

Transforming Human Lives
through **Smart Lighting**



TRIMAX
LED SMART LIGHT



Intelligent Light Control System

SMART CITIES: EFFECTIVE CITY PLANNING & MANAGEMENT

The ubiquitous city concept of 'Smart City' has started gaining momentum and attention worldwide and its topic has garnered in recent technology and innovation talks, seminars and events where people can exchange views and deliberate the details of the subject matter. It showcases latest technology in smart facility management, smart city planning, Internet of Things (IoT) and how advancements in digital solution that stores, generates and processes data entails benefits to the end users, city planners and utility operators.

Building reliable smart cities lean on many factors, aspects, and decision making to achieve. Municipalities are entrusted to accelerate urban growth and accommodate citizen's needs of safety and security. Application of smart solutions in the cities, townships and precinct areas create endless advantages systems for driving efficient city management and economic growth.

LED smart streetlights, data analytics, environmental sensors and surveillance cameras are integral part of designing and developing smart cities that manifest into potential of building the effectiveness of a smart city plan. **iLCS® (Intelligent Light Control System)** is the ultimate choice for this impeccable solution.

2



1 & 5



SYSTEM BENEFITS: SOCIAL, ENVIRONMENTAL & ECONOMIC



Intelligent Light Control System

1. Smart Street Lighting Management
2. Enhance Safety & Security
3. Traffic Flow Management
4. Air Quality Data
5. Energy Efficiency
6. Safeguard Assets & Properties
7. Surveillance Demand
8. Protect People & Privacy

A MULTIFUNCTIONAL HUB

How city can benefits from our **iLCS®**? It focuses on offering solutions by providing both hardware and software technologies that allow municipalities and operators to obtain data, monitor, maintain and safeguard their public and private assets.

The **iLCS®** integrates the combination of both smart street lighting management and security features to tackle current city's challenges such as monitoring traffic flow and air quality, road safety for drivers and pedestrians, prevent crimes and possible to eradicate danger. The focus of smart cities should protect its citizens, properties and infrastructure on the long term.

An unlimited range of ideal applications can be incorporated into **TRIMAX** smart light such as public WiFi, telecommunication network coverage, audio announcement, fire and rescue siren alarms, environmental data and occupancy detection.

3 & 4



7



6



8





iLCS® built-in remote control management system

SMART FLEXIBLE

With **iLCS®** built-in remote control management system, it gives flexibility for municipalities, city planners and operators to optimize and monitoring luminaires individually or in group remotely from a computer or smartphone. As smart as it is, operators are able to obtain and manage useful data effectively. (e.g., energy consumption, air quality of the outdoor environments and traffic data to manage daily city's traffic flow and congestion). By using these important data, they can alert and alarm the citizens with better route planning.

The DCU monitors, controls and manages all connected LCUs. It functions as the gateway to the IT world. Each node (**LCU NEMA**) of the network is embedded with a GPS receiver and an astronomic clock. This enables the node, when it is completely isolated (standalone) or the network is under maintenance, it will follows the profile that has been previously programmed. Moreover, the enclosure is made semi-transparent to allow an embedded photocell to sense daylight intensity to autonomously turn on the luminaire.



Data Control Unit (DCU)



Light Control Unit (LCU NEMA)



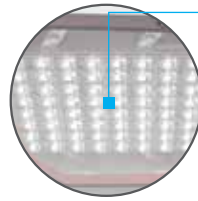
Cloud Vision

Cloud based platform for real time control of luminaires, real time monitoring of load and lighting levels.



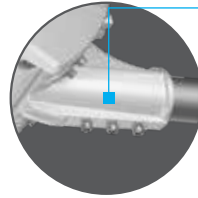


UNIQUE ADVANTAGES



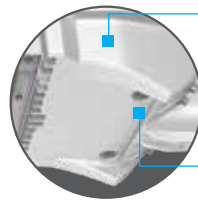
■ Photometric

- Optical Versatility with Three Types of Distributions
- High Quality Lens with > 94% Efficacy
- Excellent System Efficacy ≈140 lm/W



■ Mechanical Design

- Unique Spigot Mounting with 0°-10° Tilting Adjustment
- Post Top / Side Entry of ø60mm / ø76mm

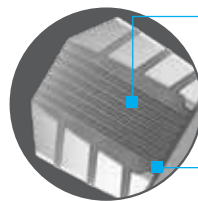


■ Housing

- Marine Grade High Corrosive Resistant Aluminium Material
- Outdoor Polyester Epoxy Powder Coating

■ Membrane Vent Plug

- Pressure Equalizer

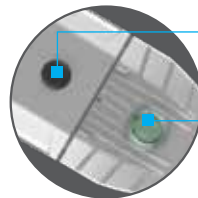


■ Heat Management

- Aerodynamic Heat Fins Design
- Dust Trap Free Design for Better Heat Dissipation Performance

■ Weatherproof Sealant

- Pure Silicon Material Gasket Provides Durable Protection for Outdoor Environment

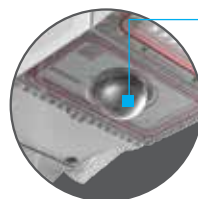


■ Broadband Antenna

- WiFi Router / Bridge / Access Point

■ iLCS Light Control Unit (LCU)

- Smart Lighting Element Utilizing Mesh Network
- Metering, GPS and Photocell Embedded



■ IP PTZ Camera

- 5 MP with 1080p Full HD
- Basic Pan, Tilt and Zoom Maneuvers
- Meeting National Security Demands and Requirements

MEASUREMENT & ORDER CODE

WATTAGE	NO. OF LEDS	TYPICAL LUMINOUS FLUX	TYPICAL WATTAGE	TYPE	NETT WEIGHT
75W	32	12300	77	R0	16.0 kg
100W	32	15790	100	R1	16.0 kg
150W	48	23155	152	R2	20.0 kg
200W	64	28860	201	R3	22.0 kg
250W	80	35580	262		

* All result tested base on 5000K CCT LEDs.

TECHNICAL SPECIFICATION

LUMINAIRE TECHNICAL DATA

- System Power : 75W
: 100W
: 150W
: 200W
: 250W
- Enclosure Material : Die Cast Marine Grade Aluminium
- Optical Cover : 95% Transparency Tempered Glass
- Gasket Material : Silicone Rubber
- Fitting Color : White Aluminium, Akzo Nobel RAL9006
: Durable Polyester Epoxy Powder Coating
- Operating Temperature : -30 ~ +50°C
- Input Voltage : 220 ~ 240 Vac 50 / 60 Hz
- Surge Protection Device (SPD) : 10kV, 20kA
- Insulation Classification : Class I
: Class II Upon Request
- Ingress Protection : IP66
- Impact Protection : IK08
- Spigot Mounting : 0°-10° Tilting
: ø60mm Post Top / Side Entry
: ø76mm Post Top / Side Entry (Upon Request)

COMPLIANCE

- LED : LM 80
: UL
: RoHS
- LED DRIVER : CE
: EN55015
: EN61000
: EN61547
: EN62493
: EN61347
: EN50581
: EN62384
- LUMINAIRE : LM79
: EN60598-1
: EN60598-2-3
: EN62471
: EN61000
: EN61547
: EN62493
: EN55015
: CISPR 15
: IEC62722
- SPD : IEC61643
: UL
: RoHS

iLCS LCU

- Operating Voltage: 100 ~ 305 Vac @ 50 / 60Hz
- Idle Consumption: < 1W
- Overvoltage, Overload and Thermal Protection
- Short-Circuit and Open-Circuit Protection
- Autonomous Operation Redundancy
- Antenna Integrated
- Metering Embedded
- GPS Embedded
- Photocell Embedded
- Dimming Interface: 0-10V
- Ingress Protection: IP66
- Analog Input Availability: 0-30V

LED MODULE SPECIFICATION

- LED Source : 5050
- CCT : 3000K Warm White
: 4000K Neutral White
: 5000K Cool White
- Lumen : >145 lm / watt
- CRI : Min 70
- L70 : 65,000 Hrs @ 25°C
- PCB Material : Metal Core
- Lens (94% Efficiency) : Type I
: Type II
: Type III

IP PTZ CAMERA

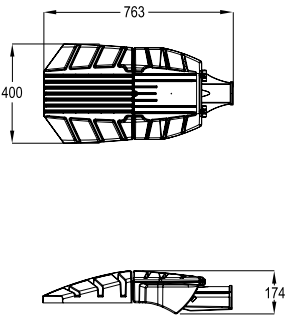
- 5 MP with 1080P Full HD
- Day and Night Mode
- 10x Zoom Lens with F4.9 - 49mm / F1.8 - 3.0, DC Iris, Auto Focus
- Basic WDR (74dB)
- 30 fps at 1920 x 1080
- Pan and Tilt
- Approval: CE (EN 55022 Class B, EN 55024)
: FCC (Part 15 Subpart B Class 13)
: NEMA 4x
: UL Listed (UL 60950-1)

APPLICATION

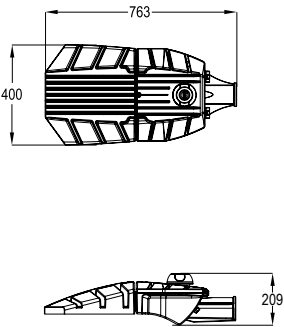
- Pathways
- Parks
- Car Parks
- Foot Paths
- Access Ways
- Road Lightings
- Residential Areas
- Municipal Expressways
- Facade Lightings

DIMENSION

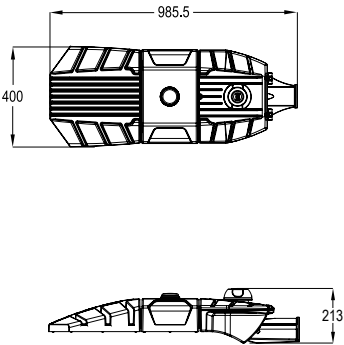
TRIMAX R0 - Side Entry
(without LCU)



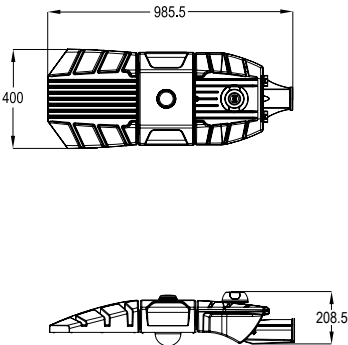
TRIMAX R1 - Side Entry



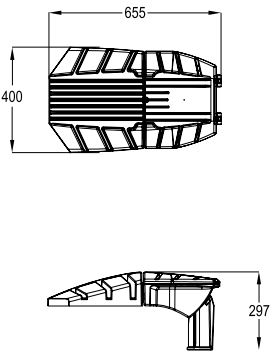
TRIMAX R2 - Side Entry
(without CCTV)



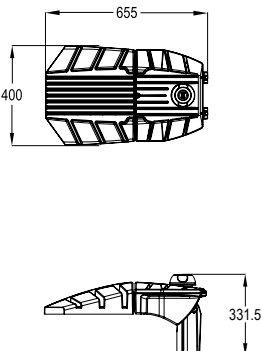
TRIMAX R3 - Side Entry



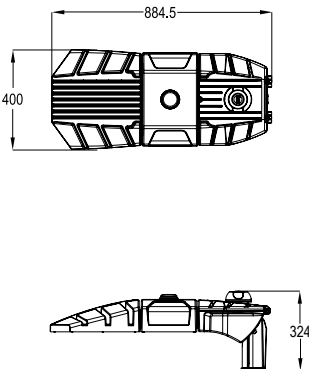
TRIMAX R0 - Post Top
(without LCU)



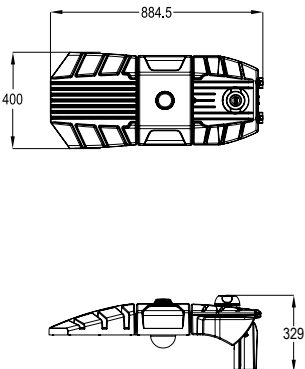
TRIMAX R1 - Post Top



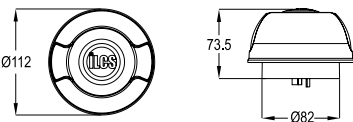
TRIMAX R2 - Post Top
(without CCTV)



TRIMAX R3 - Post Top

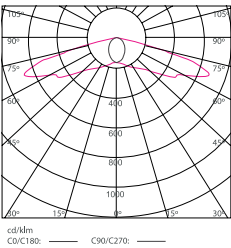


Light Control Unit

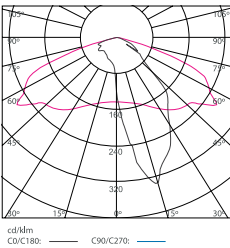


PHOTOMETRIC

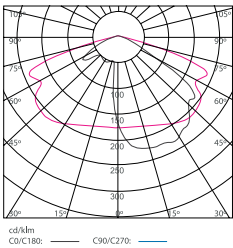
TYPE I - Rural Road



TYPE II - Urban Road



TYPE III - Expressway



Note: All specifications are subject to change without prior notice for product improvement. Images, pictures and illustrations used are for illustrative purposes only and the color printed in the brochure may differ from the actual product.



Intelligent Light Control System

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Design Summit 2018



Participation Award
by Abu Dhabi
Smart City Summit 2019

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