IP 65

IK 08

220–240V  
50–60Hz

WA  
ALBRECHT/1:  
0.24m<sup>2</sup>

WA  
ALBRECHT/10:  
0.06m<sup>2</sup>

CE

on  
request:

FLS:  
2,700K  
4,000K

DA:  
4,000K

RAL / DB

opal, clear,  
satin  
glazing

at extra  
cost:



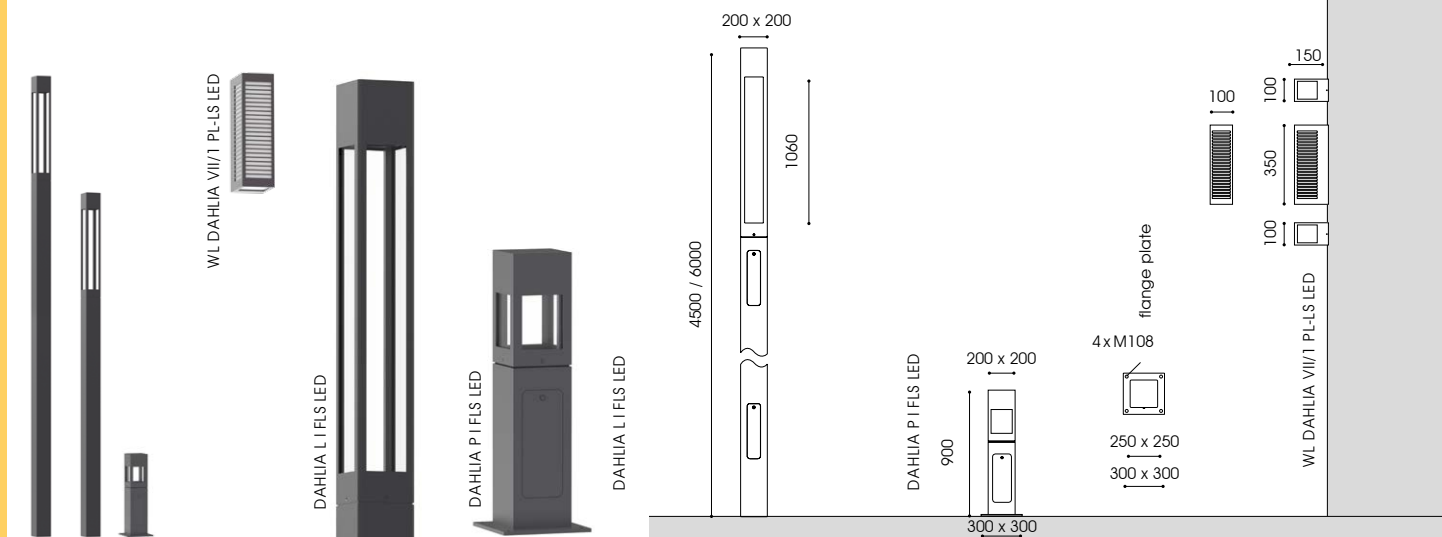
1,800K  
2,200K  
2,700K

dimming



Zhaga  
sockets

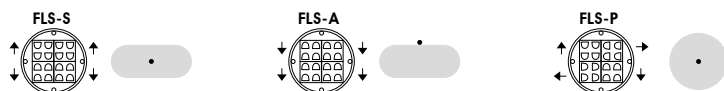
# DAHLIA L I, P I FLS WL DAHLIA VII/1 PL-LS



total height:  
mounting height:  
light standards:  
lamp:  
colour temperature:  
LED gear:  
LED life expectancy:  
optical system:  
light distribution:  
luminaire body:  
colour:  
glazing:  
wiring:  
installation:  
accessory:

0.35m / 4.50m / 6.00m / 0.90m  
WL DAHLIA VII/1 PL-LS LED: 0.5m – 4.00m  
low and medium lighting requirements  
incl. 1 FLS LED module or incl. PL-LS LED module  
3,000K warm white  
electronic driver, FLS: up to 100,000 hours or PL-LS: bis 50.000 hours, DIP-switch  
up to 100,000 hours  
lens technology; FLS LED: dark sky  
WL DAHLIA: diffuse  
FLS-S oval wide beam; FLS-A asymmetrical wide beam; FLS-P symmetrical; 4 windows  
WL DAHLIA: symmetrical; 5 windows  
DAHLIA L, P: luminaire head detachable made of aluminium; tube with 2 access doors for cable junction box and driver; powder coated  
WL DAHLIA: made of square stainless steel and aluminium, powder coated  
DB 703  
DAHLIA L, P: PMMA RESIST, clear, high-impact resistant  
WL DAHLIA: PMMA RESIST, opal, high-impact-resistant; with impact-resistant decorative grille  
completely wired; incl. cable until access door; bollard: incl. cable junction box for cable up to 5x10mm²/ 3 cables up to 5x6mm²; WL DAHLIA: via a clamp  
DAHLIA L: with root to be set into the ground; 4.50m / 0.80m; 6.00m / 1.00m  
DAHLIA P: with flange plate to be screwed on a concrete foundation on site or on an additional bolt-on root; WL DAHLIA: to be screwed on the wall  
column accessories, cable junction box (DAHLIA L), bolt-on root with screws (s. page 21), fixing material for the wall installation – to be ordered separately

lamp	light distribution	product code	kg
<b>DAHLIA L I FLS LED – 4.50m</b>			
FLS-S LED 22W/2,960lm/3,000K	oval wide beam	6.102.8071.01C	66.0
FLS-A LED 22W/2,960lm/3,000K	asymmetrical wide beam	6.102.8073.01C	66.0
FLS-P LED 22W/2,960lm/3,000K	symmetrical	6.102.8075.01C	66.0
<b>DAHLIA L I FLS LED – 6.00m</b>			
FLS-S LED 22W/2,960lm/3,000K	oval wide beam	6.102.8071.01F	80.0
FLS-A LED 22W/2,960lm/3,000K	asymmetrical wide beam	6.102.8073.01F	80.0
FLS-P LED 22W/2,960lm/3,000K	symmetrical	6.102.8075.01F	80.0
<b>DAHLIA P I FLS LED – 900mm</b>			
FLS-S LED 11W/1,660lm/3,000K	oval wide beam	6.802.8371.01	15.5
FLS-A LED 11W/1,660lm/3,000K	asymmetrical wide beam	6.802.8373.01	15.5
FLS-P LED 11W/1,660lm/3,000K	symmetrical	6.802.8375.01	15.5
<b>WL DAHLIA VII/1 PL-LS LED</b>			
PL-LS LED 11W/2,000lm/3,000K	symmetrical	6.820.9724.03	4.0



## local distribution road

requirements:  $E_{min}$  5lx /  $E_{min}$  1lx | lighting class: P4  
DAHLIA L I FLS-A LED 22W/2,960lm/3,000K  
total height: 4.50m  
pavement on one side: 1.50m  
street width: 5.00m  
pole spacing: 30.00m

## local distribution road

requirements:  $E_{min}$  5lx /  $E_{min}$  1lx | lighting class: P4  
DAHLIA L I FLS-A LED 22W/2,960lm/3,000K  
total height: 6.00m  
pavement on one side: 1.50m  
street width: 5.00m  
pole spacing: 35.00m

## pavement

requirements:  $E_{min}$  3lx /  $E_{min}$  0.6lx | lighting class: P5  
DAHLIA P I FLS-S LED 11W/1,660lm/3,000K  
total height: 900mm  
pavement: 2.50m  
pole spacing: 9.00m

- ☐
- CLO
- FLS:  
AC / DC
- FLS:  
10kV
- FLS: CRI 70  
PL-LS: CRI 80
- IP 65
- IK 08
- 220–240V  
50–60Hz
- WA  
4,50m/6,00m  
0.90/1.2m²
- WA  
DAHLIA P:  
0.053m²
- CE

on request:

- 2,700K  
4,000K

- RAL / DB

- DAHLIA L:  
flange plate

at extra cost:

- ☐

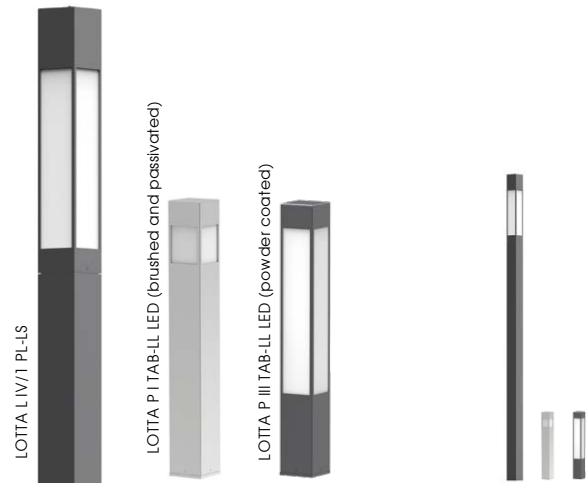
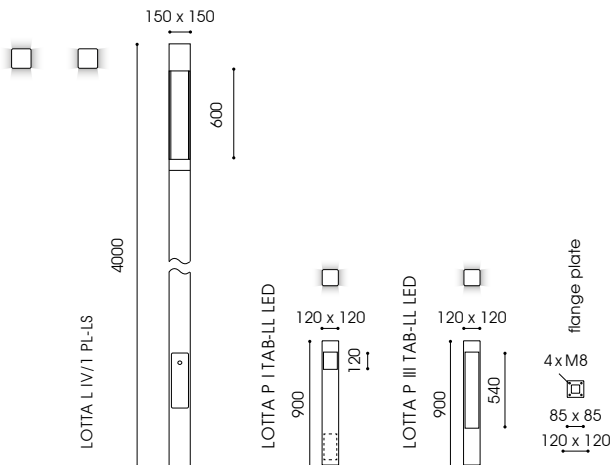
- dimming

- CLEVER LIGHT

- DAHLIA L:  
spots

- SMART CITY  
elements

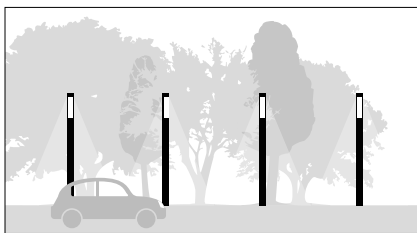
- other heights



total height: 4,00m / 0,90m  
light standards: low and medium lighting requirements  
lamp: incl. 1 glare-free PL-LS LED or incl. TAB-LL LED module  
colour temperature: 3,000K warm white  
LED gear: electronic driver, PL-LS LED: up to 100,000 hours, TAB-LL LED: op to 50,000 hours, DIP-switch  
LED life expectancy: PL-LS LED: up to 100,000 hours; TAB-LL LED: up to 80,000 hours  
optical system: diffuse  
light distribution: asymmetrical or symmetrical; 3 or 4 windows  
luminaire head: made of aluminium, detachable  
luminaire body: Lotta L: square aluminium profile with access door for cable junction box; powder coated  
Lotta P: made of square stainless steel; without access door; powder coated or brushed and passivated DB 703  
colour: PMMA RESIST, opal, high-impact-resistant  
glazing: completely wired; Lotta L: incl. cable until access door; Lotta P I: incl. cable junction box for max. 2 cables up to 5x10mm<sup>2</sup>/ 3 cables up to 5x6mm<sup>2</sup>; Lotta P III: via a clamp in a cable box, up to 3x4mm<sup>2</sup>  
wiring: Lotta L: with root to be set into the ground; 4,00m / 0,80m Lotta P: with integrated flange plate to be screwed on a concrete foundation on site or on an additional bolt-on root  
column accessories, cable junction box (Lotta L), bolt-on root with screws Q120/400 (s. page 21) – to be ordered separately  
accessory:

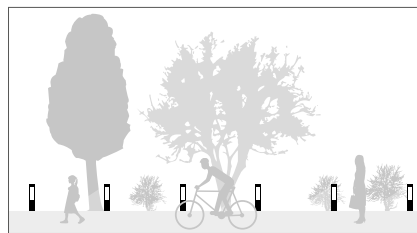


lamp	light distribution	product code	kg
<b>LOTTA L IV/1 PL-LS LED – 4.00m</b>			
PL-LS LED 15W/3,000lm/3,000K	symmetrical, 4 windows	6.813.9733.00-1-EB	40.0
PL-LS LED 15W/3,000lm/3,000K	asymmetrical, 3 windows	6.813.9733.01-1-EB	41.0
<b>LOTTA P I TAB-LL LED – 900mm, powder coated in DB 703</b>			
TAB-LL LED 14.9W/1,532lm/3,000K	symmetrical, 4 windows	6.810.9123.114-G30	13.5
<b>LOTTA P I TAB-LL LED – 900mm, brushed and passivated</b>			
TAB-LL LED 14.9W/1,532lm/3,000K	symmetrical, 4 windows	6.810.9123.314-G30	13.5
<b>LOTTA P III TAB-LL LED – 900mm, powder coated in DB 703</b>			
TAB-LL LED 14.9W/1,532lm/3,000K	symmetrical, 4 windows	6.810.9123.04-G30	12.2
<b>LOTTA P III TAB-LL LED – 900mm, brushed and passivated</b>			
TAB-LL LED 14.9W/1,532lm/3,000K	symmetrical, 4 windows	6.810.9123.34-G30	12.2



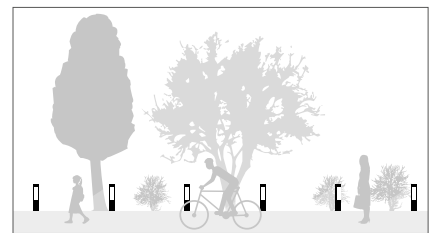
#### residential road

requirements:  $E_{min}$  3lx /  $E_{min}$  0,6lx | lighting class: P5  
LOTTA L IV/1 PL-LS LED 15W/3,000lm/3,000K, sym.  
total height: 4,00m  
street width: 5,00m  
pole spacing: 25,00m



#### pavement

requirements:  $E_{min}$  3lx /  $E_{min}$  0,6lx | lighting class: P5  
LOTTA P I TAB-LL LED 14.9W/1,532lm/3,000K  
total height: 900mm  
pavement: 2,50m  
pole spacing: 10,00m



#### pavement

requirements:  $E_{min}$  3lx /  $E_{min}$  0,6lx | lighting class: P5  
LOTTA P III TAB-LL LED 14.9W/1,532lm/3,000K  
total height: 900mm  
pavement: 2,50m  
pole spacing: 10,00m

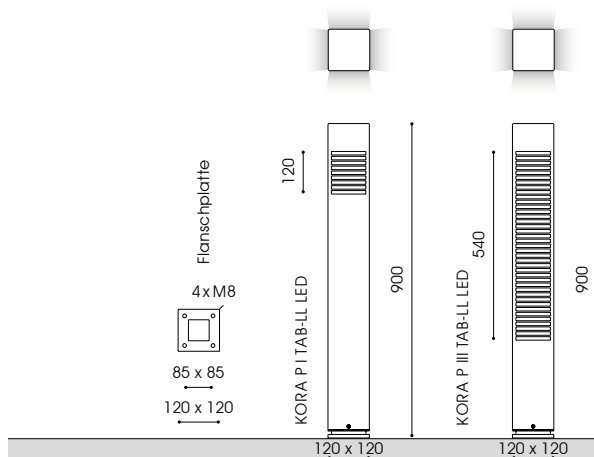
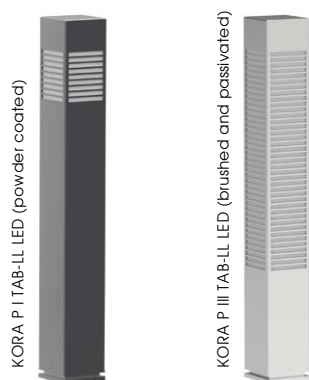
- LOTTA L CLO
- PL-LS: CRI 80  
TAB-LL: CRI 70
- IP 65
- IK 08
- 220 – 240V  
50 – 60Hz
- WA  
LOTTA L:  
0,6m<sup>2</sup>
- WA  
LOTTA P:  
0,11m<sup>2</sup>
- CE

- on request:
- TAB-LL: 4,000K
- PL-LS: 2,700K  
4,000K
- LOTTA L IV: 2,000lm  
4,000lm
- RAL / DB
- LOTTA L: flange plate

- at extra cost:
- dimming
- LOTTA L CLEVER LIGHT
- other heights



# KORA P I TAB-LL KORA P III TAB-LL



- ⊕
- CRI 70
- IP 65
- IK 10
- 220–240V  
50–60Hz
- WA  
0.11m²
- CE



KORA P I TAB-LL



KORA P III TAB-LL

- total height: 0,90m
- light standards: low lighting requirements
- lamp: incl. TAB-LL LED module
- colour temperature: 4,000K neutral white
- LED gear: electronic driver, up to 50.000 hours, DIP-switch
- LED life expectancy: up to 80.000 hours
- optical system: diffuse
- light distribution: symmetrical; 4 windows
- luminaire body: made of square stainless steel with design shadow gap; without access door; detachable; powder coated or brushed and passivated
- colour: DB 703
- glazing: PMMA RESIST, opal, high-impact-resistant; with impact-resistant decorative grille
- wiring: completely wired; KORA P I: incl. cable until the integrated cable junction box for max. 2 cables up to 5 x 10mm² / 3 cables up to 5 x 6mm²; KORA P III: connection with terminal clamp in terminal box up to 5x2,5mm² with integrated flange plate to be screwed on a concrete foundation on site or on an additional bolt-on root
- installation: bolt-on root with screws (Q120/400) (s. page 21) – to be ordered separately
- accessory:

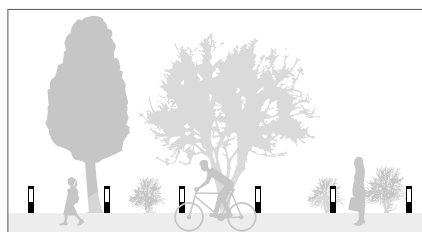
on request:

- 3,000K
- RAL / DB

at extra cost:

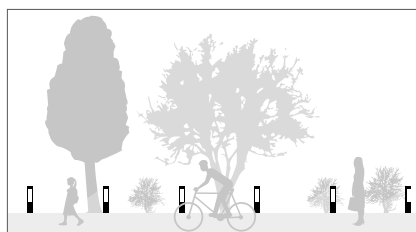
- 
- dimming

lamp	light distribution	product code	kg
<b>KORA P I TAB-LL LED – 900mm, powder coated in DB 703</b>			
TAB-LL LED 14.9W/1,632lm/4,000K	symmetrical, 4 windows	9.821.9123.114-G40	13.5
<b>KORA P I TAB-LL LED – 900mm, brushed and passivated</b>			
TAB-LL LED 14.9W/1,632lm/4,000K	symmetrical, 4 windows	9.821.9123.314-G40	13.5
<b>KORA P III TAB-LL LED – 900mm, powder coated in DB 703</b>			
TAB-LL LED 14.9W/1,632lm/4,000K	symmetrical, 4 windows	9.822.9123.134-G40	12.4
<b>KORA P III TAB-LL LED – 900mm, brushed and passivated</b>			
TAB-LL LED 14.9W/1,632lm/4,000K	symmetrical, 4 windows	9.822.9123.334-G40	12.4



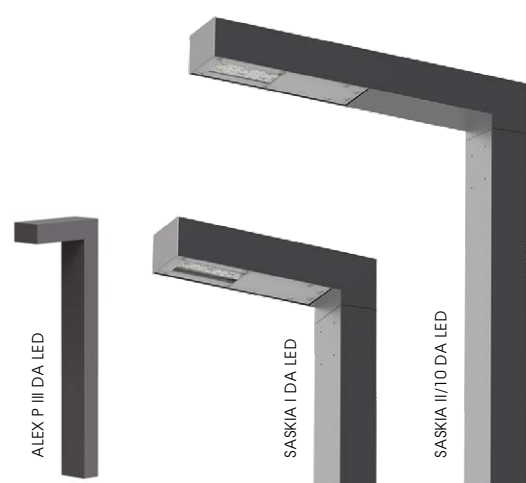
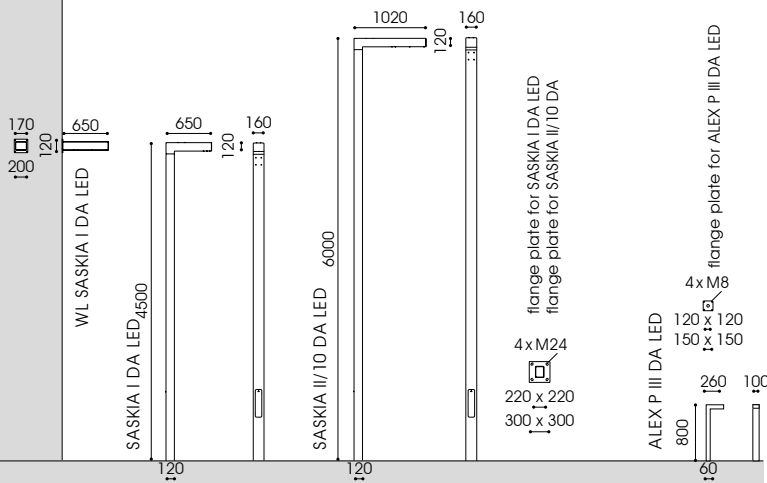
## pavement

requirements:  $E_{min}$  2lx /  $E_{max}$  0,4lx | lighting class: P6  
KORA P I TAB-LL LED 14.9W/1,632lm/4,000K  
total height: 900mm  
pavement: 2.50m  
pole spacing: 7.50m



## pavement

requirements:  $E_{min}$  3lx /  $E_{max}$  0,6lx | lighting class: P5  
KORA P III TAB-LL LED 14.9W/1,632lm/4,000K  
total height: 900mm  
pavement: 2.50m  
pole spacing: 7.50m

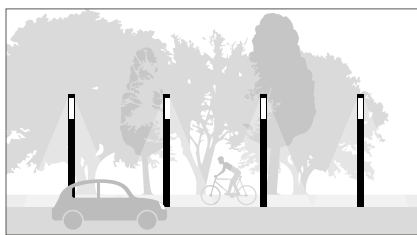


total height:	SASKIA: 4,50m / 6,00m; ALEX: 0,80m
light standards:	low and medium lighting requirements
lamp:	incl. 1 or 2 DA LED modules
colour temperature:	3,000K warm white
LED gear:	electronic driver, SASKIA: up to 100,000 hours; ALEX: bis 80.000 Stunden
LED life expectancy:	up to 100,000 hours
optical system:	lens technology, dark sky
light distribution:	asymmetrical wide beam (028) or narrow and wide beam (268, Radwegoptik)
luminaire body:	SASKIA: 2 parts; ALEX: 1 piece; with bracket, made of a rectangular aluminium profile, SASKIA: 4.50m / 6.00m: 160x120mm; ALEX: 0.80m: 100x60mm; with access door for cable junction box; powder coated
bracket:	incl. wall bracket with wall shield made of aluminium; powder coated
colour:	DB 703
glazing:	SASKIA: flat, clear toughened glass glazing ALEX: PMMA RESIST, clear, high-impact-resistant
wiring:	SASKIA: completely wired; incl. cable until access door; ALEX: incl. cable junction box; for max. 2 cables up to 3 x 2,5mm <sup>2</sup> / 3 cables up to 3 x 4mm <sup>2</sup>
installation:	with flange plate to be screwed on a concrete foundation on site; wall luminaire: to be screwed on the wall
accessory:	cable junction box, pole accessories, bolt-on root with screws (s. page 21), fixing material for the wall installation – to be ordered separately



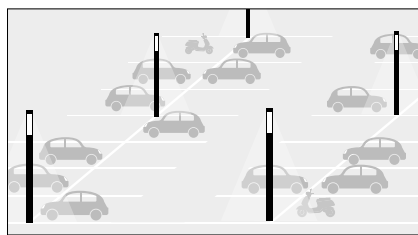
lamp	light distribution	product code	kg
<b>SASKIA I DA LED – 4.50m</b>			
DA+ 028 LED 23W/3,700lm/3,000K	asymmetrical wide beam	9.215.8128.65028-3FC	*51.5
DA+ 028 LED 47W/7,400lm/3,000K <sup>(2)</sup>	asymmetrical wide beam	9.215.8228.65028-3FC	*51.5
<b>SASKIA II/10 DA LED – 6.00m</b>			
DA+ 028 LED 23W/3,700lm/3,000K	asymmetrical wide beam	9.215.8128.10028-3FF	*75.0
DA+ 028 LED 47W/7,400lm/3,000K <sup>(2)</sup>	asymmetrical wide beam	9.215.8228.10028-3FF	*75.6
<b>WL SASKIA I DA LED</b>			
DA+ 028 LED 24W/3,700lm/3,000K	asymmetrical wide beam	9.216.8128.65-3	13.5
<b>ALEX P III DA LED – 800mm</b>			
DA+ 268 LED 6W/1,100lm/3,000K	narrow and wide beam	9.110.9107.268-3-F	14.9
DA+ 268 LED 6W/1,100lm/3,000K	narrow and wide beam	9.110.9107.268-3-F-R	14.9

<sup>(2)</sup> 2 modules | \* incl. pole



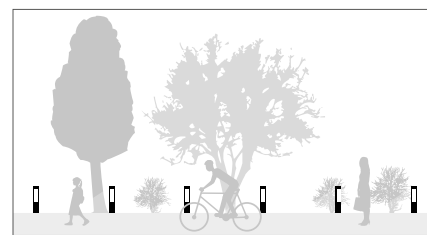
#### local distribution road

requirements:  $E_m$  5lx /  $E_{min}$  1lx | lighting class: P4  
SASKIA I DA+ 028 LED 23W/3,700lm/3,000K  
total height: 4.50m  
pavement on one side: 1.50m  
street width: 6.00m  
pole spacing: 35.00m



#### car park

area: 75.00m x 49.00m,  
30 parking lots; arranged in 6 rows  
requirements:  $E_m$  10lx /  $g$  0,25  
SASKIA II/10 DA+ 028 LED 23W/3,700lm/3,000K  
quantity: 6 luminaires heads 1 bracket  
6 luminaires heads 2 brackets  
pole height: 6.00m  
pole spacing: 30.00m



#### pavement

requirements:  $E_m$  2lx /  $E_{min}$  0,4lx | lighting class: P6  
ALEX P III DA+ 268 LED 6W/1,100lm/3,000K  
total height: 800mm  
pavement: 2.50m  
pole spacing: 6.00m

⊕
CLO
SASKIA: AC / DC
10kV
CRI 70
IP 65
IK 10 ALEX: IK 08
220–240V 50–60Hz
WA SASKIA I: 0.72m <sup>2</sup>
WA SASKIA II: 0.96m <sup>2</sup>
WA ALEX P III: 0.06m <sup>2</sup>
CE

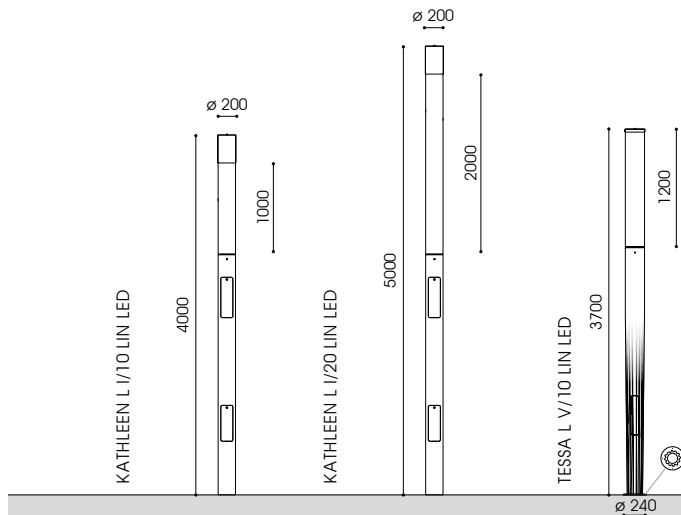
on request:

4,000K
other optics
SASKIA: RAL / DB
root

at extra cost:

□
1,800K 2,200K 2,700K
dimming
CLEVER LIGHT
other heights
Zhaga socket

# KATHLEEN L I/10, 20 LIN TESSA L V/10 LIN



- ⊕
- CLO
- AC / DC
- 10kV
- CRI 80
- IP 65
- IK 08
- 220–240V  
50–60Hz
- WA  
KATHLEEN:  
0.75m²
- WA  
TESSA L V/10  
0.49m²
- CE



TESSA L V/10 LIN



KATHLEEN L I/10 LIN

total height:

KATHLEEN: 4.00m or 5.00m

TESSA: 3.70m

light standards:

low, medium and high lighting requirements

lamp:

incl. 1 LIN LED module

colour temperature:

3,000K warm white or 4,000K neutral white

LED gear:

electronic driver up to 100,000 hours

LED life expectancy:

bis 80.000 Standen

optical system:

diffuse

light distribution:

symmetrical

luminaire head:

with cap made of aluminium, powder coated

luminaire body:

TESSA: tube made of cast aluminium, conical, in plat design, at the end smaller than on top; with access door for cable junction box; powder coated

KATHLEEN: straight tubular column made of aluminium with 2 access doors for cable junction box and driver; powder coated

DB 703

colour:

PMMA RESIST, opal, high-impact-resistant

glazing:

completely wired; incl. cable until access door

wiring:

KATHLEEN: with root to be set into the ground; 4.00m / 0.80m; 5.00m / 0.80m

installation:

TESSA: with flange plate to be screwed on a concrete foundation on site or on an additional bolt-on root cable junction box, bolt-on root with screws (s. page 21)

accessory:

– to be ordered separately

on  
request:

KATHLEEN  
RAL / DB

KATHLEEN  
flange plate

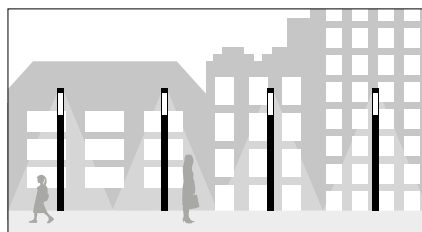
at extra  
cost:

□

dimming

KATHLEEN  
other heights

lamp	light distribution	product code	kg
<b>KATHLEEN L I/10 LIN LED – 4.00m</b>			
LIN LED 33W/5,000lm/3,000K	symmetrical	9.005.8103.31B	47.0
LIN LED 29W/5,000lm/4,000K	symmetrical	9.005.8103.41B	47.0
<b>KATHLEEN L I/20 LIN LED – 5.00m</b>			
LIN LED 44W/8,120lm/3,000K	symmetrical	9.005.8203.31D	50.5
LIN LED 38W/8,120lm/4,000K	symmetrical	9.005.8203.41D	50.5
<b>TESSA L V/10 LIN LED – 3.70m</b>			
LIN LED 29W/5,000lm/3,000K	symmetrical	9.629.8103.35	43.5
LIN LED 27W/5,000lm/4,000K	symmetrical	9.629.8103.45	43.5

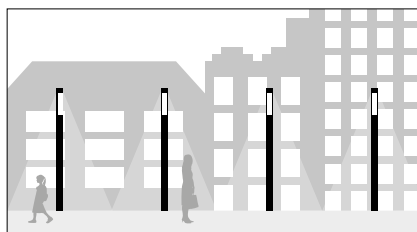


## pedestrian zone

requirements:  $E_{min}$  5lx /  $E_{min}$  1lx | lighting class: P4

KATHLEEN L I/20 LIN LED 44W/8,120lm/3,000K

total height: 5.00m  
pavement on one side: 1.50m  
street width: 5.00m  
pole spacing: 20.00m



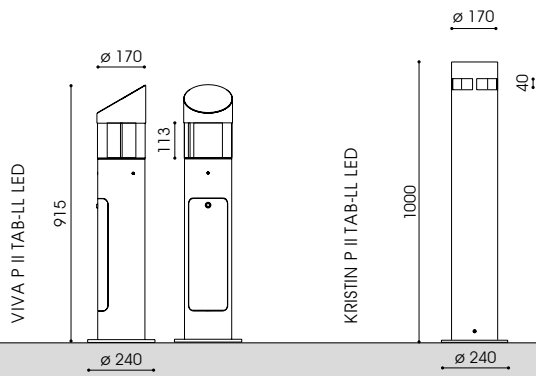
## pedestrian zone

requirements:  $E_{min}$  3lx /  $E_{min}$  0.6lx | lighting class: P5

TESSA L V/10 LIN LED 29W/5,000lm/3,000K

total height: 3.70m  
pavement on one side: 3.00m  
pole spacing: 29.00m





VIVA P II TAB-LL LED

KRISTIN P II TAB-LL LED

PARTICULARLY ROBUST

total height:	VIVA P II: 0.915m KRISTIN P II: 1.00m
light standards:	low lighting requirements
lamp:	incl. 1 TAB-LL LED module
colour temperature:	3,000K warm white
LED gear:	up to 50.000 hours; DIP-switch
LED life expectancy:	up to 80.000 hours
optical system:	diffuse
light distribution:	symmetrical; KRISTIN: 4 windows
luminaire head:	VIVA: cap made of stainless steel; powder coated KRISTIN: robust against vandalism, made of 1 piece until the ground, made of hot-dip galvanised steel; powder coated
luminaire body:	VIVA: straight tubular column, tube made of hot dip galvanised steel with access door for cable junction box; powder coated KRISTIN: massive straight 2. tube inside until the luminaire head, with hole for cable junction box, made of hot dip galvanised steel; powder coated
colour:	DB 703
glazing:	PMMA RESIST, clear, high-impact resistant
wiring:	completely wired, incl. cable junction box for max. 2 cables up to 5 x 16mm <sup>2</sup> / 3 cables up to 5 x 10mm <sup>2</sup>
installation:	with flange plate to be screwed on a concrete foundation on site or on an additional bolt-on root bolt-on root with screws, accessory ring – to be ordered separately
accessory:	

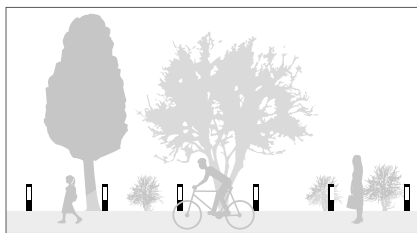


VIVA P II TAB-LL



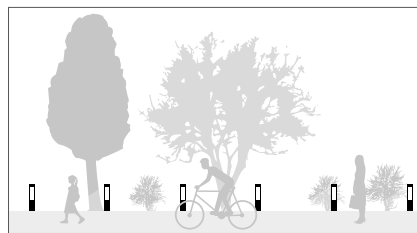
KRISTIN P II TAB-LL

lamp	light distribution	product code	kg
<b>VIVA P II TAB-LL LED – 915mm</b>			
adjustable power levels: 851lm, 1,192lm, <b>1,532lm (factory setting)</b> TAB-LL LED 14.9W/1,532lm/3,000K	symmetrical	9.014.7123.02-G30	16.4
<b>KRISTIN P II TAB-LL LED – 1,00m</b>			
adjustable power levels: 851lm, 1,192lm, <b>1,532lm (factory setting)</b> TAB-LL LED 14.9W/1,532lm/3,000K	symmetrical	9.819.7123.15-G30	11.6
<b>accessory: bolt-on root - hot-dip galvanised steel, incl. screws</b>			
• G240/500		9.900.0012.00	7.1
<b>accessory: accessory ring - stainless steel</b>			
• Z248/1 - DB 703		9.900.0008.70	0.3



pavement

requirements:  $E_m$  2lx /  $E_{min}$  0,4lx | lighting class: P6  
VIVA P II TAB-LL LED  
pavementbreite: 2.50m  
pole spacing: 8.00m



pavement

requirements:  $E_m$  2lx /  $E_{min}$  0,4lx | lighting class: P6  
KRISTIN P II TAB-LL LED  
pavementbreite: 2.50m  
pole spacing: 9.00m

⊕
CRI 70
IP 65
IK 08 VIVA
IK 10 KRISTIN
220–240V 50–60Hz
VIVA WA: 0.16m <sup>2</sup>
KRISTIN WA: 0.17m <sup>2</sup>
CE
• LL stock

on request:

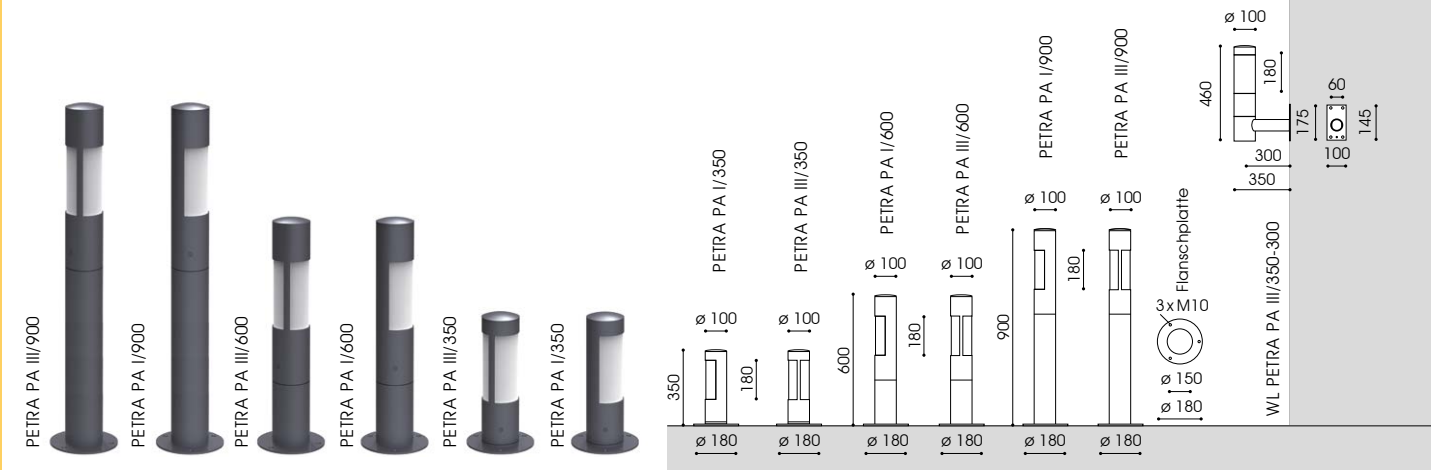
4,000K
CRI 80

at extra cost:

□
10kV
dimming

PETRA PA I /350, 600, 900  
 PETRA PA III/350, 600, 900  
 WL PETRA P III/350-300

- ⚡
- CRI 80
- IP 65
- IK 08
- 220–240V  
50–60Hz
- WA  
PETRA / 600  
0.06m²
- CE
- LL stock



- total height:  
light standards:  
lamp:  
colour temperature:  
Betriebsgerät:  
LED life expectancy:  
optical system:  
light distribution:  
luminaire head:
- 0,35m / 0,46m / 0,60m / 0,90m  
low lighting requirement  
incl. 1 LED lamp  
2,700K warm white  
integrated in lamp  
up to 25.000 hours  
vertically mounted light source; diffuse  
symmetrical or asymmetrical  
aluminium, 1 or 2 windows; wall luminaire: made of stain-  
less steel; powder coated
- luminaire body:
- cylindrical tube without door made of aluminium; pow-  
der coated
- wall bracket:  
colour:  
glazing:  
wiring:
- made of stainless steel; powder coated  
DB 703  
PMMA RESIST, opal, high-impact-resistant  
completely wired: PETRA /350, wall luminaire: via a  
clamp below the luminaire head; PETRA /600, PETRA  
/900: via a plug and socket connector below the lumi-  
naire head
- installation:
- with flange plate to be screwed on a concrete foundati-  
on on site or on an additional bolt-on root; wall luminaire:  
to be screwed on the wall
- accessory:
- cable, bolt-on root with screws (s. page 21), accessory  
ring, fixing material for the wall installation – to be order-  
ed separately

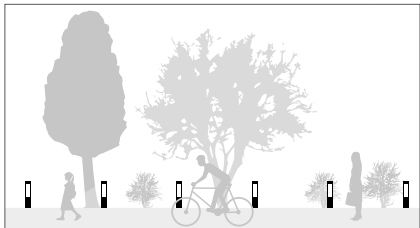
on  
request:

- 3,000K  
4,000K
- RAL / DB

at extra  
cost:

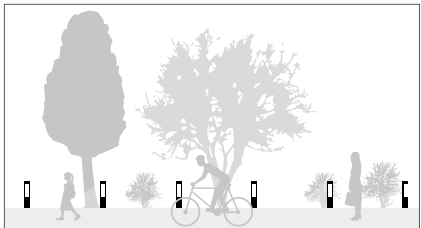


lamp	light distribution	product code	kg	Fassung
<b>PETRA PA I/350 LED – 350mm</b>				
LED 8W/806lm/2,700K	asymmetrical, 1 window	9.883.9002.00135AL	2.0	E27
<b>PETRA PA I/600 LED – 600mm</b>				
● LED 8W/806lm/2,700K	asymmetrical, 1 window	9.883.9002.00160AL	4.7	E27
<b>PETRA PA I/900 LED – 900mm</b>				
LED 8W/806lm/2,700K	asymmetrical, 1 window	9.883.9002.00190AL	5.3	E27
<b>PETRA PA III/350 LED – 350mm</b>				
LED 8W/806lm/2,00K	symmetrical, 2 windows	9.883.9002.00335AL	1.9	E27
<b>PETRA PA III/600 LED – 600mm</b>				
● LED 8W/806lm/2,700K	symmetrical, 2 windows	9.883.9002.00360AL	4.4	E27
<b>PETRA PA III/900 LED – 900mm</b>				
LED 8W/806lm/2,700K	symmetrical, 2 windows	9.883.9002.00390AL	5.1	E27
<b>WL PETRA P III/350-300 LED</b>				
LED 8W/806lm/2,700K	symmetrical	9.827.9002.0335-3	4.0	E27



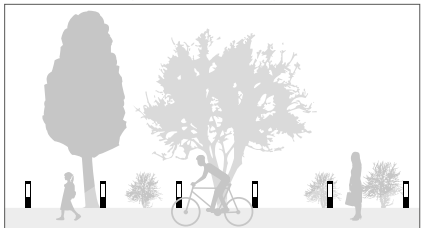
pavement

requirements:  $E_{\text{min}}$  2lx /  $E_{\text{min}}$  0,4lx | lighting class: P6  
 PETRA PA I/350 LED  
 total height: 350mm  
 pavement: 2.50m  
 pole spacing: 6.00m



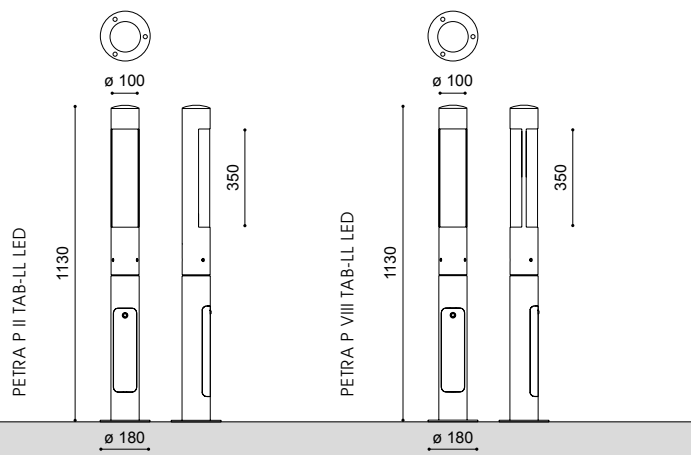
pavement

requirements:  $E_{\text{min}}$  2lx /  $E_{\text{min}}$  0,4lx | lighting class: P6  
 PETRA PA III/600 LED  
 total height: 600mm  
 pavement: 2.50m  
 pole spacing: 8.00m



pavement

requirements:  $E_{\text{min}}$  2lx /  $E_{\text{min}}$  0,4lx | lighting class: P6  
 PETRA PA III/900 LED  
 total height: 900mm  
 pavement: 2.50m  
 pole spacing: 10.00m

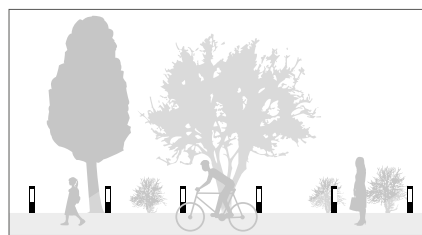


## PETRA P II TAB-LL PETRA P VIII TAB-LL

total height: 1.13m  
light standards: low and medium lighting requirements  
lamp: incl. 1 TAB-LL LED module  
colour temperature: 3,000K warm white  
LED gear: electronic driver up to 50.000 hours, DIP-switch  
LED life expectancy: up to 80.000 hours  
optical system: diffuse  
light distribution: asymmetrical or symmetrical; L1 or 2 windows  
luminaire head: made of stainless steel; powder coated or brushed and passivated  
luminaire body: cylindrical tube with or without door, made of stainless steel; powder coated or brushed and passivated  
DB 703  
colour: PMMA RESIST, opal, high-impact-resistant  
glazing: completely wired; incl. cable junction box for max. 2 cables up to 5 x 10mm<sup>2</sup> / 3 cables up to 5 x 6mm<sup>2</sup>  
wiring: with flange plate to be screwed on a concrete foundation on site or on an additional bolt-on root  
installation: bolt-on root with screws, accessory ring – to be ordered separately  
accessory:

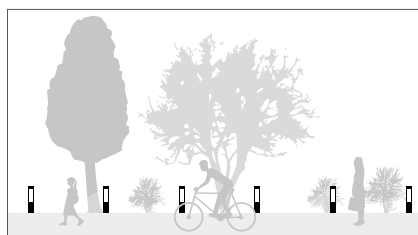


lamp	light distribution	product code	kg
<b>PETRA P II TAB-LL LED – powder coated</b> TAB-LL LED 14.9W/1,532lm/3,000K	asymmetrical, 1-seitig	9.883.9123.11-G30	11.6
<b>PETRA P II TAB-LL LED – brushed and passivated</b> TAB-LL LED 14.9W/1,532lm/3,000K	asymmetrical, 1-seitig	9.883.9123.113-G30	11.6
<b>PETRA P VIII TAB-LL LED – powder coated</b> TAB-LL LED 14.9W/1,532lm/3,000K	symmetrical, 2-seitig	9.883.9123.10-G30	10.0
<b>PETRA P VIII TAB-LL LED – brushed and passivated</b> TAB-LL LED 14.9W/1,532lm/3,000K	symmetrical, 2-seitig	9.883.9123.40-G30	10.0
<b>accessory: bolt-on root – hot-dip galvanised steel, incl. screws</b> • G180/400		9.900.0011.00	3.5
<b>accessory: accessory ring - stainless steel</b> • Z180/2 - DB 703 • Z180/2 - brushed and passivated		9.900.0010.25 9.900.0010.45	0.3 0.3



### pavement

requirements:  $E_m$  2lx /  $E_{min}$  0,4lx | lighting class: P6  
PETRA P II TAB-LL LED  
total height: 1.13m  
pavement: 2.50m  
pole spacing: 12.00m



### pavement

requirements:  $E_m$  2lx /  $E_{min}$  0,4lx | lighting class: P6  
PETRA P VIII TAB-LL LED  
total height: 1.13m  
pavement: 2.50m  
pole spacing: 14.00m



CRI 70

IP 65

IK 08

220–240V  
50–60Hz

WA  
0.11m<sup>2</sup>

CE

• LL stock

on request:

4,000K

RAL / DB

at extra cost:

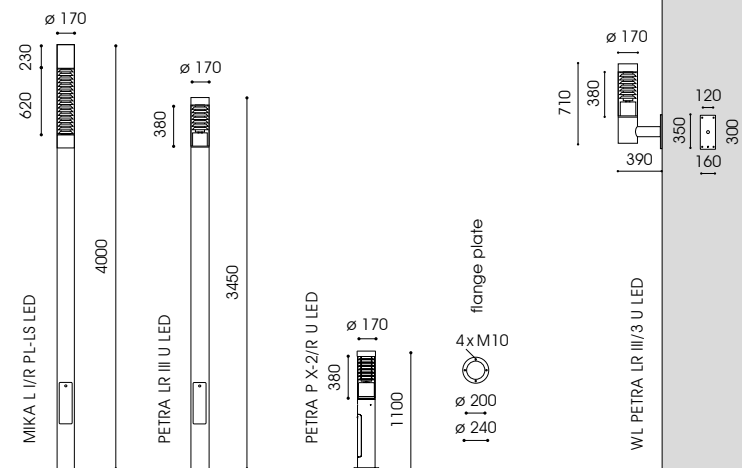


10kV

dimming

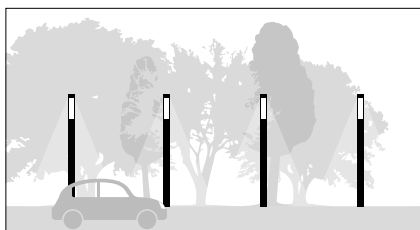


# MIKA L I/R PL-LS PETRA LR III U, P X-2/R U



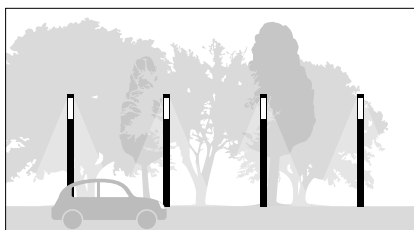
total height: 0.71m / 1.10m / 3.45m / 4.00m  
light standards: low and medium lighting requirements  
lamp: incl. 1 glare-free PL-LS LED module or U LED module  
colour temperature: 3,000K warm white  
LED gear: electronic driver up to 100,000 hours  
LED life expectancy: up to 100,000 hours  
optical system: louvre system for vertically mounted light with additional interior satinised anti-glare tube  
light distribution: symmetrical or asymmetrical  
luminaire head: made of hot-dip galvanised steel, cap made of aluminium; powder coated  
luminaire body: straight tubular column made of hot-dip galvanised steel with door for cable junction box, powder coated  
bracket: incl. wall bracket with wall shield made of hot-dip galvanised steel; powder coated  
colour: DB 703  
glazing: PMMA RESIST, clear, high-impact-resistant  
wiring: completely wired; MIKA L: with cable until access door; PETRA: via a plug and socket connector below the luminaire head; PETRA P: incl. cable junction box: with cable until access door for max. 2 cables up to 5 x 16mm<sup>2</sup> / 3 cables up to 5 x 10mm<sup>2</sup>  
installation: with flange plate to be screwed on a concrete foundation on site or on an additional bolt-on root; wall luminaire: to be screwed on the wall  
accessory: cable, cable junction box (luminous column), column accessories, bolt-on root with screws, accessory ring, fixing material for the wall installation – to be ordered separately

lamp	light distribution	product code	kg
<b>MIKA L I/R PL-LS LED – 4.00m</b>			
PL-LS LED 21W/4,000lm/3,000K	symmetrical	4.100.9744.01-2BF	67.7
PL-LS LED 27W/4,000lm/3,000K	asymmetrical with back shield	4.100.9744.01-3BF	67.7
<b>PETRA LR III U LED – 3.45m</b>			
U LED 15W/3,000lm/3,000K	symmetrical	9.824.9033.65-24F	45.0
U LED 15W/3,000lm/3,000K	asymmetrical	9.824.9033.65-44F	45.0
<b>PETRA P X-2/R U LED – 1.10m</b>			
U LED 11W/2,000lm/3,000K	symmetrical	9.883.9024.752-24	33.0
<b>WL PETRA LR III/3 U LED</b>			
U LED 11W/2,000lm/3,000K	asymmetrical	9.548.9024.55390-44	20.0



## residential road

requirements:  $E_m$  3lx /  $E_{min}$  0,6lx | lighting class: P5  
MIKA L I/R PL-LS LED 21W/4,000lm/3,000K, symmetrical  
total height: 4.00m  
street width: 5.00m  
pole spacing: 29.00m



## residential road

requirements:  $E_m$  3lx /  $E_{min}$  0,6lx | lighting class: P5  
PETRA LR III U LED 15W/3,000lm/3,000K, symmetrical  
total height: 3.45m  
street width: 5.00m  
pole spacing: 25.00m

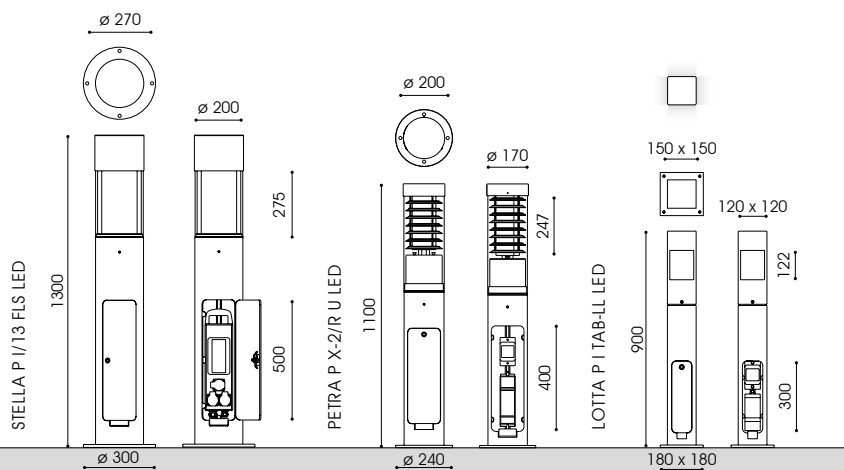


## pavement

requirements:  $E_m$  2lx /  $E_{min}$  0,4lx | lighting class: P6  
PETRA P X-2/R U LED 11W/2,000lm/3,000K, symmetrical  
total height: 1.10m  
pavement: 2.50m  
pole spacing: 17.00m

- ±
- CLO
- CRI 80
- IP 65
- IK 08
- 220–240V  
50–60Hz
- WA  
MIKA L:  
0.68m<sup>2</sup>
- WA  
PETRA LR:  
0.59m<sup>2</sup>
- WA  
PETRA P X:  
0.19m<sup>2</sup>
- CE
- MIKA:  
10kV
- PETRA:  
2x 20kV
- on request:
- 2,000lm  
3,000lm
- PETRA:  
2,700K  
4,000K
- RAL / DB
- root

- at extra cost:
- 
- dimming
- PETRA:  
CLEVER LIGHT
- other heights
- asym. back shield

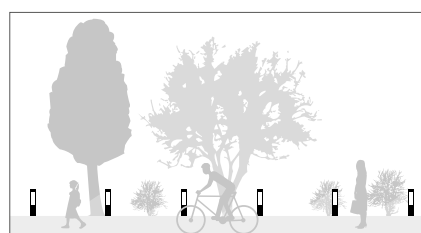
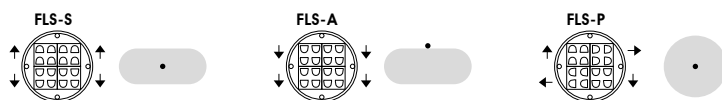


STELLA P I/13 FLS  
PETRA P X-2/R U  
LOTTA P I TAB-LL

total height:	STELLA P: 1.30m / PETRA P: 1.10m / LOTTA P: 0.90m
light standards:	low and medium lighting requirements
lamp:	incl. 1 replaceable FLS LED module; incl. 1 glare-free U LED module or incl. 1 TAB-LL LED module
colour temperature:	STELLA / PETRA: 3,000K warm white; LOTTA: 4,000K neutral white
LED gear:	electronic driver bis 85.000 or 100.000 hours
LED life expectancy:	FLS and U LED: up to 100,000 hours; TAB-LL LED: up to 80,000 hours
optical system:	FLS: directed light (multi layer) provided by a computer optimised anti-aging lens technology; dark sky; U LED: louvre system for vertically mounted light with additional interior sated anti-glare tube; TAB-LL LED: diffuse
light distribution:	FLS-S oval wide beam; FLS-A asymmetrical wide beam; FLS-P symmetrical; U LED: symmetrical; TAB-LL LED: symmetrical; 4 windows
luminaire body:	STELLA P: made of stainless steel and tube made of aluminium, powder coated; PETRA P: made of stainless steel and tube made of hot-dip galvanised steel, powder coated; LOTTA P: made of square stainless steel, powder coated
equipment:	STELLA P: incl. distribution box with 3 pcs. sockets 16A/ 1p / 230V, RCDs, MCBs; PETRA P and LOTTA P: incl. cable junction box and 1 socket 16A/ 1p / 230V
colour:	DB 703
glazing:	STELLA / PETRA: PMMA RESIST, clear, high-impact resistant
wiring:	LOTTA: PMMA RESIST, opal, high-impact-resistant
installation:	incl. cable junction box or terminal point with flange plate to be screwed or on an additional bolt-on roof
accessory:	bolt-on roof with screws, accessory ring (s. page 21) – to be ordered separately

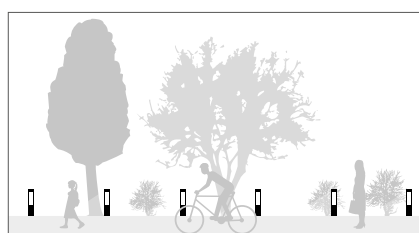


lamp	light distribution	product code	kg
<b>STELLA P I/13 FLS LED – 1.30m</b>			
FLS-S LED 11W/1,660lm/3,000K	oval wide beam	6.628.9371.2013AL3S	21.8
FLS-A LED 11W/1,660lm/3,000K	asymmetrical wide beam	6.628.9373.2013AL3S	21.8
FLS-P LED 11W/1,660lm/3,000K	symmetrical	6.628.9375.2013AL3S	21.8
<b>PETRA P X-2/R U LED – 1.10m</b>			
U LED 11W/2,000lm/3,000K	symmetrical	9.883.9024.752-24-1S	33.5
<b>LOTTA P I TAB-LL LED – 0.9m</b>			
TAB-LL LED 14.9W/1,632lm/4,000K	symmetrical	6.810.9123.114-G40K1ST	13.4



#### pavement

requirements:  $E_{min}$  2lx /  $E_{min}$  0,4lx | lighting class: P6  
STELLA P I/13 FLS-P LED 11W/1,660lm/3,000K  
total height: 1.30m  
pavement: 2.50m  
pole spacing: 12.00m



#### pavement

requirements:  $E_{min}$  2lx /  $E_{min}$  0,4lx | lighting class: P6  
PETRA P X-2/R U LED 11W/2,000lm/3,000K  
total height: 1.10m  
pavement: 2.50m  
pole spacing: 17.00m



#### pavement

requirements:  $E_{min}$  2lx /  $E_{min}$  0,4lx | lighting class: P6  
LOTTA P I TAB-LL LED 14.9W/1,632lm/4,000K  
total height: 900mm  
pavement: 2.50m  
pole spacing: 10.00m



STELLA /  
PETRA: CLO

FLS / TAB:  
CRI 70  
R U: CRI 80

IP 65

IK 08

220–240V  
50–60Hz

WA:  
STELLA P  
0.20m²

WA:  
PETRA P  
0.19m²

WA:  
LOTTA P  
0.11m²



STELLA:  
10kV

PETRA:  
2 x 20kV

on  
request:

2,700K  
4,000K  
3,000K

RAL / DB

other  
optics

at extra  
cost:



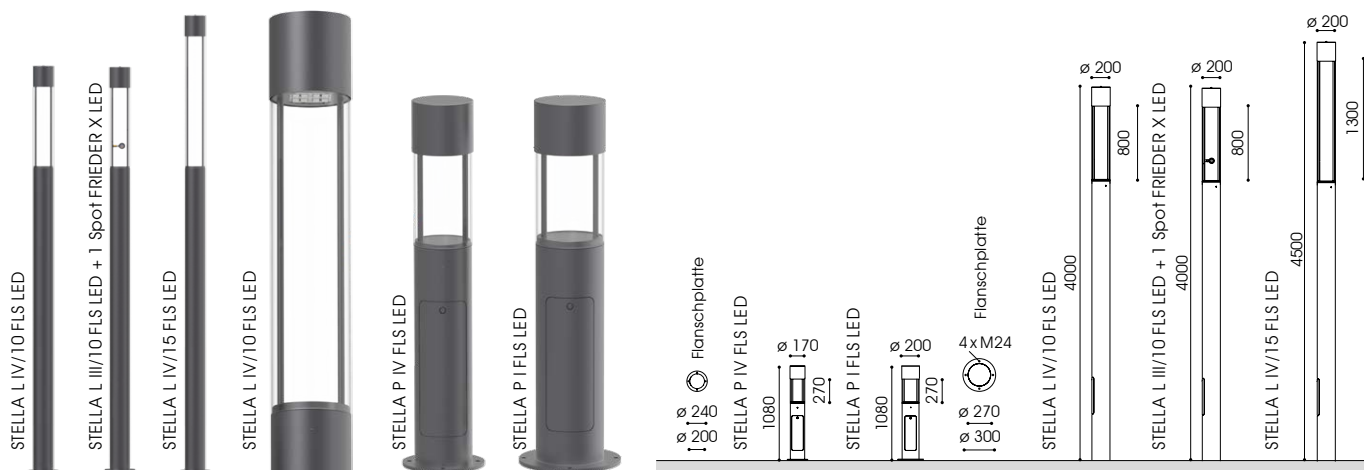
LOTTA:  
10kV

dimming

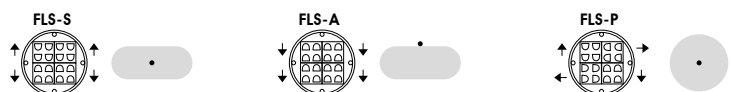


other  
heights

# STELLA L III, IV, P IV FLS STELLA P I FLS



total height: 1.08m / 4.00m / 4.50m  
light standards: low and medium lighting requirements  
lamp: incl. 1 FLS LED module; optionally with 1 spot FRIEDER X LED  
colour temperature: 3,000K warm white  
LED gear: electronic driver up to 100,000 hours  
LED life expectancy: up to 100,000 hours; spot: up to 50,000 hours  
optical system: lens technology; FLS LED: dark sky  
light distribution: FLS-S oval wide beam; FLS-A asymmetrical wide beam; FLS-P symmetrical; Spot: 30°  
luminaire head: made of stainless steel, with cap made of aluminium; powder coated; spot: made of aluminium; with a magnetic joint for individual adjustment  
luminaire body: straight tubular column, STELLA L, P I: made of aluminium; STELLA P: made of hot-dip galvanised steel; with access door for cable junction box; powder coated DB 703  
colour: PMMA RESIST, clear, high-impact resistant  
glazing: STELLA L: completely wired; with cable until access door; STELLA P: incl. cable junction box for max. for 2 cables up to 5 x 16mm<sup>2</sup> / 3 cables up to 5 x 10mm<sup>2</sup>  
wiring: with flange plate to be screwed on a concrete foundation on site or on an additional bolt-on root  
installation: cable junction box ((STELLA L), column accessories, accessory ring, bolt-on root with screws (s. page 21) – to be ordered separately



lamp	light distribution	product code	kg
<b>STELLA L IV/10 FLS LED – 4.00m</b>			
FLS-S LED 22W/2,960lm/3,000K	oval wide beam	9.628.9071.65ALBF	39.0
FLS-A LED 22W/2,960lm/3,000K	asymmetrical wide beam	9.628.9073.65ALBF	39.0
FLS-P LED 22W/2,960lm/3,000K	symmetrical	9.628.9075.65ALBF	39.0
<b>STELLA L III/10 FLS LED – 4.00m, incl. 1 spot FRIEDER X LED 7W/623lm/3,000K/30°</b>			
FLS-S LED 22W/2,960lm/3,000K	oval wide beam	9.628.9071.55ALBF-33	40.0
FLS-A LED 22W/2,960lm/3,000K	asymmetrical wide beam	9.628.9073.55ALBF-33	40.0
FLS-P LED 22W/2,960lm/3,000K	symmetrical	9.628.9075.55ALBF-33	40.0
<b>STELLA L IV/15 FLS LED – 4.50m</b>			
FLS-S LED 22W/2,960lm/3,000K	oval wide beam	9.628.9071.655ALCF	41.0
FLS-A LED 22W/2,960lm/3,000K	asymmetrical wide beam	9.628.9073.655ALCF	41.0
FLS-P LED 22W/2,960lm/3,000K	symmetrical	9.628.9075.655ALCF	41.0
<b>STELLA P IV FLS LED – 1.08m</b>			
FLS-S LED 11W/1,660lm/3,000K	oval wide beam	6.628.9371.65	22.3
FLS-A LED 11W/1,660lm/3,000K	asymmetrical wide beam	6.628.9373.65	22.3
FLS-P LED 11W/1,660lm/3,000K	symmetrical	6.628.9375.65	22.3
<b>STELLA P I FLS LED – 1.08m</b>			
FLS-S LED 11W/1,660lm/3,000K	oval wide beam	6.628.9371.20AL	14.9
FLS-A LED 11W/1,660lm/3,000K	asymmetrical wide beam	6.628.9373.20AL	14.9
FLS-P LED 11W/1,660lm/3,000K	symmetrical	6.628.9375.20AL	14.9

## local distribution road

requirements:  $E_{min}$  5lx /  $E_{min}$  1lx | lighting class: P4  
STELLA L IV/10 FLS-A LED 22W/2,960lm/3,000K  
total height: 4.00m  
pavement on one side: 1.50m  
street width: 6.00m  
pole spacing: 26.00m

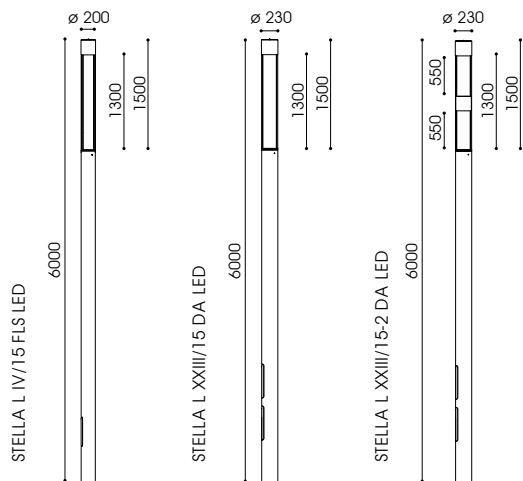
## local distribution road

requirements:  $E_{min}$  5lx /  $E_{min}$  1lx | lighting class: P4  
STELLA L IV/15 FLS-A LED 22W/2,960lm/3,000K  
total height: 4.50m  
pavement on one side: 1.50m  
street width: 6.00m  
pole spacing: 30.00m

## pavement

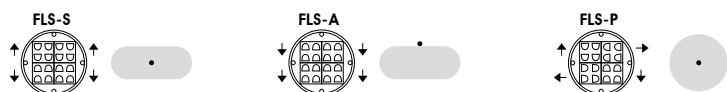
requirements:  $E_{min}$  2lx /  $E_{min}$  0.4lx | lighting class: P6  
STELLA P IV FLS-P LED 11W/1,660lm/3,000K  
total height: 1.08m  
pavement: 2.50m  
pole spacing: 10.00m





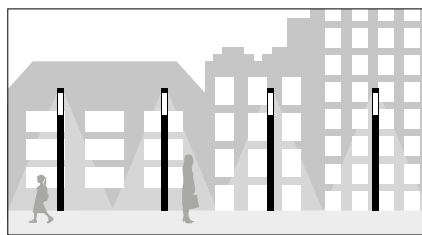
STELLA L IV/15 FLS  
STELLA L XXIII/15 DA  
STELLA L XXIII/15-2 DA

total height: 6.00m  
light standards: medium and high lighting requirements  
lamp: incl. 1 FLS LED or incl. 1 or 2 DA LED modules  
colour temperature: 3,000K warm white  
LED gear: electronic driver up to 100,000 hours  
LED life expectancy: up to 100,000 hours  
optical system: lens technology; dark sky  
light distribution: FLS LED: FLS-S oval wide beam; FLS-A asymmetrical wide beam; FLS-P symmetrical DA LED: asymmetrical wide beam (028); narrow and wide beam (268)  
luminaire head: with cap made of aluminium; powder coated  
luminaire body: straight tubular column made of aluminium with 1 or 2 access doors for cable junction box and driver; powder coated  
colour: DB 703  
glazing: PMMA RESIST, clear, high-impact resistant  
wiring: completely wired; completely wired; incl. cable until access door  
installation: with root to be set into the ground (1.00m)  
accessory: cable junction box, column accessories – to be ordered separately



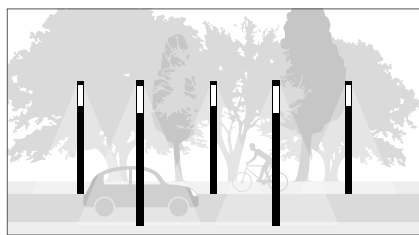
lamp	light distribution	product code	kg
<b>STELLA L IV/15 FLS LED – 6.00m, ø 200mm</b>			
FLS-S LED 32W/3,414lm/3,000K	oval wide beam	9.628.9671.655ALFE	47.0
FLS-A LED 32W/3,414lm/3,000K	asymmetrical wide beam	9.628.9673.655ALFE	47.0
FLS-P LED 32W/3,414lm/3,000K	symmetrical	9.628.9675.655ALFE	47.0
<b>STELLA L XXIII/15 DA LED – 6.00m, ø 230mm</b>			
DA+ 028 LED 19W/3,200lm/3,000K <sup>(2)</sup>	asymmetrical wide beam	9.628.8213.655028-3FE	66.4
DA+ 028 LED 22W/3,600lm/3,000K <sup>(2)</sup>	asymmetrical wide beam	9.628.8214.655028-3FE	66.4
DA+ 028 LED 27W/4,400lm/3,000K <sup>(2)</sup>	asymmetrical wide beam	9.628.8222.655028-3FE	66.4
DA+ 028 LED 37W/5,600lm/3,000K <sup>(2)</sup>	asymmetrical wide beam	9.628.8229.655028-3FE	66.4
<b>STELLA L XXIII/15-2 DA LED – 6.00m, ø 230mm with 2 light emissions</b>			
DA+ 028 LED 23W/4,000lm/3,000K <sup>(2)</sup>	asymmetrical wide beam	9.628.8215112.655028268-3ALFE	73.1
DA+ 268 LED 10W/1,600lm/3,000K	narrow and wide beam		

(2) 2 LED modules



#### Pedestrian zone

requirements:  $E_m$  7.5lx /  $E_{min}$  1.5lx | lighting class: P3  
STELLA L IV/15 FLS LED 32W/3,414lm/3,000K<sup>(2)</sup>  
total height: 6.00m  
pavement: 5.00m  
pole spacing: 20.00m



#### local distribution road

requirements:  $E_m$  5lx /  $E_{min}$  1lx | lighting class: P4  
STELLA L XXIII/15 DA LED  
arrangement: offset on both sides  
total height: 6.00m  
pavement on one side: 5.00m  
street width: 9.00m  
pole spacing: 30.00m



on request:

FLS:  
2,700K  
4,000K

RAL / DB

flange  
plate

at extra  
cost:

□

DA: 1,800K  
2,200K  
2,700K

dimming

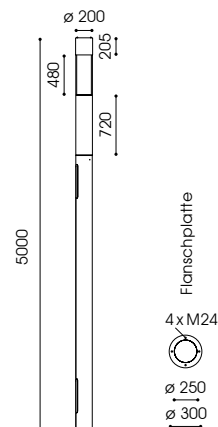
CLEVER LIGHT

other  
heights

spots

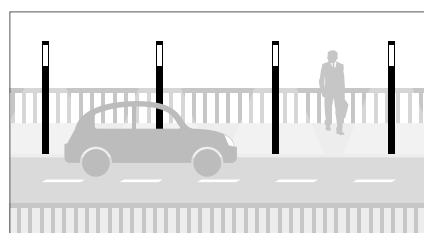
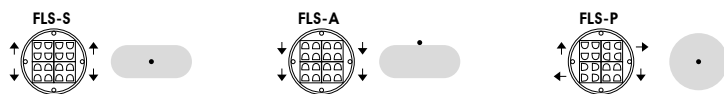
SMART CITY  
elements

Zhaga  
sockets



total height: 5,00m  
light standards: medium lighting requirements with RGBW accent lighting  
lamp: incl. 1 FLS LED module as basic light source; incl. LED stripes in RGB and white, as decorative unit  
colour temperature: 3,000K warm white  
LED gear: electronic driver up to 100,000 hours  
LED life expectancy: FLS LED: 100,000 hours; LED stripes: 50,000 hours  
Lichtsteuerung: incl. CASAMBI via bluetooth via free app on smartphone or Laptop; change of individual luminaires or groups in terms of color and brightness; up to 127 luminaires; can be operated from a distance of approx. 20m  
optical system: FLS: lens technology; dark sky; LED stripes: diffuse, RGB+W control for dynamic light  
light distribution: FLS LED: FLS-S oval wide beam; FLS-A asymmetrical wide beam; FLS-P symmetrical wide beam; LED stripes: symmetrical with cap made of aluminium; powder coated  
luminaire head: straight tubular column made of aluminium with access door for cable junction box, control unit and driver for RGB modules; powder coated  
luminaire body:  
colour: DB 703  
glazing: PMMA RESIST, high-impact-resistant; upper half: clear; lower half: satined  
wiring: completely wired; incl. cable until access door  
installation: with flange plate to be screwed on a concrete foundation on site or on an additional bolt-on root  
accessory: cable junction box, column accessories, accessory ring, bolt-on root with screws (s. page 21) – to be ordered separately

lamp	light distribution	product code	kg
<b>STELLA L IX/15 RGBW FLS LED – 5.00m; incl. CASAMBI controller</b>			
FLS-S LED 11W/1,660lm/3,000K	oval wide beam	9.628.9371.655DF-RGBW-CA-M	55.0
FLS-A LED 11W/1,660lm/3,000K	asymmetrical wide beam	9.628.9373.655DF-RGBW-CA-M	55.0
FLS-P LED 11W/1,660lm/3,000K	symmetrical	9.628.9375.655DF-RGBW-CA-M	55.0



#### bridge

requirements:  $E_{min}$  10lx /  $E_{max}$  2lx | lighting class: P2  
STELLA L IX/15 RGBW FLS-A LED 11W/1,660lm/3,000K  
total height: 5.00m  
pavement on both sides: 2 x 1.50m  
street width: 7.00m  
pole spacing: 10.00m

- ±
- CLO
- AC / DC
- 10kV
- FLS: CRI 70
- IP 65
- IK 08
- CASAMBI
- 220–240V 50–60Hz
- WA 1.00m<sup>2</sup>
- CE

on request:

- 2,700K
- 4,000K

RAL / DB

root

at extra cost:

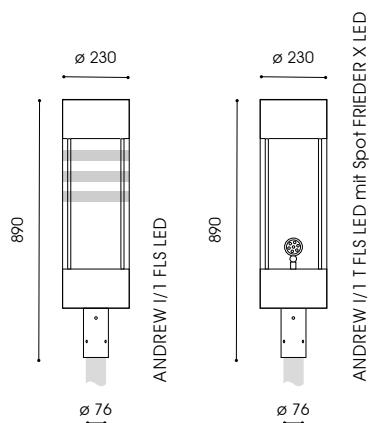


dimming

other heights

SMART CITY elements

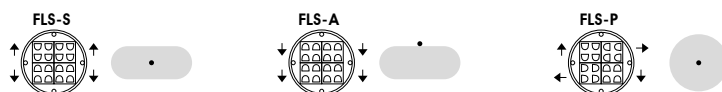
other light controls



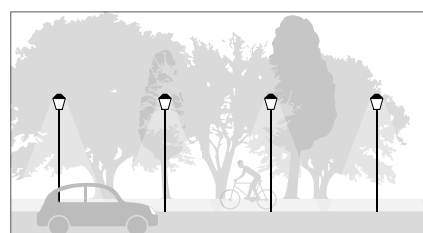
ANDREW I/1 FLS LED

ANDREW I/1 T FLS LED mit Spot FRIEDER X LED

recom. pole height: 3.00m – 6.00m  
 light standards: low and medium lighting requirements  
 lamp: incl. 1 FLS LED module; optionally with 1 spot Frieder X LED  
 colour temperature: 3,000K warm white  
 LED gear: electronic driver up to 100,000 hours  
 LED life expectancy: FLS LED: up to 100,000 hours; spot: up to 50,000 hours  
 optical system: lens technology; FLS LED: dark sky  
 light distribution: FLS-**S** oval wide beam; FLS-**A** asymmetrical wide beam; FLS-**P** symmetrical; spot: 30°  
 luminaire head: aluminium and stainless steel; powder coated; spot: made of aluminium; with a magnetic joint for individual adjustment  
 colour: DB 703  
 glazing: PMMA RESIST, clear, high-impact resistant, optionally with decor stripes  
 wiring: completely wired; incl. cable until access door (please specify pole height when ordering)  
 installation: for post top ø 76mm  
 accessory: pole, pole accessories, cable junction box – to be ordered separately



lamp	light distribution	product code	kg
<b>ANDREW I/1 FLS LED – with decor stripes, without LED spot</b>			
FLS- <b>S</b> LED 22W/2,960lm/3,000K	oval wide beam	9.302.9071.001	17.3
FLS- <b>A</b> LED 22W/2,960lm/3,000K	asymmetrical wide beam	9.302.9073.001	17.3
FLS- <b>P</b> LED 22W/2,960lm/3,000K	symmetrical	9.302.9075.001	17.3
<b>ANDREW I/1 T FLS LED – without decor stripes, incl. spot FRIEDER X LED 7W/623lm/3.000K/30°</b>			
FLS- <b>S</b> LED 22W/2,960lm/3,000K	oval wide beam	9.302.9071.011-33	18.3
FLS- <b>A</b> LED 22W/2,960lm/3,000K	asymmetrical wide beam	9.302.9073.011-33	18.3
FLS- <b>P</b> LED 22W/2,960lm/3,000K	symmetrical	9.302.9075.011-33	18.3
FLS- <b>S</b> LED 32W/3,414lm/3,000K	oval wide beam	9.302.9671.011-33	18.3
FLS- <b>A</b> LED 32W/3,414lm/3,000K	asymmetrical wide beam	9.302.9673.011-33	18.3
FLS- <b>P</b> LED 32W/3,414lm/3,000K	symmetrical	9.302.9675.011-33	18.3



#### local distribution road

requirements:  $E_m$  5lx /  $E_{min}$  1lx | lighting class: P4  
 ANDREW I/1 T FLS-A LED 22W/2,960lm/3,000K  
 pole height: 4.50m  
 street width: 6.00m  
 pavement on one side: 1.50m  
 pole spacing: 34.00m



ANDREW I/1 FLS  
 ANDREW I/1 T FLS

- ⊕
- CLO
- AC / DC
- 10kV
- CRI 70
- IP 67
- IK 08
- 220 – 240V  
50 – 60Hz
- WA  
0.18m²
- CE
- on request:
- 2,700K  
4,000K
- RAL / DB
- satined glazing
- at extra cost:
- 
- dimming
- CLEVER LIGHT
- bracket
- SMART CITY elements
- other spot



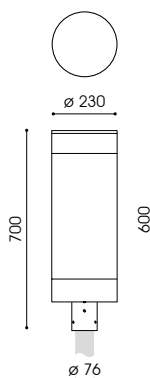
FRANZ I DA LED



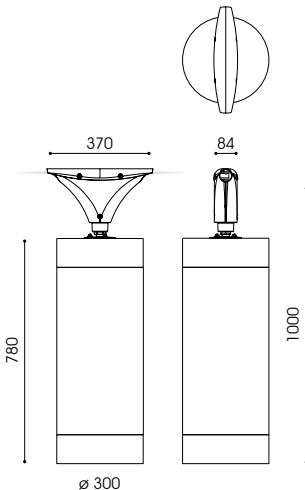
HL FRANZ V DA LED



FRANZ I DA LED



HL FRANZ V DA LED



recom. pole height: FRANZ I: 3.00m – 6.00m  
 mounting height: HL FRANZ V: 5.00m – 10.00m  
 light standards: medium and high lighting requirements  
 lamp: incl. 2 DA LED modules  
 colour temperature: 3,000K warm white  
 LED gear: electronic driver up to 100,000 hours  
 LED life expectancy: up to 100,000 hours  
 optical system: lens technology  
 light distribution: asymmetrical wide beam (028) or symmetrical (058)  
 luminaire head: aluminium and stainless steel, with cap of aluminium; powder coated  
 colour: DB 703  
 glazing: PMMA RESIST, satined, high-impact resistant  
 wiring: completely wired; via a plug and socket connector outside the luminaire head  
 installation: FRANZ I: for post top ø 76mm  
 HL FRANZ V incl. suspension device for installation friendly fixing on steel cables with the possibility for horizontal and vertical adjustment of the luminaire  
 accessory: pole, pole accessories – to be ordered separately

- ☐
- CLO
- AC / DC
- 10kV
- CRI 70
- IP 65
- IK 10
- 220–240V  
50–60Hz
- WA  
0.14m²
- CE

- on request:
- 4,000K
  - RAL / DB
  - other optics

- at extra cost:
- ☐

- dimming
- CLEVER LIGHT
- bracket
- 1,800K  
2,200K  
2,700K
- Zhaga sockets

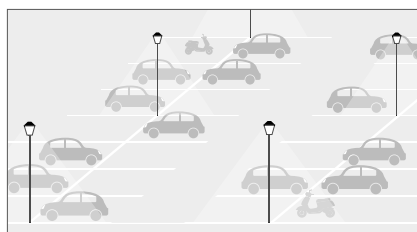
lamp	light distribution	product code	kg
<b>FRANZ I DA LED</b>			
DA+ 028 LED 13W/2,200lm/3,000K <sup>(2)</sup>	asymmetrical wide beam	9.100.8207.08028-3	16.0
DA+ 028 LED 20W/3,200lm/3,000K <sup>(2)</sup>	asymmetrical wide beam	9.100.8212.08028-3	16.0
DA+ 028 LED 26W/4,000lm/3,000K <sup>(2)</sup>	asymmetrical wide beam	9.100.8217.08028-3	16.0
DA+ 058 LED 15W/2,200lm/3,000K <sup>(2)</sup>	symmetrical	9.100.8207.08058-3	16.0
DA+ 058 LED 23W/3,200lm/3,000K <sup>(2)</sup>	symmetrical	9.100.8212.08058-3	16.0
DA+ 058 LED 26W/4,000lm/3,000K <sup>(2)</sup>	symmetrical	9.100.8217.08058-3	16.0
<b>HL FRANZ V DA LED</b>			
DA+ 028 LED 23W/4,000lm/3,000K <sup>(2)</sup>	asymmetrical wide beam	9.113.8215.08028-3	19.5
DA+ 028 LED 35W/5,800lm/3,000K <sup>(2)</sup>	asymmetrical wide beam	9.113.8224.08028-3	19.5
DA+ 028 LED 47W/7,400lm/3,000K <sup>(2)</sup>	asymmetrical wide beam	9.113.8228.08028-3	19.5
DA+ 058 LED 23W/4,000lm/3,000K <sup>(2)</sup>	symmetrical	9.113.8215.08058-3	19.5
DA+ 058 LED 35W/5,800lm/3,000K <sup>(2)</sup>	symmetrical	9.113.8224.08058-3	19.5
DA+ 058 LED 47W/7,400lm/3,000K <sup>(2)</sup>	symmetrical	9.113.8228.08058-3	19.5

<sup>(2)</sup> 2 LED modules



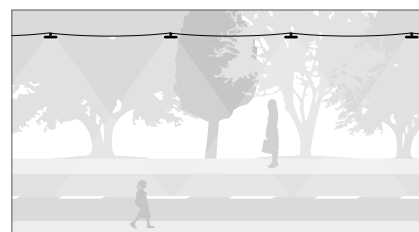
#### residential road

requirements:  $E_m$  3lx /  $E_{min}$  0,6lx | lighting class: P5  
 FRANZ I DA+ 028 LED 20W/ 3,200lm/ 3,000K  
 pole height: 4.00m  
 street width: 5.00m  
 pavement on one side: 1.50m  
 pole spacing: 30.00m



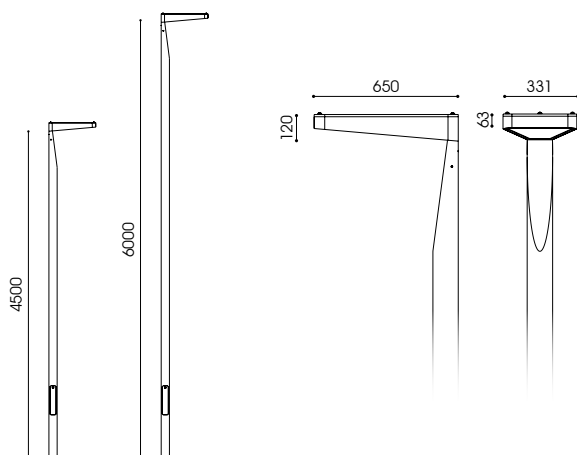
#### car park

area: 75.00m x 49.00m;  
 30 parking lots; arranged in 6 rows  
 requirements:  $E_m$  5lx /  $g$  0,25  
 FRANZ I DA+ 058 LED 23W/3,200lm/3,000K  
 quantity: 5 luminaires per row  
 pole height: 4.00m  
 pole spacing: 15.00m



#### local distribution road

requirements:  $E_m$  5lx /  $E_{min}$  1lx | lighting class: P4  
 HL FRANZ V DA+ 028 LED 23W/4,000lm/3,000K<sup>(2)</sup>  
 mounting height: 6.00m  
 pavement on both sides: 2.00m  
 street width: 6.00m  
 pole spacing: 20.00m

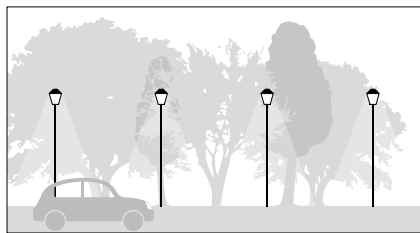


lamp height:	4.50m / 6.00m
light standards:	low and medium lighting requirements
lamp:	incl. 1 DA LED module
colour temperature:	3,000K warm white
LED gear:	electronic driver up to 100,000 hours
LED life expectancy:	up to 100,000 hours
optical system:	lens technology
light distribution:	asymmetrical wide beam (028)
luminaire head:	stainless steel and aluminium; powder coated; to be opened upwards
Mast:	incl. straight pole with special cut end in the shape of a whistle, made of hot-dip galvanised steel; access door for cable junction box; powder coated, single colour; 4.50m or 6.00m
colour:	DB 703 (single colour); 2 colored pole on request
glazing:	PMMA RESIST, clear, flat, high-impact-resistant
wiring:	komplett verdrahtet; mit freien Leitungsenden bis zur Masttür
installation:	with root to be set into the ground; 4.50m / 0.8m; 6.00 / 1.00m
accessory:	cable junction box, pole accessories, back light shield for non-glare on the rear side – to be ordered separately



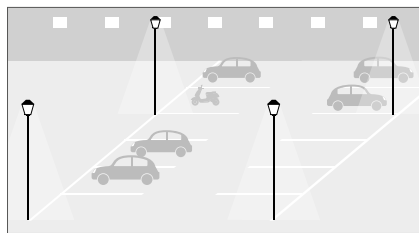
lamp	light distribution	product code	kg
<b>MORTEN I DA LED – pole 4.50m / ø 114mm</b>			
DA+ 028 LED 12W/2.000lm/3.000K	asymmetrical wide beam	6.986.8115.028-3CE	*55,0
DA+ 028 LED 18W/2.900lm/3.000K	asymmetrical wide beam	6.986.8124.028-3CE	*55,0
DA+ 028 LED 23W/3.700lm/3.000K	asymmetrical wide beam	6.986.8128.028-3CE	*55,0
DA+ 028 LED 29W/4.400lm/3.000K	asymmetrical wide beam	6.986.8130.028-3CE	*55,0
<b>MORTEN I DA LED – pole 6.00m / ø 114mm</b>			
DA+ 028 LED 14W/2.300lm/3.000K	asymmetrical wide beam	6.986.8118.028-3FE	*70,0
DA+ 028 LED 18W/2.900lm/3.000K	asymmetrical wide beam	6.986.8124.028-3FE	*70,0
DA+ 028 LED 23W/3.700lm/3.000K	asymmetrical wide beam	6.986.8128.028-3FE	*70,0
DA+ 028 LED 29W/4.400lm/3.000K	asymmetrical wide beam	6.986.8130.028-3FE	*70,0
incl. 2 coloured pole		6.986.xxxx.028-3xE-RD2	
<b>accessory: back light shield (1 piece per lens; max. 4 pieces per module)</b>			
• LS DA 1		2.914.8301.17	0,01

\* incl. pole



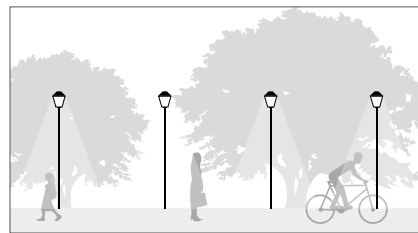
#### residential road

requirements:  $E_m$  3lx /  $E_{min}$  0,6lx | lighting class: P5  
 DA+ 028 LED 12W/2.000lm/3.000K  
 pole height: 4.50m  
 pavement on one side: 1.50m  
 street width: 5.00m  
 pole spacing: 30.00m



#### car park

area: 50.00m x 16.00m;  
 20 parking lots; arranged à 2 rows  
 requirements:  $E_m$  5lx /  $g$  0,25  
 DA+ 028 LED 23W/3.700lm/3.000K  
 quantity: 4 luminaires  
 pole height: 6.00m  
 pole spacing: 25.00m



#### pavement

requirements:  $E_m$  5lx /  $E_{min}$  1lx | lighting class: P4  
 DA+ 028 LED 14W/2.300lm/3.000K  
 pole height: 6.00m  
 pavement on one side: 2.50m  
 pole spacing: 35.00m



CLO

AC / DC

10kV

CRI 70

IP 65

IK 10

220–240V  
50–60HzWA  
4.50m: 0.59m²  
6.00m: 0.76m²

pole

CE

Z Zhaga

• LL stock

on  
request:

4,000K

other  
optics

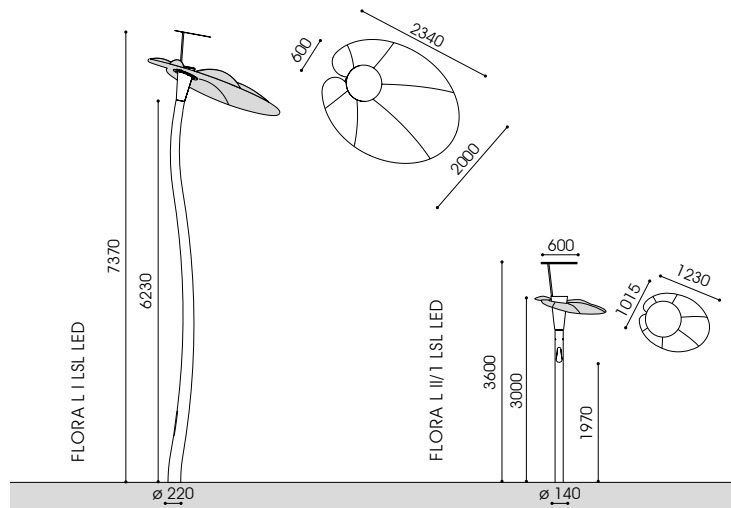
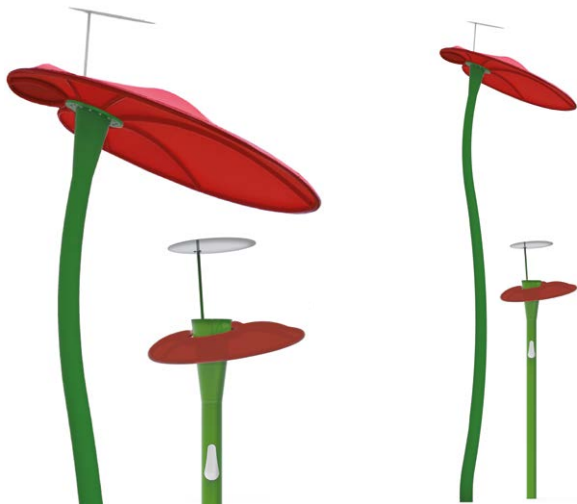
RAL / DB

flange  
plateat extra  
cost:

dimming



# FLORA L I LSL FLORA L II/1 LSL



CLO

LSL LED:  
AC / DC

10kV

CRI 80

IP 65

IK 08

220–240V  
50–60Hz

FLORA L I:  
WA 1.4m<sup>2</sup>

FLORA L II/1  
WA 0.68m<sup>2</sup>

pole

CE

on  
request:

4,000K

RAL / DB

at extra  
cost:



dimming

flange  
plate



FLORA L I LSL



FLORA L II/1 LSL

total height: FLORA L I: 7.37m  
FLORA L II/1: 3.60m  
light standards: low and medium lighting requirements  
lamp: FLORA L I: incl. LSL LED module  
FLORA L II/1: incl. LSL LED module and glare-free LLM-DA LED module  
colour temperature: 3,000K warm white  
LED gear: electronic driver up to 100,000 hours  
LED life expectancy: LSL LED: up to 80,000 hours  
LLM-DA LED: up to 100,000 hours  
optical system: diffuse  
light distribution: indirect, symmetrical; LLM-DA : direct asymmetrical  
luminaire head: cast aluminium, stainless steel; leaf construction made of hot-dip galvanised steel; powder coated; incl. awning cloth in read  
Mast: FLORA I LSL LED: twice bent tapered pole; made of hot dip galvanised steel; powder coated  
FLORA II/1 LSL LED: straight, cylindrical pole with light drop; made of hot dip galvanised steel; powder coated RAL 6017  
colour: flat, clear toughened glass glazing; dewdrop shape made of PMMA RESIST, opal, high-impact resistant  
glazing: completely wired, incl. cable until access door  
wiring: with root to be set into the ground; 7.37m / 1.00m; 3.60m / 0.80m  
installation: cable junction box, pole accessories – to be ordered separately

lamp	light distribution	product code	kg
<b>FLORA L I LSL LED – 7.37m</b> LSL LED 33W/5,100lm/3,000K	symmetrical	6.111.9098.0313G	280.0
<b>FLORA L II/1 LSL LED – 3.60m</b> LSL LED 33W/5,100lm/3,000K + LLM-DA LED 9W/1,100lm/3,000K	symmetrical asymmetrical wide beam	6.112.9098.0212A	130.0



## square

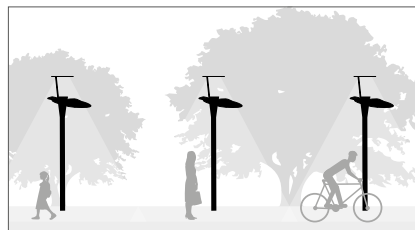
area: 50.00m x 30.00m

requirements:  $E_m$  5lx /  $g$ , 0,25

FLORA L I LSL LED

quantity: 5 luminaires

pole spacing: 15.00m



## pavement

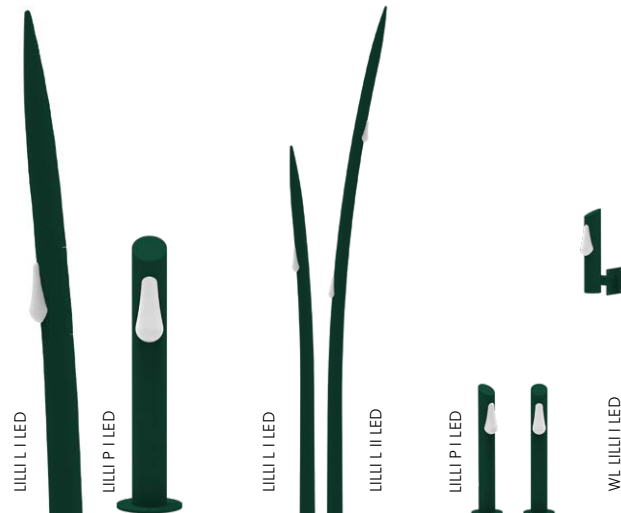
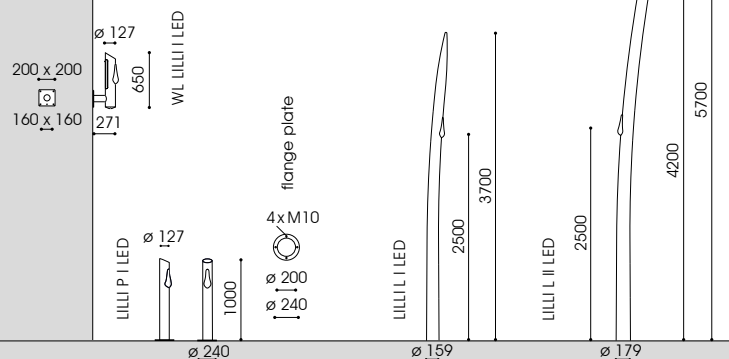
requirements:  $E_m$  5lx /  $E_{min}$  1lx | lighting class: P4

FLORA L II/1 LSL LED

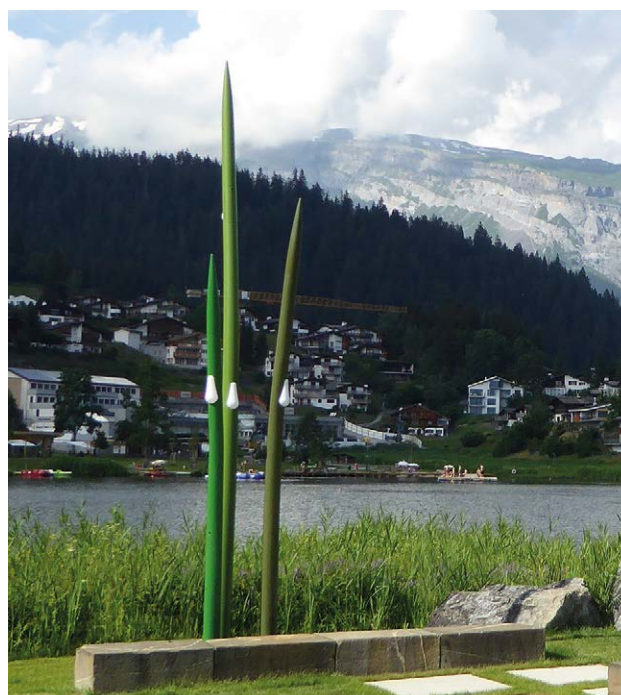
pavement: 3.00m

pole spacing: 22.00m

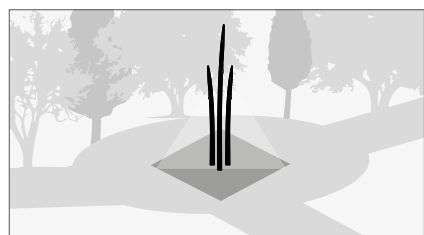




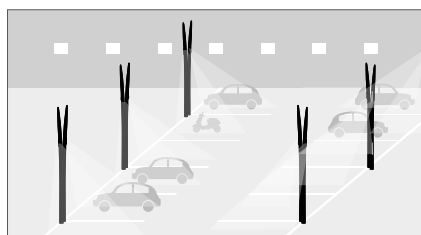
- total height: 0.65m / 1.00m / 3.70m / 5.70m  
light standards: low and medium lighting requirements  
lamp: incl. 1 or 2 LLM-DA LED modules  
colour temperature: 3,000K warm white  
LED gear: up to 50.000 hours  
LED life expectancy: up to 80.000 hours  
optical system: system for LLM-DA LED modules, diffuse  
light distribution: asymmetrical wide beam  
luminaire body: hot-dip galvanised steel; powder coated; LILLI L: tapered bent pole, with top made of cast aluminium; with 2 or 3 access doors for cable junction box and drivers; LILLI P: cylindrical tube with 2 access doors for cable junction box and drivers; WL LILLI: cylindrical tube with access door for driver
- bracket: incl. wall bracket with wall shield made of hot-dip galvanised steel; powder coated
- colour: RAL 6009
- glazing: in drop shape made of PMMA RESIST, opal, high-impact-resistant
- wiring: LILLI L, WL LILLI: completely wired, incl. cable until access door; LILLI P: incl. cable junction box for max. 2 cables up to 5x10mm<sup>2</sup> / 3 cables up to 5x6mm<sup>2</sup>  
with root to be set into the ground 3.70m / 1.00m; 5.70m / 1.00m; LILLI P: with flange plate; WL LILLI: with wall shield to be screwed on the wall
- installation: pole accessory, cable junction box, bolt-on root with screws G240/500 (LILLI P) (s. page 21), fixing material for the wall installation – to be ordered separately
- accessory:



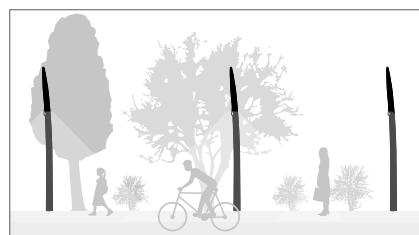
lamp	light distribution	product code	kg
<b>LILLI L I LED – 3.70m</b>			
LLM LED 9W/1,100lm/3,000K	asymmetrical wide beam	9.956.0138.70	60.0
<b>LILLI L II LED – 5.70m</b>			
LLM-DA LED 16W/1,800lm/3,000K + LLM LED 9W/1,100lm/3,000K	asymmetrical wide beam	9.956.0118.70-2	93.0
<b>LILLI P I LED – 1.00m</b>			
LLM LED 9W/1,100lm/3,000K	asymmetrical wide beam	9.956.0139.03	20.0
<b>WL LILLI I LED – 0.65m</b>			
LLM LED 9W/1,100lm/3,000K	asymmetrical wide beam	9.956.0150.03	15.0



**square**  
area: 13.00m x 13.00m  
**requirements:** E<sub>m</sub> 5lx / g, 0,25  
LILLI L I LED and LILLI L II LED  
quantity: 1 luminaire LILLI L II LED  
2 luminaires LILLI L I LED  
total height: 3.70m and 5.70m  
pole spacing: 0.75m



**car park**  
area: 50.00m x 16.00m;  
20 parking lots; arranged à 2 rows  
**requirements:** E<sub>m</sub> 5lx / g, 0,25  
LILLI L I LED  
quantity: 16 luminaires  
total height: 3.70m  
pole spacing: 15.00m



**pavement**  
**requirements:** E<sub>m</sub> 3lx / E<sub>min</sub> 0,6lx | lighting class: P5  
LILLI L I LED  
total height: 3.70m  
street width: 4.00m  
pole spacing: 18.00m

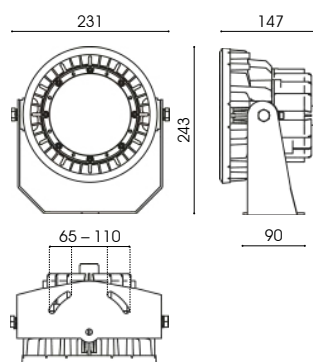


on request:



at extra cost:





4kV

RA 85

IP 65

IK 10

220–240V  
50–60Hz

WA  
0.18m<sup>2</sup>

ambient  
temperature  
-40°C bis 50°C



light standards:

lamp:

colour temperature:

LED gear:

LED life expectancy:

optical system:

light distribution:

beam:

luminaire body:

bracket:

glazing:

wiring:

glazing:

installation:

accessory:

medium lighting requirements

incl. 12 High Power LEDs

4,000K neutral white or 3,000K warm white

incl. electronic driver, in heat sink integrated, continuous adjustable (55W - 96W), lumenous flux adjustable 50.000 hours

lense system for efficient alignment

symmetrical, symmetrical narrow beam or symmetrical wide beam

15°, 45°, 28° or 120°

made of aluminium made of corrosion-resistant cast aluminium; black; anodised

made of satinless steel

polycarbonate, clear, UV-stabilised

incl. 350mm cable pre-assembled

polycarbonate, clear, UV-stabilised

to fixed on a pole, in the luminaire, for screwing to the wall, on the ground spike or bracket

adapter for pole mounting, traverse, pole – to be ordered separately

lamp	beam	light distribution	product code	kg
<b>FRIEDER XIII LED</b>				
LED 96W/8,500lm/3,000K	15°	symmetrical engstrahlend	6.119.9096.13-3015	3.3
LED 96W/8,500lm/3,000K	28°	symmetrical	6.119.9096.13-3028	3.3
LED 96W/8,500lm/3,000K	45°	symmetrical	6.119.9096.13-3045	3.3
LED 96W/8,500lm/3,000K	120°	symmetrical wide beam	6.119.9096.13-30120	3.3
LED 96W/8,900lm/4,000K	15°	symmetrical engstrahlend	6.119.9096.13-4015	3.3
LED 96W/8,900lm/4,000K	28°	symmetrical	6.119.9096.13-4028	3.3
LED 96W/8,900lm/4,000K	45°	symmetrical	6.119.9096.13-4045	3.3
LED 96W/8,900lm/4,000K	120°	symmetrical wide beam	6.119.9096.13-40120	3.3

at extra  
cost:



dimming



# THE FRIEDER FAMILY AT A GLANCE

LIGHT ON! FRIEDER SETS THE SCENE.

With the FRIEDER spots, passages, sculptures, nature, models, buildings, murals, riding arenas or factory grounds are either highlighted selectively or illuminated over a wide area, according to individual customer requirements and lens type.

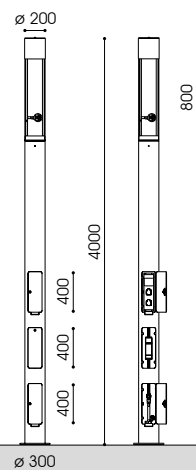
Small but mighty: The smallest of the family, FRIEDER X is just 70mm in diameter and has 900lm. The largest of the family, FRIEDER XXII, is 330mm in diameter and offers 85,000lm.

The mounting of the spots is selectable: in the luminaire, on the pole, on top of the pole, on the house wall or in the bollard.

This is how objects really come into their own!







CLO

AC / DC

10kV

CRI 70

IP 65

IK 08

220–240V  
50–60Hz

WA  
0.80m²

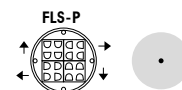


product example



product example

total height: 4.00m  
light standards: medium lighting requirements  
lamp: incl. 1 FLS LED module; inkl 1 spot FRIEDER XI LED  
colour temperature: 3,000K warm white  
LED gear: electronic driver, FLS LED: up to 100,000 hours; spot: 50.000 hours  
LED life expectancy: up to 100,000 hours; spot: up to 50.000 Stunden  
optical system: lens technology; FLS LED: dark sky  
light distribution: FLS-S oval wide beam, FLS-A asymmetrical wide beam, FLS-P symmetrical; spot: 50°  
luminaire body: straight tubular column with cap made of aluminium with 3 access doors; powder coated; spot: made of aluminium; with a magnetic joint for individual adjustment with hinges and cable slot (power / water) or lift odd (removable) without cable slot (cable junction box)  
door: upper door: distribution box inside, IP 44, completely wired; door middle: cable junction box; lower door: equipment for water  
equipment: DB 703  
colour: PMMA RESIST, clear, high-impact resistant  
glazing: operates with closed access door  
operation mode: with flange plate to be screwed on a concrete foundation on site or on an additional bolt-on root  
installation: column accessories, bolt-on root (G300/1000) with screws, accessory ring (s. page 21)  
accessory:



## lamp

## light distribution

## product code

## kg

**SMART STELLA L III/10 FLS LED – 4.00m, incl. spot FRIEDER X LED 14.9W/1,523lm/3,000K/50°**

FLS-S LED 22W/2,960lm/3,000K

FLS-A LED 22W/2,960lm/3,000K

FLS-P LED 22W/2,960lm/3,000K

oval wide beam  
asymmetrical wide beam  
symmetrical

9.638.9071.55BFK-G3-1SW12

9.638.9073.55BFK-G3-1SW12

9.638.9075.55BFK-G3-1SW12

45.0

45.0

45.0

## upper door:

2 pcs. sockets 16A / 250 V

2 pcs. miniature circuit breakers 16A / 1p-C

1 pc. residual-current circuit breaker 25A / 2 / 0.03 A

1 pc. terminal clamp for max. 3 x 6mm²

1 pc. cable gland M25 (ø 9-17mm)

## door in the middle:

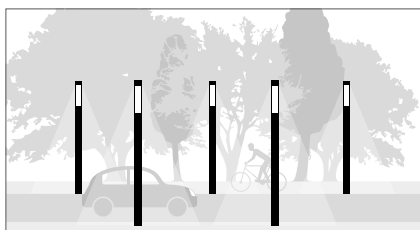
1 pc. cable junction box: 2 x D01 (E14), 16A / 400V, max. 2 cables 5 x 16mm² or 3 cables 5 x 10mm²

## lower door:

1 pc. tap for water 1/2" with back flow preventer and ventilation

1 pc. shut-off valve 1/2" with emptying device

1 pc. equipment for 1/2" water hose



## local distribution road

requirements:  $E_{min}$  5lx /  $E_{min}$  1lx | lighting class: P4

FLS-A LED 22W/2,960lm/3,000K

total height:

pavement on one side:

street width:

pole spacing:

4.00m

1.50m

6.00m

26.00m

on request:

2,700K  
4,000K

RAL / DB

root

at extra cost:

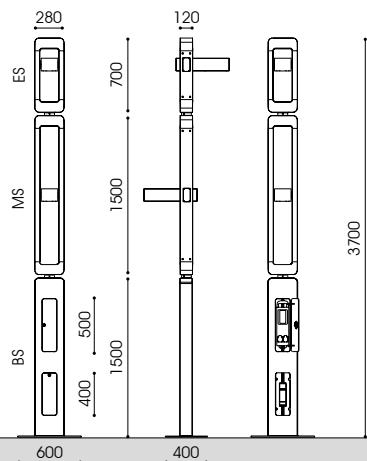


dimming



other heights

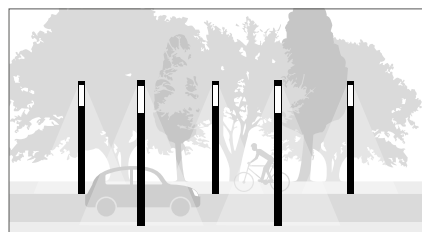
SMART CITY elements



total height:	3.70m
light standards:	medium lighting requirements
lamp:	incl. 2x 1 DA LED modules
colour temperature:	4,000K neutral white
LED gear:	electronic driver up to 100,000 hours
LED life expectancy:	up to 100,000 hours
optical system:	lens technology, dark sky
light distribution:	asymmetrical wide beam (028) or narrow and wide beam (268)
luminaire body:	rectangular profile column made of stainless steel; frames made of die-cast aluminium and aluminium; light components inside a rectangular aluminium profile; powder coated
door:	lift off (removable) without cable slot (cable junction box) and with hinges
equipment:	upper door: cable junction box; lower door: distribution box inside, IP 44, completely wired
glazing:	flat, clear toughened glass glazing
colour:	DB 703
operation mode:	operates with open access door
installation:	with flange plate to be screwed on a concrete foundation on site or on an additional bolt-on root
accessory:	bolt-on root with screws (R600x400/1000) – to be ordered separately



lamp	light distribution	product code	kg
SMART PABLO L II DA LED – 3.70m			
END SEGMENT (ES) DA+ 028 LED 17W/3,000lm/4,000K	asym. wide beam narrow and wide beam	6.137.9008.15-124028	134.0
MIDDLE SEGMENT (MS) DA+ 268 LED 6W/1,150lm/4,000K		6.137.4008.07-107268	
BASE SEGMENT (BS)		6.137.2003.15	
upper door:			
2 pcs. sockets 16A / 250V			
2 pcs. miniature circuit breakers 16A / 1p-C			
1 pc. residual-current circuit breaker 40A / 4 / 0.03A			
1 pc. terminal clamp for max. 5 x 10mm <sup>2</sup>			
1 pc. cable gland M25 (ø 13-18mm)			
lower door:			
1 pc. cable junction box: 2 x D01 (E14), 16A / 400V, max. 2 cables 5 x 16mm <sup>2</sup> or 3 cables 5 x 10mm <sup>2</sup>			
accessory: bolt-on root – hot-dip galvanised steel, incl. screws			
R600x400/1000		9.900.0016.09	43.2



#### roadway and pavement

requirements: E <sub>m</sub> 10lx / E <sub>min</sub> 2lx   lighting class: P2	
pavement on one side:	2.50m
green stripes:	1.00m
street width:	6.00m
pole spacing:	25.00m

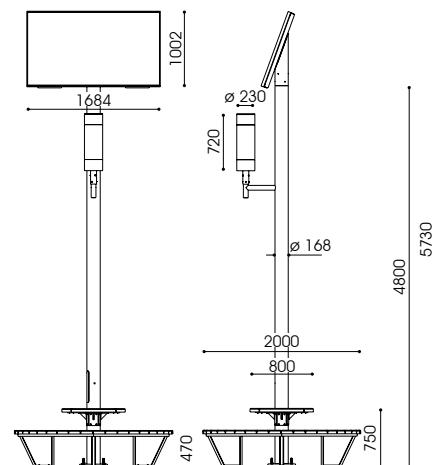


on request:



at extra cost:





CRI 80

IP 65

IK 10

12 V / DC

WA  
2.7m<sup>2</sup>

total height:  
light standards:  
luminaire head:

5.73m (height of lamp: 4.10m)

incl. efficient SOLAR-LED modules; light distribution symmetrical; satined glazing made of PMMA RESIST, high-impact resistant; made of aluminium, powder coated in DB 703; other RAL or DB colour without extra cost on request; incl. cable until door  
pole: special straight tubular pole ZD 48.168, with  $\varnothing$  168mm, with short bracket; incl. flange plate to be screwed on a concrete foundation; made of hot-dip galvanised steel; powder coated in DB 703  
solar flat panel: solar flat panel 310 WP with pole mounting device 70°; incl. cable of the panel with battery, the control unit and the luminaire head

battery:

2 pieces AGM gel-battery inside housing to be installed along the concrete foundation

management system:

- incl. Solar System Controller PSS 2  
- PSS 2 light guaranty of 36 days through intelligent deposited lightning profile, also in December and January  
- incl. intelligent twilight sensor with thunderstorm detection and automatic measurement of the brightness, with defined brightness limit values for the switch on and off the luminaire

round bench and table:

metal parts made of stainless steel V2A (304), solid slats made of hardwood (Kambala), untreated, incl. 2nd wooden level with 4 integrated wireless smartphone charging stations

concrete foundation:

with anchor bolts M20 to be set into the ground, incl. installation of battery housing; height-adjustable

installation:

the solar flat panel is oriented to the south and not be shaded by trees, etc.

## lamp

## light distribution

## product code

## kg

**SOLVEIG I – solar luminaire ANDREW incl. pole and concrete foundation, with round bench, table and 4x mobile phone charging stations**

U LED 6.3W/1.350lm/4.000K<sup>(4)</sup>,  
incl. pole and concrete foundation  
U LED 6W/ 1.200lm/3.000K<sup>(4)</sup>,  
incl. pole and concrete foundation

symmetrical

9.302.0400.33-1-4-SOLAR,  
9.937.4816.70001-14B-SOLAR  
9.302.0400.33-1-3-SOLAR,  
9.937.4816.70001-14B-SOLAR

813.0

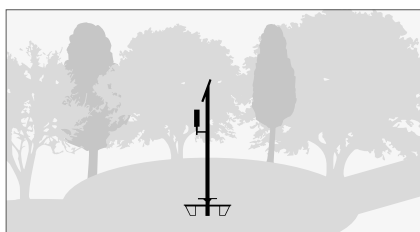
813.0

surcharge for 1 dimming level

9.302.0400.33-1-x-93-SOLAR

<sup>(4)</sup> 4 moduleson  
request:

RAL / DB

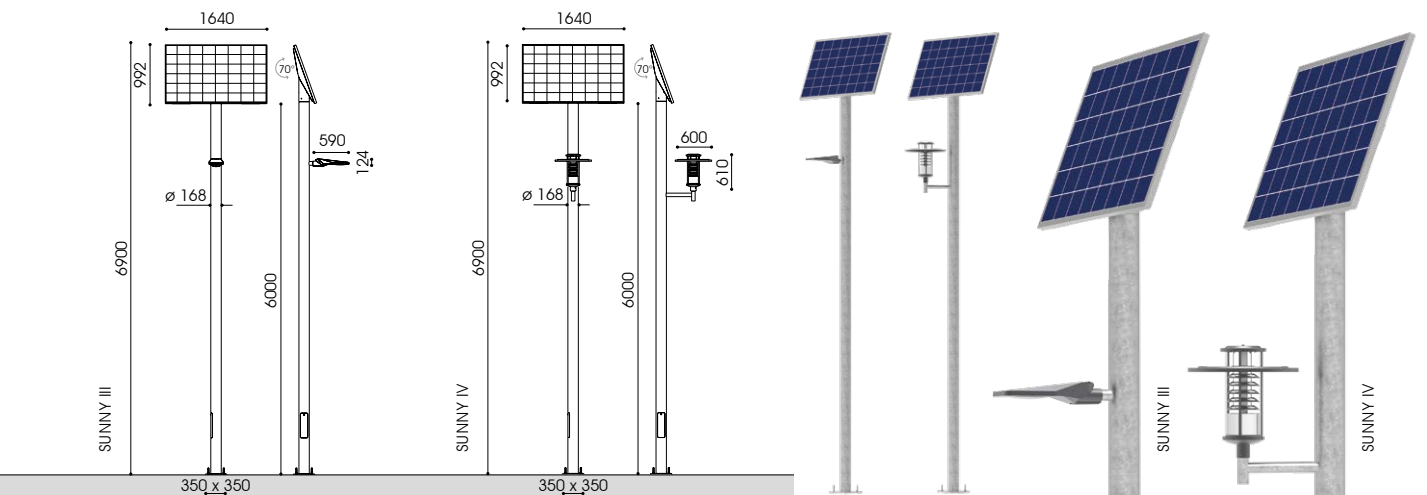
at extra  
cost:other  
heightsother  
luminaireother  
benches**square**

area: 15.00m x 15.00m

requirements: E<sub>m</sub> 2lx / E<sub>min</sub> 0,4lx | lighting class: P6U LED 6.3W/ 1.350lm/ 4.000K<sup>(4)</sup>

quantity: 1 luminaire in the middle



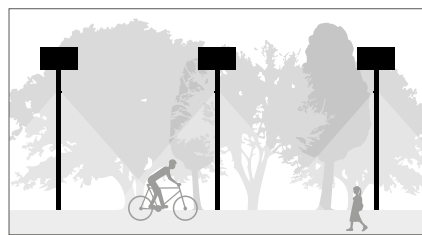


- total height: 6,90m (height of lamp: 5,00m)  
light standards: low lighting requirements  
luminaire head:
- ALFONS I U/L LED with efficient SOLAR-LED-modules and lens technology; housing made of die-cast aluminium; powder coated in DB 703, incl. ASA 60; glazing made of flat, clear toughened glass
  - LOUIS I/R U O LED with upper light and louvre system for efficient, vertical SOLAR-LED modules; clear glazing made of PMMA RESIST, high-impact resistant; canopy and cap made of aluminium, base made of cast aluminium, powder coated in DB 703
- pole: special straight tubular pole ZD 60.168; with bracket; incl. flange plate flange plate to be screwed on a concrete foundation; made of hot-dip galvanised steel
- solar flat panel: solar flat panel 310 WP with pole mounting device 70°; incl. cable of the panel with battery, the control unit and the luminaire head
- battery: 2 pieces AGM gel-battery inside housing to be installed along the concrete foundation
- management system: - incl. Solar System Controller PSS 2  
- PSS 2 light guaranty of 36 days through intelligent deposited lightning profile, also in December and January  
- incl. intelligent twilight sensor with thunderstorm detection and automatic measurement of the brightness, with defined brightness limit values for the switch on and off the luminaire
- concrete foundation: with anchor bolts M20 to be set into the ground, incl. installation of battery housing; height-adjustable
- installation: the solar flat panel is oriented to the south and not be shaded by trees, etc.



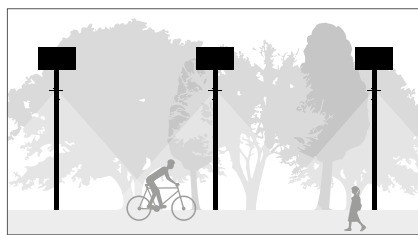
lamp	light distribution	product code	kg*
<b>SUNNY III – solar luminaire ALFONS I U/L LED incl. pole und and concrete foundation</b>			
U/L 028 LED 6W/1,200lm/3,000K, incl. pole and concrete foundation	asymmetrical wide beam	9.136.0400.10028-3-SOLAR, 9.937.6016.56-1B-SOLAR	274.0
U/L 058 LED 6W/1,200lm/3,000K, incl. pole and concrete foundation	symmetrical	9.136.0400.10058-3-SOLAR, 9.937.6016.56-1B-SOLAR	274.0
U/L 268 LED 6W/1,200lm/3,000K, incl. pole and concrete foundation	narrow and wide beam	9.136.0400.10268-3-SOLAR, 9.937.6016.56-1B-SOLAR	274.0
<b>SUNNY IV – Solarleuchte LOUIS I/R U O LED inkl. Mast und Fundament (9.937.6016.56-14B-SOLAR)</b>			
U LED 6,3W/1,350lm/4,000K, incl. pole and concrete foundation	asymmetrical	4.615.0400.07-04-SOLAR, 9.937.6016.56-14B-SOLAR	280.0
U LED 6W/1,200lm/3,000K, incl. pole and concrete foundation	asymmetrical	4.615.0400.07-04-3-SOLAR, 9.937.6016.56-14B-SOLAR	280.0
surcharge for 1 dimming level surcharge pole in RAL or DB colour on request		9.136.0400.07-04(-3)-93-SOLAR 9.937.6016.70-1(4)B-SOLAR-RD	

\* weight without concrete foundation (450.0 kg)



#### pavement

requirements:  $E_{min}$  2lx /  $E_{min}$  0,4lx | lighting class: P6  
SUNNY III - ALFONS I U/L 268 LED 6.3W/1,350lm/4,000K  
height of lamp: 5.00m  
pavementbreite: 2.50m  
pole spacing: 39.00m



#### pavement

requirements:  $E_{min}$  2lx /  $E_{min}$  0,4lx | lighting class: P6  
SUNNY IV - LOUIS I/R U O LED 6.3W/1,350lm/4,000K  
height of lamp: 5.00m  
pavementbreite: 2.50m  
pole spacing: 24.00m



CRI 80

IP 65

IK 10

12 V / DC

WA  
SUNNY III:  
2.6m²

WA  
SUNNY IV:  
2.8m²

CE

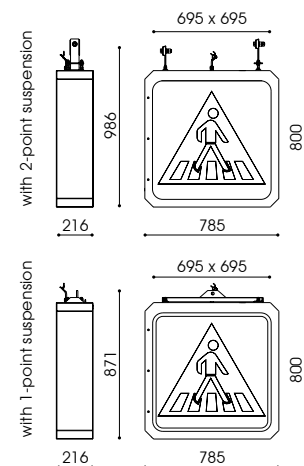
on  
request:

4,000K

RAL / DB

at extra  
cost:

other  
luminaire



DA: CLO

10kV

CRI 80

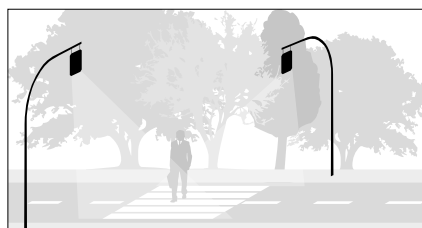
IP 66

IK 10

220–240V  
50–60HzWA  
0.65m<sup>2</sup>

mounting height: 5.00m – 6.00m  
light standards: medium and high lighting requirements  
lamp: DA LED module lighting for pedestrian crossing; BX LED for traffic sign lighting  
colour temperature: DA LED: 2,200K warm white; BX LED: 6.500K cold white  
LED gear: electronic driver up to 100,000 hours  
LED life expectancy: up to 80.000 hours or up to 100,000 hours  
light distribution: right beam (298), downward: as pedestrian crossing lighting; 2-sided: sign lighting  
luminaire body: made of stainless steel; powder coated  
colour: DB 703  
glazing: PMMA RESIST, high-impact resistant; incl. traffic sign No. 350-40 German road traffic regulation (StVO), printed luminaire completely wired, with cable (length when ordering)  
wiring: to fixed on poles with with 1- or 2-point suspension  
accessory: accessories of the 1-point suspension – to be ordered separately

lamp	light distribution	product code	kg
<b>DORIS I LED – with 1-point suspension, 2-sided traffic sign lighting</b>			
BX LED 60W/6.400lm/6.500K + DA+ 298 LED 43W/5.000lm/2.200K <sup>(2)</sup>	right beam	6.141.8224.29801-224	35.0
<b>DORIS I LED – with 2-point suspension, 2-sided traffic sign lighting</b>			
BX LED 60W/6.400lm/6.500K + DA+ 298 LED 43W/5.000lm/2.200K <sup>(2)</sup>	right beam	6.141.8224.29802-224	35.0
<b>necessary accessory for 1-point suspension - hot-dip galvanised steel</b>			
EPA DORIS 60 - to fixed on poles for ø 60mm		0.910.0116.00-60	7.3
EPA DORIS 76 - to fixed on poles for ø 76mm		0.910.0116.00-76	7.3
EPA DORIS 89 - to fixed on poles for ø 89mm		0.910.0116.00-89	7.3

<sup>(2)</sup> 2 modules**road cross-section****Vorgabe nach DIN: E<sub>n</sub> 30lx / E<sub>min</sub> 4lx**

poles are 2.00m before the crossing  
pavement on both sides: 2.00m  
street width: 7.00m  
pedestrian crossing width: 4.00m  
height of lamp: 6.00m  
quantity: 2 pieces luminaires hang in the middle  
above the lane  
per luminaire: 46W/5.000lm/2.200K

on  
request:2,700K  
3,000K  
4,000Kother  
opticsat extra  
cost:

1,800K

poles

# SMART CITY CONZEPTS

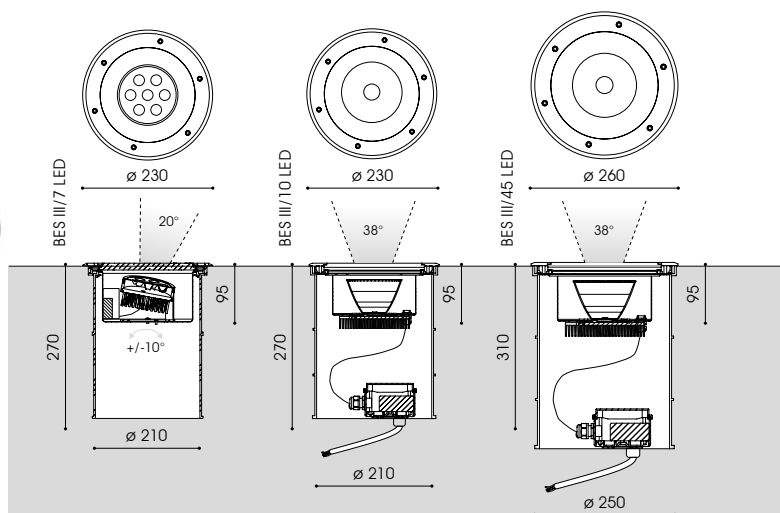
## SMART SOLUTIONS FOR FUTURE-ORIENTED CUSTOMERS

Smart city topics have become our daily focus. Every year we realise more smart city projects. We have different smart city concepts for each user, depending on location, country, readiness for reform, resources and requirements.

With the LEIPZIGER LEUCHTEN portfolio of Smart City components, we offer individual, small and large solutions. Our bollards, columns and poles, between 1 and 8 metres high, are located in central places of municipalities and cities and offer plenty of space for additional components. We would be happy to advise you on the possibilities of keeping the future open by providing for tomorrow today.







CRI 70

IP 67

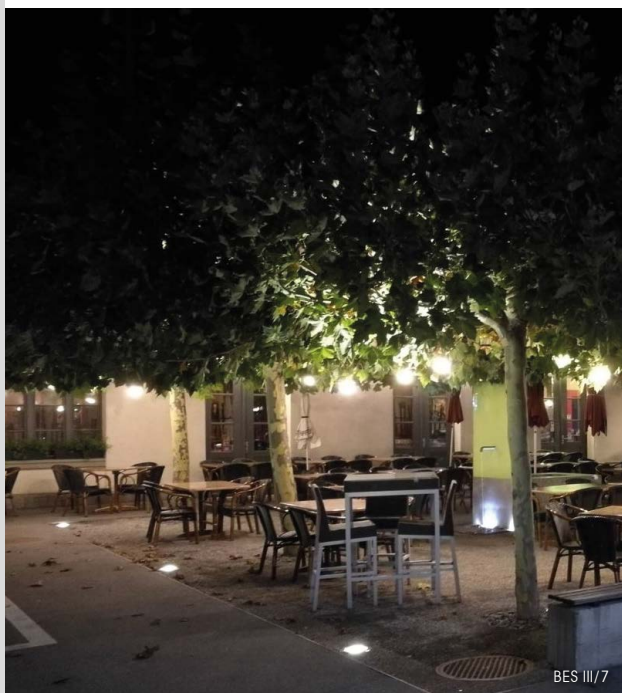
IK 10

220–240V  
50–60Hz



on  
request:

4,000K



light standards:  
lamp:

colour temperature:  
LED gear:  
LED life expectancy:

optical system:

light distribution:  
beam:

housing:

sump:

bezel:

glazing:

load capacity:

wiring:

installation:

accessory:

low and medium lighting requirements  
BES III/7 LED: incl. LED module with 7 LEDs  
BES III/10 LED; BES III/45 LED: incl. COB LED

3,000K warm white

up to 50,000 hours

up to 50,000 hours

BES III/7 LED: reflector with lenses, adjustable +/-10°

BES III/10 LED; BES III/45 LED: reflector system for COB LEDs, not adjustable

symmetrical

BES III/7 LED: 20°

BES III/10 LED; BES III/45 LED: 38°

made of aluminium

incl. sump made of polyamide

made of stainless steel; round, brushed and passivated  
toughened glass glazing, clear (12mm thick)

up to 2.5 t per wheel

incl. cable; 0.50m, 3 x 1.5mm²

to be set into the ground; ensure good drainage and  
avoid water stagnation

non-slip glass – to be ordered separately

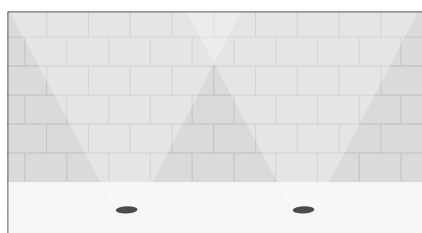
at extra  
cost:

glass



RGBW

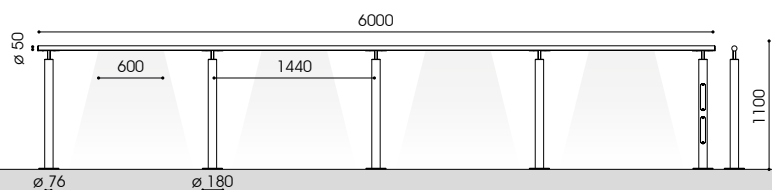
DALI



#### illumination of a wall

BES III/7 LED  
LED 8.4W/455lm/3,000K  
inclination: 0°  
distance from the wall: 0.50m  
wall height: 3.50m  
luminaire spacing: 5.00m

lamp	Winkel	Schutzklasse	product code	kg
<b>BES III/7 LED – adjustable</b>				
• LED 8.4W/455lm/3,000K	20°	I	9.320.9009.037	3.2
<b>BES III/10 LED – not adjustable</b>				
• COB LED 11 W/1,950lm/3,000K	38°	I	9.320.9910.0310-3	3.2
<b>BES III/45 LED – not adjustable</b>				
• COB LED 31 W/4,240lm/3,000K	38°	II	9.320.9945.03	3.8



- total height: 1.10m  
width: 6.00m  
shape: round, straight, stable stainless steel tube, vandalism-proof thanks to the internal profile for stabilising and accommodating the modules
- finish: made of stainless steel V4A (316), brushed and passivated, 6 parts, consisting of:
- 4 pieces stanchions without door: 1100mm x ø 76mm
  - 1 piece end stanchion with 2 doors, incl. driver without cable junction box: 1100mm x ø 76mm
  - 1 piece handrail: 6.0m x ø 50mm, with 4 pieces integrated, highly efficient D LED modules in an anodised, extruded aluminium housing, polycarbonate glazing, clear, impact-resistant, UV-stabilised, illumination downwards: symmetrical 112 °: 600mm each 7.2W (9W) / 347lm / 3,000K warm white; asymmetrical 56 ° on request
- installation: stanchions with flange plate to be screwed on a concrete foundation on site or on an additional bolt-on root, handrail to be screwed to the stanchions
- accessories: bolt-on root with screws – to be ordered



lamp	light distribution	product code	kg
<b>KATJA T I LED – 6.00m</b> D LED 28.8W(32W)/2,252lm/3,000K	symmetrical	8.607.9000.30600-016000	150.0



#### staircase

requirements:  $E_m$  50lx  
D LED je 7.2W/563lm/3,000K  
total height: 1.10m  
arrangement railings: middle  
pavement width: each 2.50m



CRI 80

IP 66

IK 10

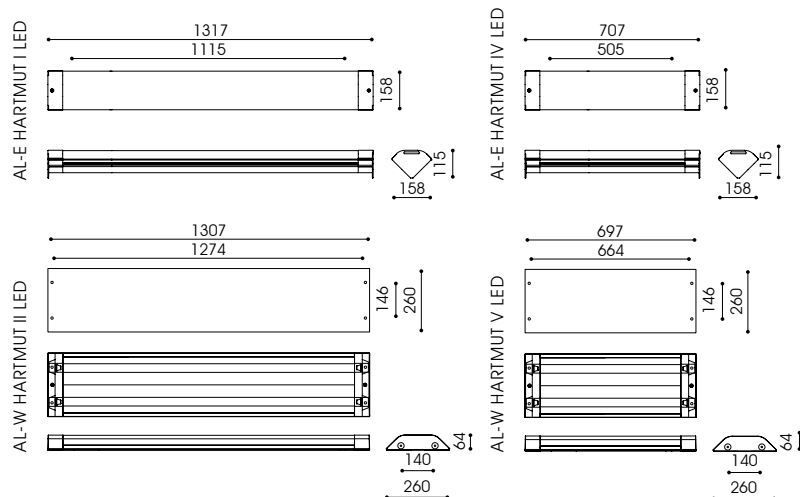
220–240V  
50–60Hzon  
request:2,700K  
4,000K

asym. 56°

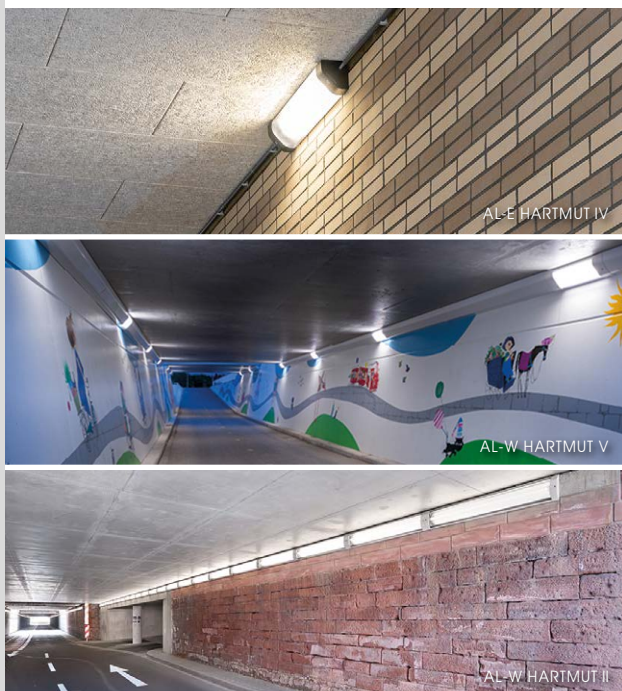
module  
300mmat extra  
cost:modules  
900mm,  
1200mm

DALI

# AL-E HARTMUT I, IV AL-W HARTMUT II, V



- ⊕
- CRI 80
- IP 65
- AL-E :  
3x IK 10
- AL-W :  
5x IK 10
- 220–240V  
50–60Hz
- CE



mounting height: 3.00m – 6.00m  
light standards: medium lighting requirements  
lamp: incl. LED module  
colour temperature: 4,000K neutral white  
LED gear: electronic driver; up to 80,000 hours  
LED life expectancy: up to 80,000 hours  
optical system: white reflector with integrated longitudinal prisms in the cover  
light distribution: symmetrical  
housing: made of aluminium, powder coated  
end caps: AL-E HARTMUT I, IV: made of colored polycarbonate  
AL-W ARTMUT II, V: continuous aluminum profile without end caps  
colour: RAL 9010 (white)  
glazing: made of polycarbonate with longitudinal prisms, clear, high impactproof, UV stabilized, 3mm thickness (AL-E HARTMUT I, IV LED) or 4mm thickness (AL-W HARTMUT II, V LED)  
wiring: completely wired; with terminal clamp inside the luminaire  
AL-W ARTMUT II, V: incl. integrated cable duct with partition for cable diameters up to 14 mm  
installation: AL-E HARTMUT I, IV: for corner mounting, with hexagon socket head screw, special screws provide additional protection against unauthorized opening  
AL-W HARTMUT II, V: for wall and ceiling mounting; 3-phase through wiring, prepared for continuous led strips assembly  
accessory: fixing material for the wall installation, cable duct – to be ordered separately

on request:

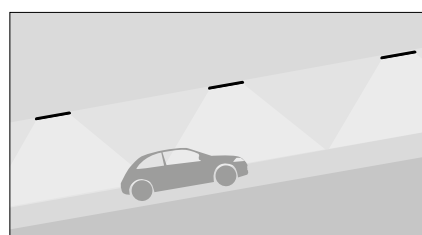
- 3,000K

at extra cost:

- 
- 10 kV
- dimming
- DALI
- RAL / DB
- cable
- cable duct
- special screws

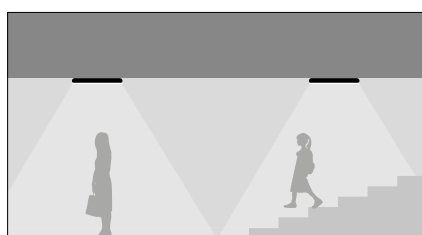
lamp	light distribution	product code	kg
<b>connectable luminaire corner mounting</b>			
<b>AL-E HARTMUT I LED</b> LED 23.7W/3,600lm/4,000K <sup>(2)</sup>	symmetrical	5.420.9020.00110	10,0
<b>AL-E HARTMUT IV LED</b> LED 9.4W/1,300lm/4,000K LED 15.4W/2,200lm/4,000K	symmetrical	5.420.9003.00410	8,0
	symmetrical	5.420.9014.00410	8,0
<b>connectable luminaire wall and ceiling mounting</b>			
<b>AL-W HARTMUT II LED</b> LED 23.7W/3,600lm/4,000K <sup>(2)</sup>	symmetrical	5.421.9020.003	12,0
<b>AL-W HARTMUT V LED</b> LED 8.1W/1,100lm/4,000K LED 15.4W/2,200lm/4,000K	symmetrical	5.421.9003.005	10,0
	symmetrical	5.421.9014.005	10,0

<sup>(2)</sup> 2 LED modules



## drivey parking deck

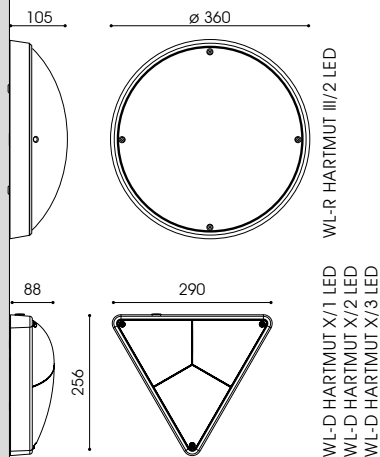
requirements:  $E_m$  50lx  
AL-W HARTMUT II LED 23.7W/3,600lm/4,000K<sup>(2)</sup>  
arrangement: ceiling luminaire, middle  
mounting height: 2.00m  
luminaire spacing: 5.00m



## underpass pavement

requirements:  $E_m$  50lx /  $E_{min}$  1lx  
AL-E HARTMUT I LED 23.7W/3,600lm/4,000K<sup>(2)</sup>  
arrangement: corner luminaire, offset on both sides  
mounting height: 3.50m  
luminaire spacing: 25.00m





WL-R HARTMUT III/2 LED

WL-D HARTMUT X/3 LED



WL-D HARTMUT X/1 LED



WL-D HARTMUT X/2 LED

mounting height: 2.50m – 5.00m  
 light standards: low and medium lighting requirements  
 lamp: inkl. LED module  
 colour temperature: 4,000K neutral white  
 LED gear: electronic driver; up to 100,000 hours  
 LED life expectancy: up to 80,000 hours  
 optical system: diffuse  
 light distribution: symmetrical; WL-D with 1, 2 or 3 windows  
 housing: made of aluminium, powder coated  
 colour: DB 703  
 glazing: polycarbonate, opal, high-impact, UV-stabilised  
 wiring: completely wired, cable entry on the back  
 installation: to be screwed to the wall or ceiling  
 accessory: fixing material for the wall installation – to be ordered separately



lamp	light distribution	product code	kg
<b>WL-R HARTMUT III/2 LED</b> LED 22W/2,320lm/4,000K	symmetrical	5.422.9023.0021703	2.6
<b>WL-D HARTMUT X/1 LED</b> LED 3W/445lm/4,000K	symmetrical	5.424.9001.01	1.4
<b>WL-D HARTMUT X/2 LED</b> LED 6W/890lm/4,000K	symmetrical	5.424.9001.02	1.3
<b>WL-D HARTMUT X/3 LED</b> LED 8W/1,335lm 4,000K	symmetrical	5.424.9001.03	1.2

WL-R HARTMUT III/2  
 WL-D HARTMUT X/1, 2, 3



CRI 80

IP 65

WL-R:  
5x IK 10

WL-D:  
2x IK 10

220 – 240V  
50 – 60Hz

CE

on request:

3,000K

at extra cost:



10 kV

dimming



RAL / DB

cable

AC/DC

Installation  
set for wall  
mounting

PETRA E I/2



PETRA E VI/1



PETRA E VIII



PETRA E I/2



PETRA E VIII

use:

tube:

door:

colour:

installation:

accessory:

equipment:

operates with closed access door; PETRA E VIII: operates with open access door, while using the CEE sockets made of hot dip galvanised steel, powder coated or stainless steel V2A (304), brushed and passivated with hinges, with cable slot, with tri-head bolt lock M6, incl. tri-head bolt key M6

DB 703  
with flange plate to be screwed on a concrete foundation on site or on an additional bolt-on root bolt-on roots with screws made of hot dip galvanised steel; accessory rings made of stainless steel powder coated or brushed and passivated – to be ordered separately  
incl. distribution box inside, IP 44

#### PETRA E I/2:

2 pcs. sockets 16A / 250V  
2 pcs. miniature circuit breakers 16A / 1p-C  
1 pc. residual-current circuit breaker 25A / 2 / 0.03 A  
1 pc. terminal clamp max. 5x6mm<sup>2</sup>  
1 Stk. cable gland M25 (ø 9-17mm)

#### PETRA E VI/1:

4 pcs. sockets 16A / 250V  
1 pc. CEE socket 16A / 5p / 400V  
1 pc. CEE socket 32A / 5p / 400V  
4 pcs. miniature circuit breakers 16A / 1p-C  
1 pc. miniature circuit breaker 16A / 3p-C  
1 pc. miniature circuit breaker 32A / 3p-C  
1 pc. residual-current circuit breaker 63A / 4 / 0.03 A  
1 pc. terminal clamp max. 5x25mm<sup>2</sup>  
1 pc. cable gland M40 (ø 22-32mm)

#### PETRA E VIII:

**door up:**  
4 pcs. sockets 16A / 250V  
1 pc. CEE socket 16A / 5p / 400V  
1 pc. CEE socket 32A / 5p / 400V  
4 pcs. miniature circuit breakers 16A / 1p-C  
1 pc. miniature circuit breaker 16A / 3p-C  
1 pc. miniature circuit breaker 32A / 3p-C  
1 pc. residual-current circuit breaker 63A / 4 / 0.03 A  
1 pc. terminal clamp max. 5x25mm<sup>2</sup>  
1 pc. cable gland M40 (ø 22-32)

**door down:**  
tap for water 1/2" with back flow preventer and ventilation shut-off valve 1/2" with emptying device  
equipment for 1/2" water hose

product	kg	product code
<b>PETRA E I/2 – 0.70m, incl. flange plate</b>		
hot-dip galvanized steel, powder coated	3.5	9.946.0993.112S
stainless steel, brushed and passivated	3.5	9.946.0993.312S
<b>PETRA E VI/1 – 1.00m, incl. flange plate</b>		
hot-dip galvanized steel, powder coated	62.0	9.946.0998.114SC16C32
stainless steel, brushed and passivated	62.0	9.946.0998.314SC16C32
<b>PETRA E VIII – 1.30m, incl. flange plate</b>		
hot-dip galvanized steel, powder coated	81.0	9.946.0999.114SC16C32
stainless steel, brushed and passivated	81.0	9.946.0999.314SC16C32
<b>accessory: bolt-on root – hot-dip galvanised, with screws</b>		
G240/500 – PETRA E I/2	7.1	9.900.0012.00
G420D/500 – PETRA E VI/1, VIII	17.5	9.900.0017.14ABW
<b>accessory: accessory ring</b>		
Z248/1 – stainless steel, DB 703	0.4	9.900.0008.70
Z248/1 – stainless steel, brushed and passivated	0.4	9.900.0008.45
Z429 – stainless steel, DB 703	0.8	9.900.0008.71
Z429 – stainless steel, brushed and passivated	0.8	9.900.0008.46

on request:

RAL / DB

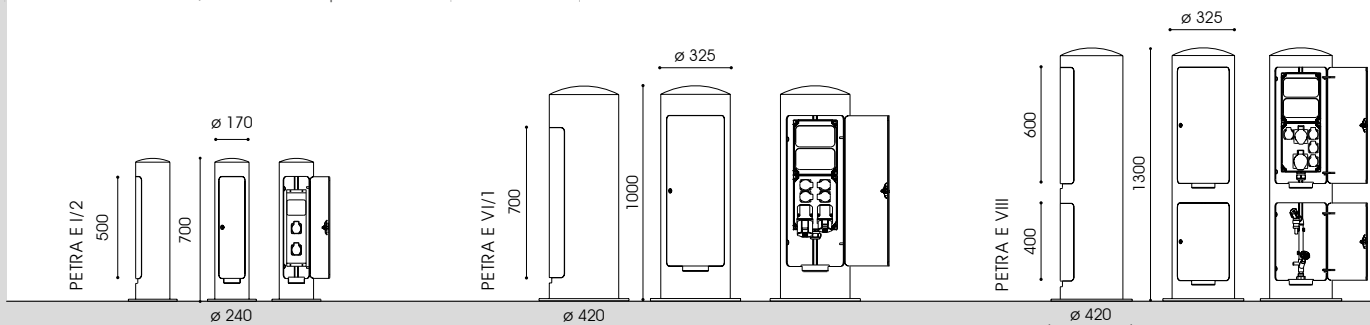
door removable

at extra cost:

profile cylinder lock

other models

other unit



PETRA ME I



PETRA ME IV



LOTTA EI/1



- use:** PETRA ME I: operates with open access door; PETRA ME IV: operates with closed access door; LOTTA E I/1: operates with open access door, while using also the CEE socket
- tube:** PETRA ME I: made of stainless steel; powder coated or brushed and passivated; PETRA ME IV, LOTTA E I/1: made of hot dip galvanized steel; powder coated or stainless steel, brushed and passivated; LOTTA E I/1: square tube section; PETRA ME I, ME IV: round tube
- door:** lift off (removable), with cable slot, with tri-head bolt lock M6, incl. tri-head bolt key M6
- colour:** DB 703
- installation:** with flange plate to be screwed on a concrete foundation on site or on an additional bolt-on root
- accessory:** bolt-on roots with screws made of hot dip galvanized steel; accessory rings made of stainless steel powder coated or brushed and passivated – to be ordered separately
- equipment:** **PETRA ME I:**  
1 pc. socket 16A / 250V  
without fuses – to be installed by the costumer on site  
**PETRA ME IV:**  
2 pcs. sockets 16A / 250V  
without fuses – to be installed by the costumer on site  
**LOTTA E I/1:**  
incl. distribution box inside, IP 44:  
1 pc. socket 16A / 250V  
1 pc. CEE socket 16A / 5p / 400V  
1 pc. miniature circuit breaker 16A / 1p-C  
1 pc. miniature circuit breakers 16A / 3p-C  
1 pc. residual-current circuit breaker 40A / 4 / 0.03 A  
1 pc. terminal clamp max. 5x10mm<sup>2</sup>  
1 pc. cable gland M25 (ø 13-18mm)



PETRA ME IV

Produkt	kg	product code
<b>PETRA ME I – 0.29m, incl. flange plate</b>		
stainless steel, powder coated	3.5	9.883.0002.501S
stainless steel, brushed and passivated	3.5	9.883.0002.301S
<b>PETRA ME IV – 0.36m, incl. flange plate</b>		
hot-dip galvanized steel, powder coated	8.0	9.883.0001.102S
stainless steel, brushed and passivated	8.0	9.883.0001.302S
<b>LOTTA E I/1 – 0.70m, incl. flange plate</b>		
hot-dip galvanized steel, powder coated	20.0	9.946.0983.101SC16
stainless steel, brushed and passivated	20.0	9.946.0983.301SC16
<b>accessory: bolt-on root – hot-dip galvanised, with screws</b>		
G180/400 - PETRA ME I	3.5	9.900.0011.00
G240/500 - PETRA ME IV	7.1	9.900.0012.00
Q250/500 - LOTTA E I/1	7.8	9.900.0016.00
<b>accessory: accessory ring</b>		
Z180/2 – stainless steel, DB 703	0.3	9.900.0010.25
Z180/2 – stainless steel, brushed and passivated	0.3	9.900.0010.45
Z248/1 – stainless steel, DB 703	0.4	9.900.0008.70
Z248/1 – stainless steel, brushed and passivated	0.4	9.900.0008.45

on request:

RAL / DB

at extra cost:

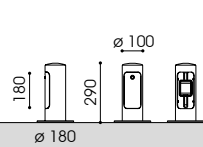
profile  
cylinder lock

door with  
hinges

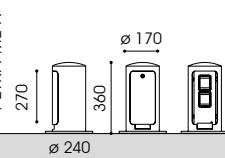
other  
models

other  
unit

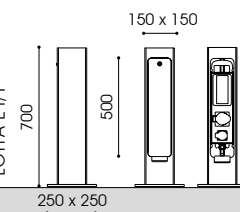
PETRA ME I



PETRA ME IV



LOTTA EI/1





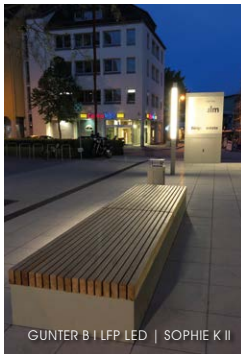
# SYMBOL DIRECTORY

## EXPLANATION OF THE SYMBOLS

	protection class I	x,xxxK	other colour temperatures available		asym. back shield	add. back shield for asymmetrical light distribution available
	protection class II	RAL / DB	other RAL / DB colours available		other heights	other heights available
	protection class III	xxxmm	bracket length		spots	luminaire can be equipped with spot FRIEDER X or FRIEDER XI
CLO	with Constant Light Output over the entire lifetime	ø xmmm	other top entries available		glass	non-slip glass available
AC / DC	compatible for emergency systems	xxx glazing	glazing made of xxx available		X°	other beams available
10kV 2 x 20kV	surge protection with 10kV or 2 x 20kV available	other optics	other lenses, modules or light distributions available		RGBW	with RGBW color change on request
CRI xx	Colour Rendering Index	root	pole, column or tube with root available			incl. Qi charging station for smart phones
IP xx	protection degree	flange plate	pole, column or tube with flange plate available		cable duct	installation-friendly, additional duct for laying cables
IK xx	impact resistance	dimming	dimming with or without pilot-line		special screws	e.g.: Pinhex, Torx, safety screws
220–240V 50–60Hz	voltage (V); frequency (Hz)	DALI	via DALI interface available		Installation set for wall mounting	installation-friendly housing
WA x,xxm²	windage area		Intelligent, dynamic and event-controlled light management system		door removable	door removable available
CE	product complies with the applicable requirements	other light controls	e.g.: prepared for DMX		other models	other products from product group available
	modules according to Zhaga standards	SMART CITY elements	Equipment options to make the luminaire smart and future-proof		profile cylinder lock	with profile cylinder lock available
pole	luminaire incl. pole	Zhaga sockets	Luminaire can be equipped with a standardized Zhaga socket		door with hinges	door with hinges available
● LL stock	LEIPZIGER LEUCHTEN stock goods; fast delivery	bracket	single-, double-, multiple- or wall bracket / other bracket lengths available		other unit	other distribution units and water connections available
x,xxxlm	other luminous fluxes available	cable	other cable or cable lengths available		FSC	Kambala wood with FSC certificate (Forest Stewardship Council)

# URBAN FURNITURE

## SUPPLEMENT LIGHTING IN THE SAME DESIGN



# FEEDER PILLARS

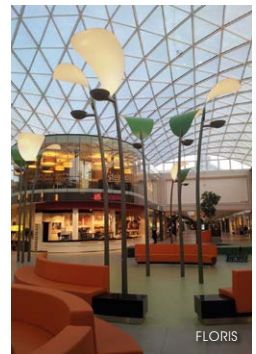
## STYLISH VARIETY FOR INDIVIDUAL SUPPLY NEEDS





# CUSTOM-MADE SOLUTIONS

TECHNICAL, PRACTICAL, ATTRACTIVE AND UNUSUAL



## DESIGN OPTIONS FOR URBAN AND RURAL SPACES:

- wide range of outdoor luminaires, urban furniture products, feeder pillars and charging stations.
- high quality, efficient LED technologies
- intelligent lighting control systems, e.g.: CLEVER LIGHT
- environmentally friendly light for flora and fauna
- Smart City concepts
- conversion kits
- LED conversion kits
- wide range of colours
- short delivery times
- customised special solutions

## OUR CATALOGUES / BROCHURES

If you are interested in getting further information about the luminaires, feeder pillars and smart city concepts of LEIPZIGER LEUCHTEN, please do not hesitate to contact us.



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