

Leading design & service

Corporate Overview 2024

Group Profile

- Employee: 96
- Total Close Area: 6.750 m²
- Production: 1.500 m²
- R&D LAB: 500 m²
- Warehouse: 3.000 m²
- Offices: 1.750 m²

- %10** Master Profile
- %30** Engineering Profile
- %30** Bachelor Profile
- %30** Others Profile



TD ELEKTRONICS

- Established: 2008
- Employees: 45












TD LIGHTING SOLUTIONS

- Established: 2012
- Employees: 51



Brands We Serve

LED	DRIVER	DIFFUSER	OTHER
 NICHIA <small>Made in JAPAN</small>			
			
		 JUNGBECKER <small>Enlightening Solutions</small>	
	 SOSEN LED DRIVER	 Bright View TECHNOLOGIES	
			
			



Our Brands

OPTIC



DRIVER



LED STRIP/NEON

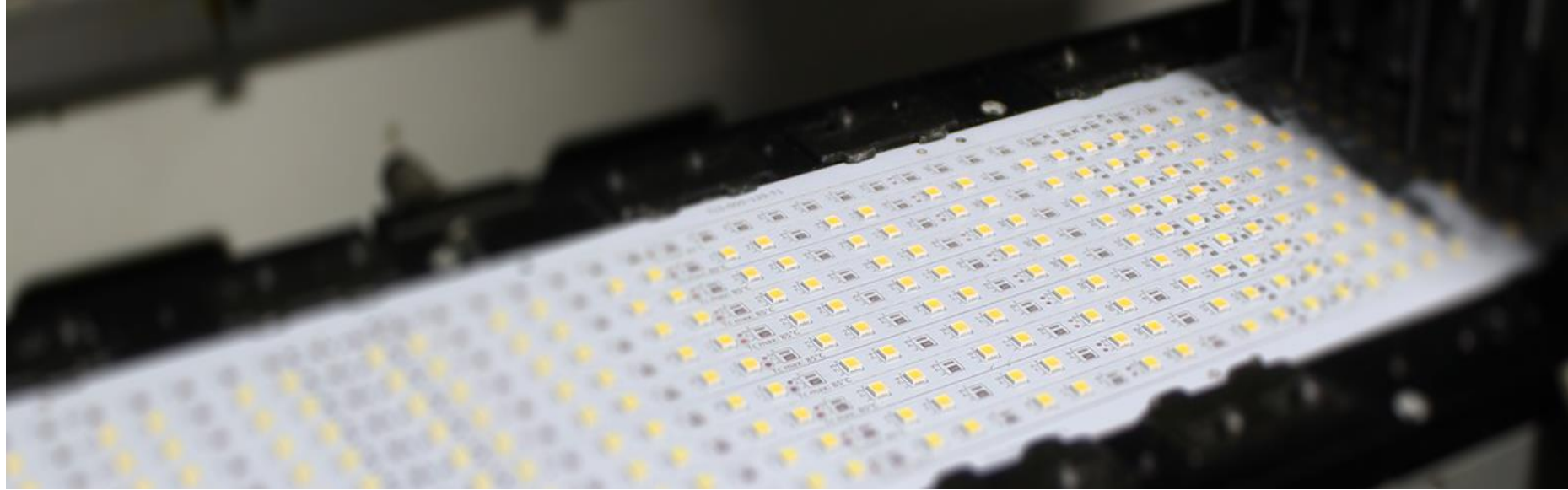


GLASS/DIFFUSER



TLS Manufacturing Capabilities

- 125.000 pcs Component Per Hour Real Time
- 3 Full Automatic inline SMT Lines
- QR Tracking Systems on Each PCB
- Up to 1.5m Manufacturing
- Highly Complex Electronic Board Manufacturing



TLS Manufacturing Capabilities

ESD (Antistatic)



Hygienic Production Area

The ventilation system, humidity and dust values required to provide a workable environment in the production area, ESD (antistatic) epoxy floor and an infrastructure system to take the electric charge in the environment is divided.



TLS Manufacturing Capabilities

Input & Output Quality Control

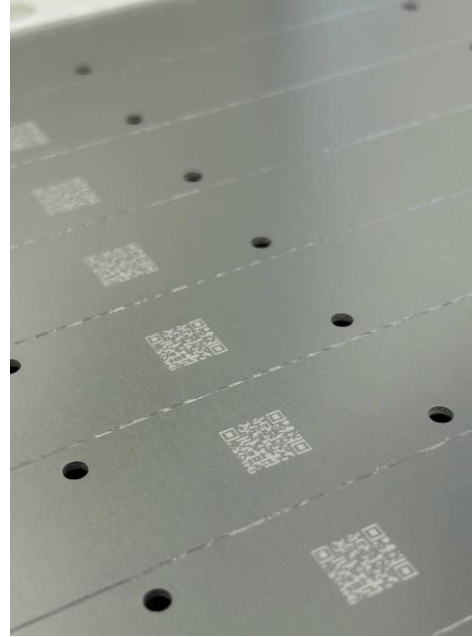


Input and Output Quality Control

All components required for production are prepared and sent to production. In the input quality control, the components that come to order and production are compared one by one. Those deemed appropriate are given to production. Output quality control is the final control of the main products produced within the technical specifications.

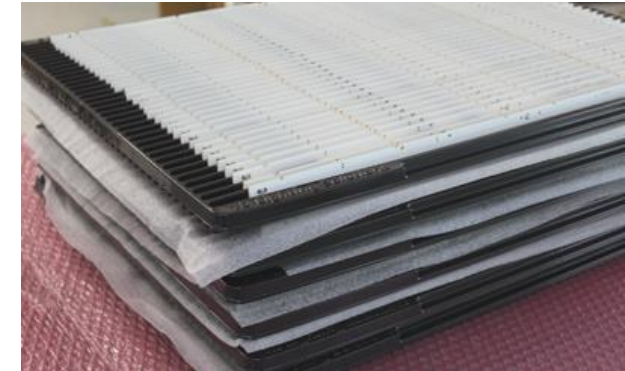
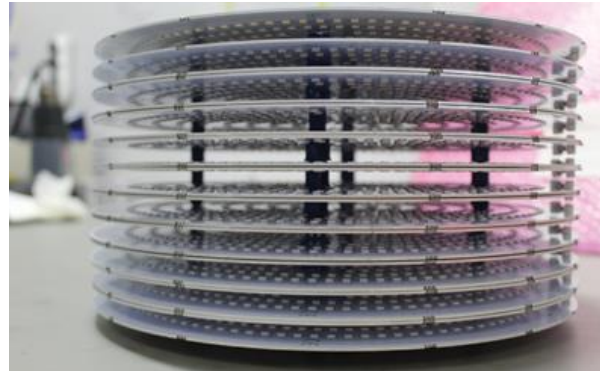
TLS Manufacturing Capabilities

QR Tracking & Packing



QR Barcode Tracking

In order to follow the production, QR Barcodes are prepared and pasted on each module. In our QR Barcode tracking system, it is possible to access all information such as which Lot Numbered products, which SMT machine used, who lined up, who tested it and who packaged it...etc.



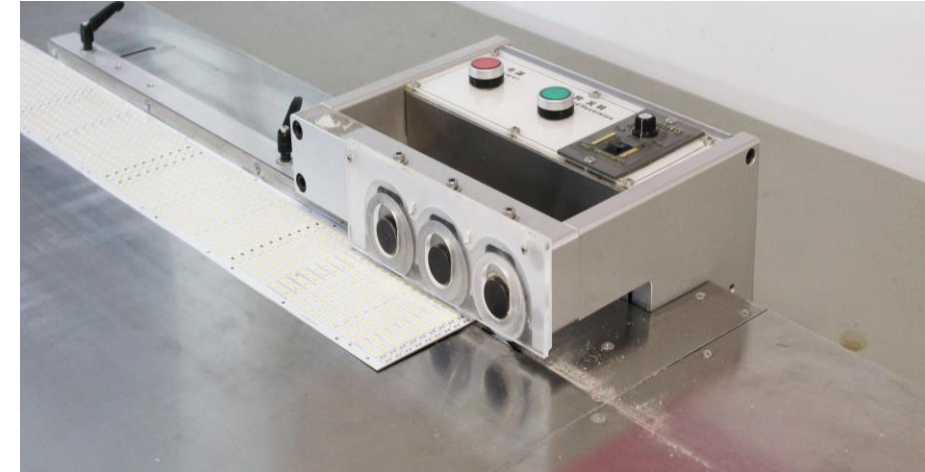
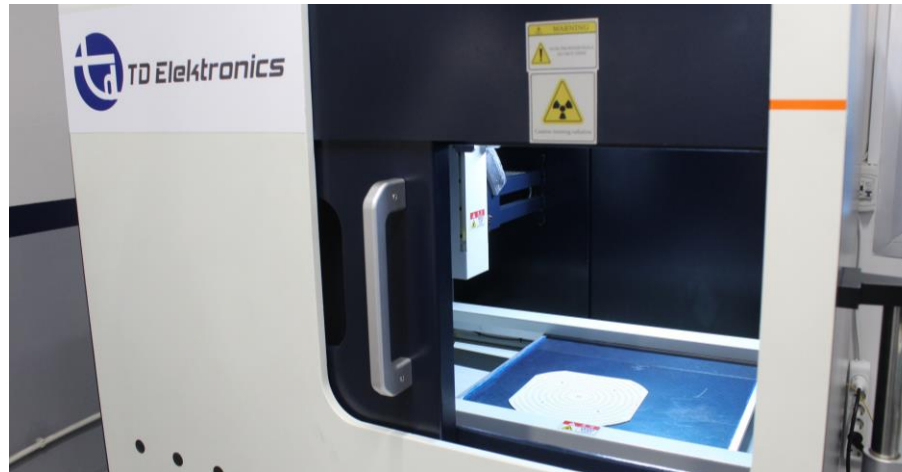
Packing & Antistatic Protective

All products are packed with anti-static packaging products in a way that will not harm each other and become ready for shipment.



TLS Manufacturing Capabilities

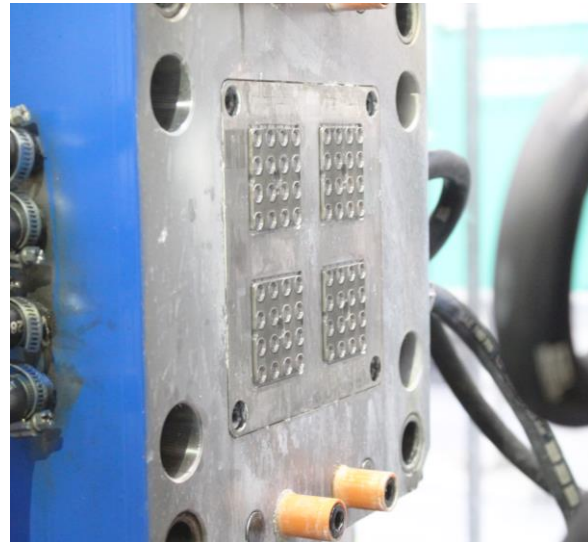
X-RAY
SAKI
V-Cut



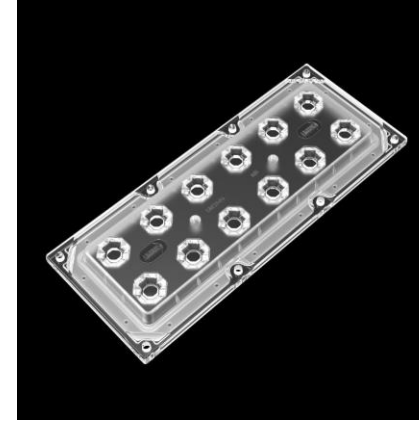
TLS Optical Production

We are a real solution partner that can respond to all technical values with our optical and mold design team.

With injection molding machine lines and our experience, we are able to supply products to the whole world from Turkey and our branch offices.



Popular Optic Products



Structural Design

Comprehensive design possibilities, to LED module design that compatible with our optic, from automation, traffic and automotive solutions with R&D Design Center



Mass Production

Full automatic production lines with our injection machines equipped with robot arms and laser cutting machines, ISO 9001/14001 certified



Special Software

To not leave our business to luck, we use software to our optic designs which are compatible with fine mechanical design, providing multiple mounting options and keeping efficiency at the highest level



Optical Team

Our optical team, which produces innovative solutions in mechanical, mold and optical designs, is within the R&D Design Center consisting of more than 20 expert technicians and engineers

「MADE IN
TURKEY」

「PATENT
PENDING」



Optical Customization Process

1

Optical Requirement

Target FWHM, IES
Lens Size
LED
Application

2

Optical Design Report

Our R&D will design and share the datas within 10 days.

3

Structure Design

If you are satisfied with the optical report, we will process to structure designing. Please provide us with the assembly drawing, structure drawing and any files that are helpful for us to design structure which will perfectly meet your expectations.

4

Structure Confirm

We ask for your confirmation whether the lens structure conflict with the PCB, component location and luminaire.

5

Mold Production

We need 20-35 working days to produce the mold, then will send you the samples when the mold finished.

6

Confirm The Samples

Whether the samples are the same as the optical design and structure design.

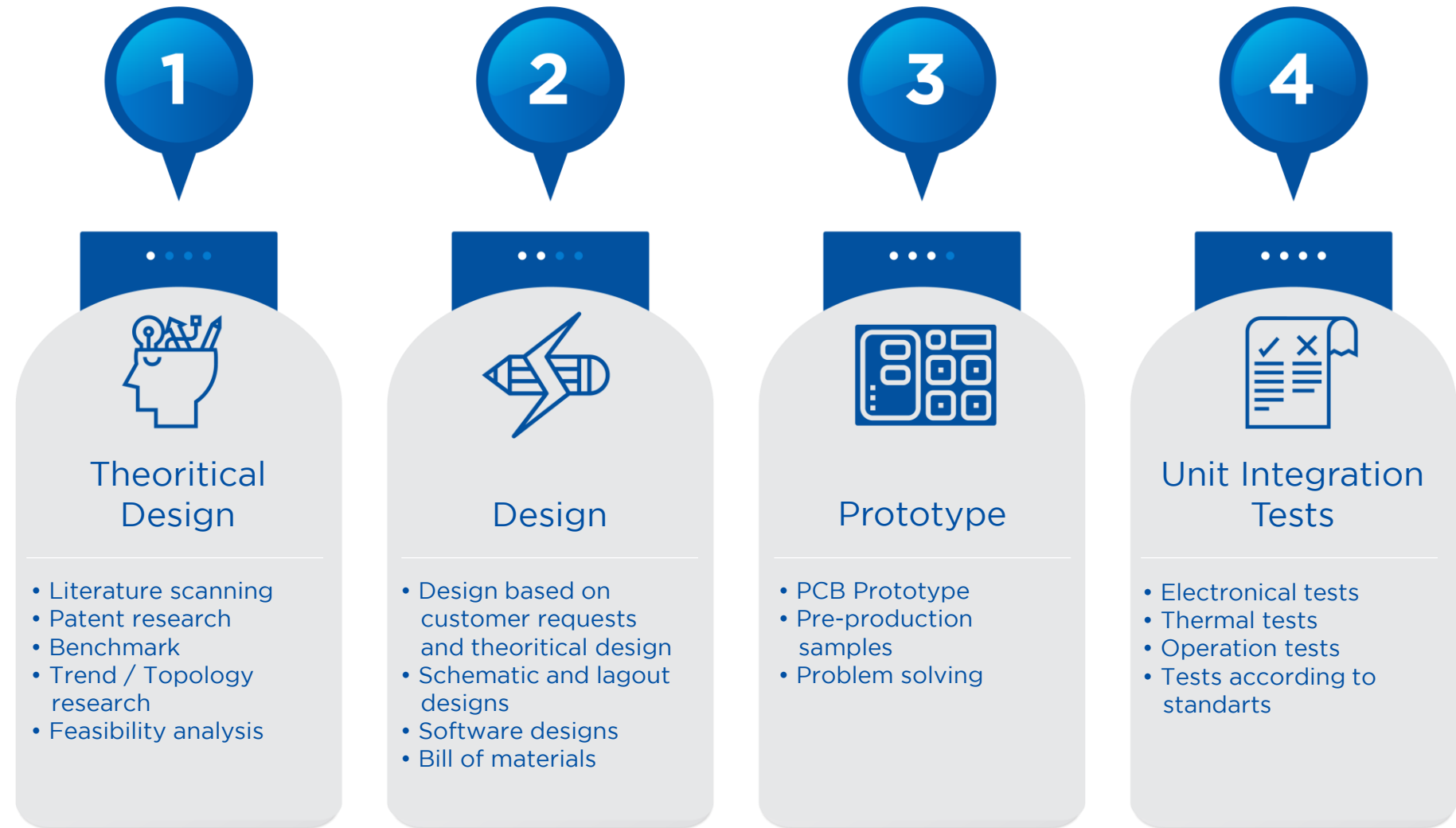
7

Mass Production

After sample approval, we will start producing the best optics for you!

R&D Design Center Service

Electronical Design



Industries We Serve

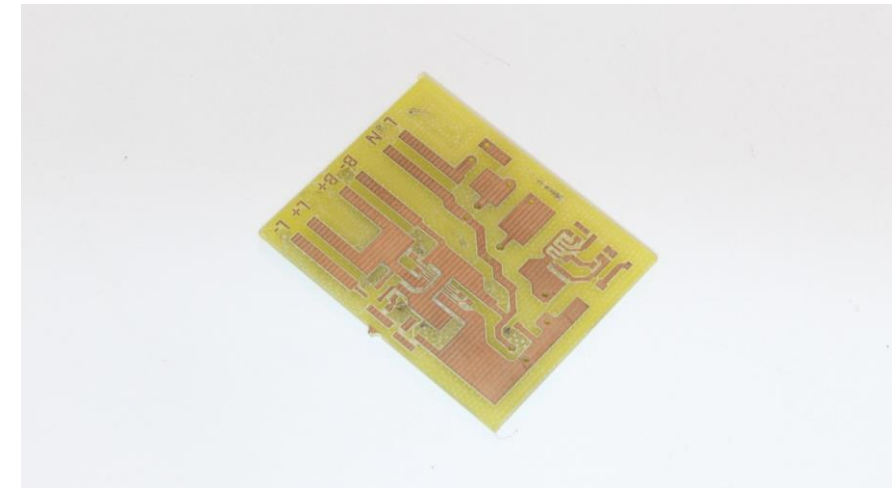
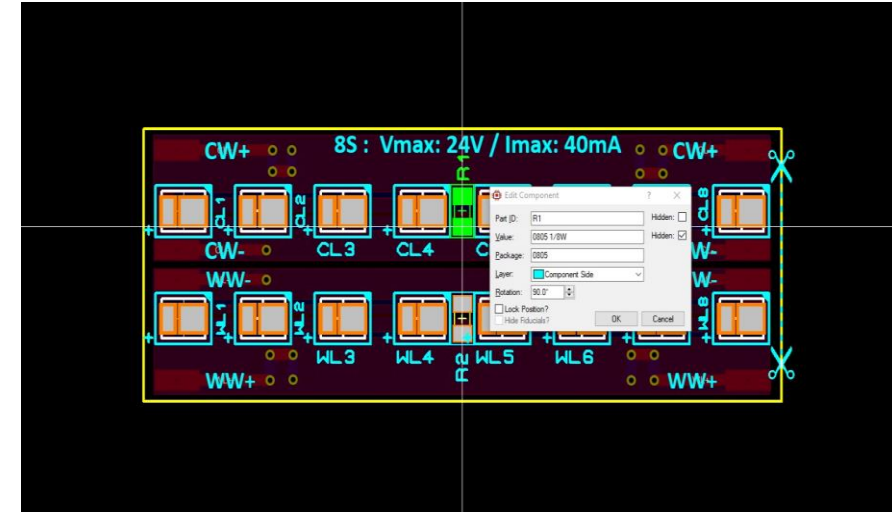
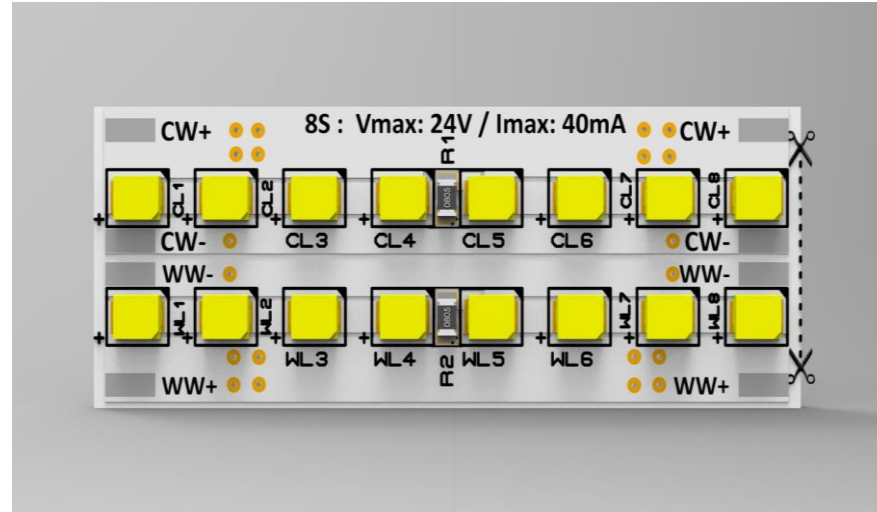
Lighting - Automotive - Medical - Military - House Electronics



R&D Design Center Service

PCB Design

- 5.000 PCB designs available
- New design in 72 hours





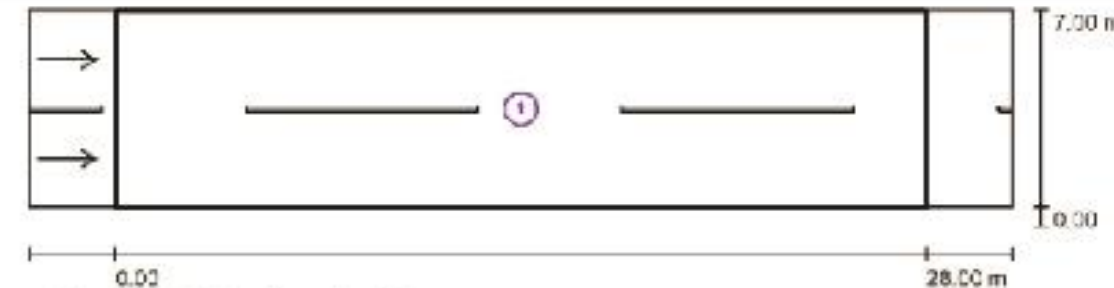
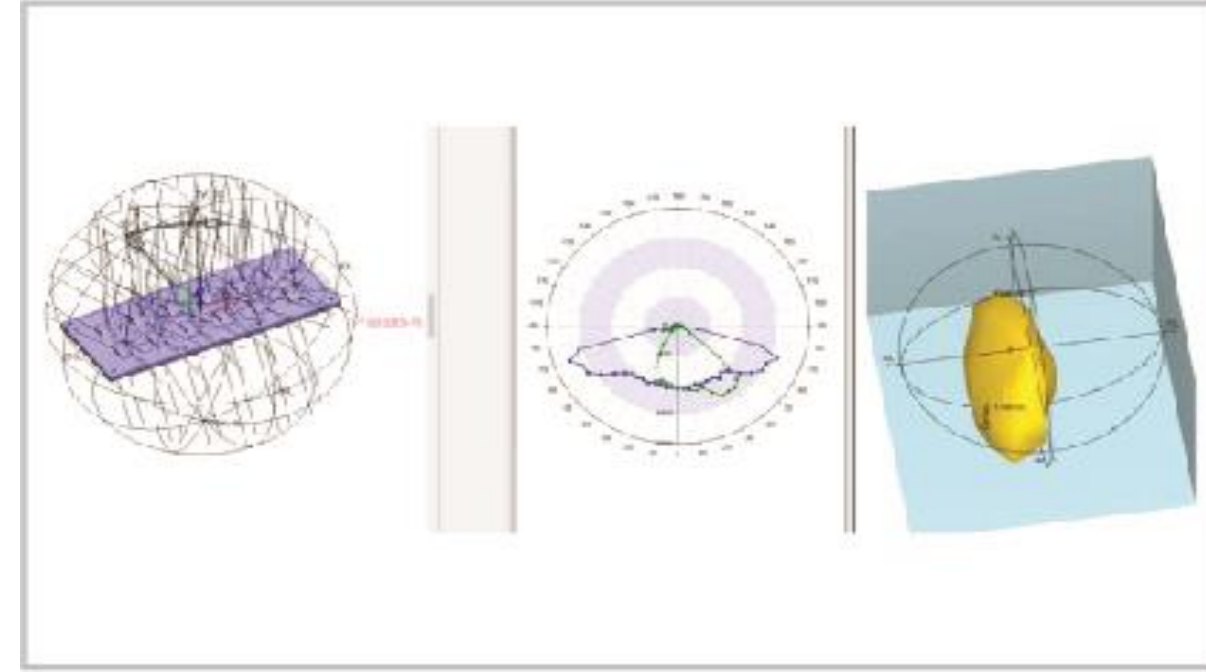
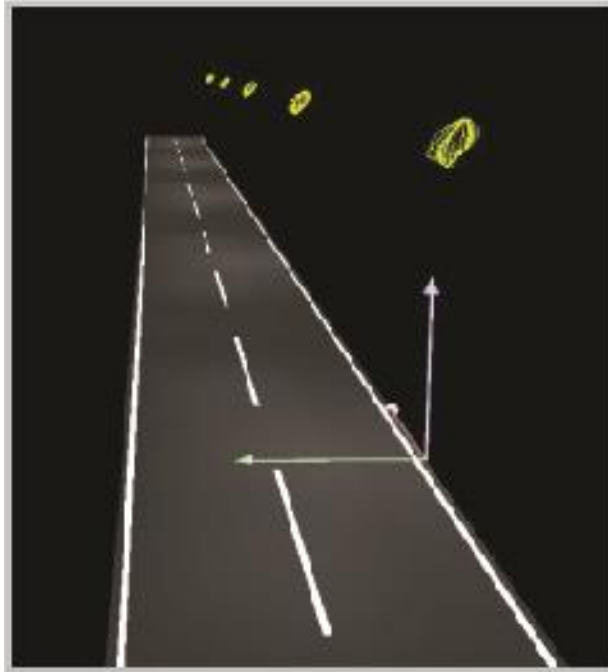
- 2021 Establishment
- www.tlstechology.bg
- info@tlstechnology.bg
- Plovdiv 4000, Vasil Aprilov Bulv. No: 124A Bulgaria

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- Quick Access to the EU Market
 - Smooth registration to EPREL

R&D Design Center Service

Optical Design

- Optical design on leading softwares.
- Simulations on Dialux and Relux design evaluation and approval.



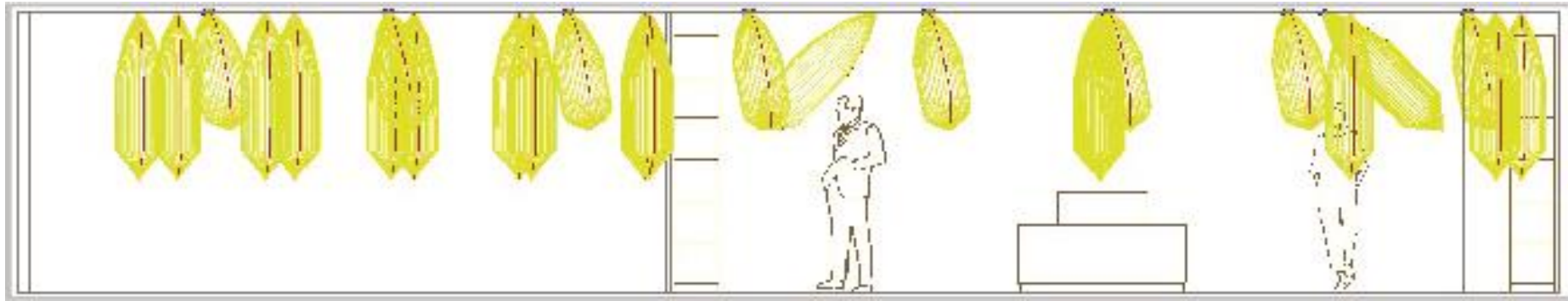
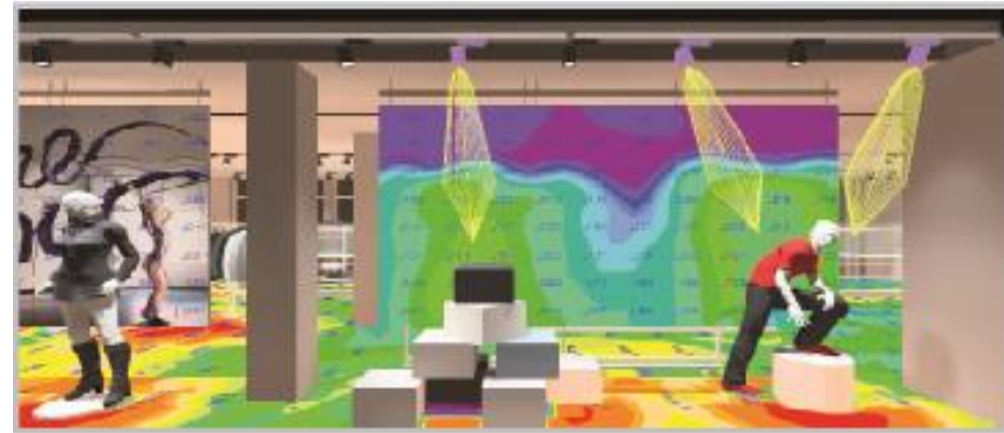
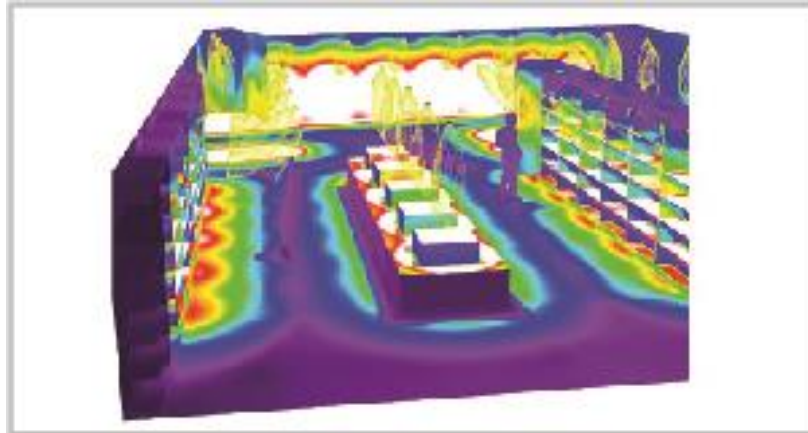
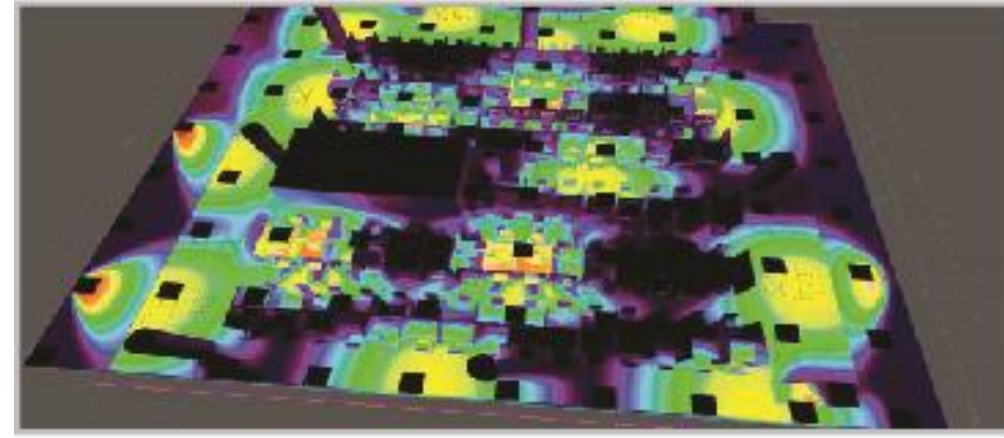
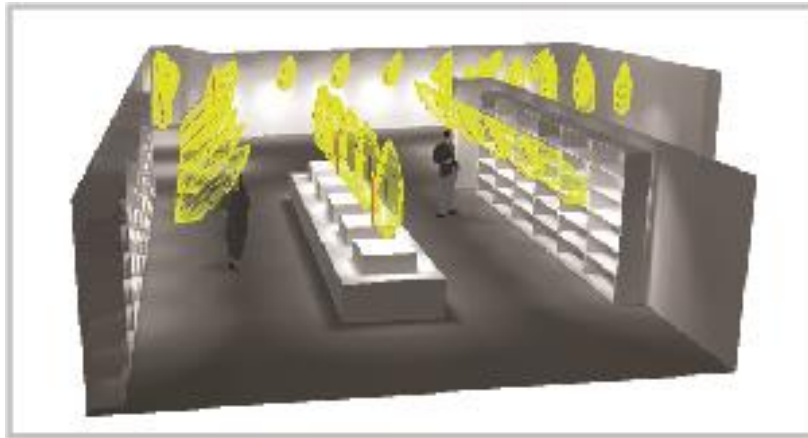
(Tüm fotometrik istemler sağlandı.)

L_m [cd/m ²]	U0	U1	TI [%]	SR
1.00	0.40	0.71	7	0.54
≥ 1.00	≥ 0.40	≥ 0.70	≤ 15	≥ 0.50
✓	✓	✓	✓	✓

R&D Design Center Service

Dialux Analysis

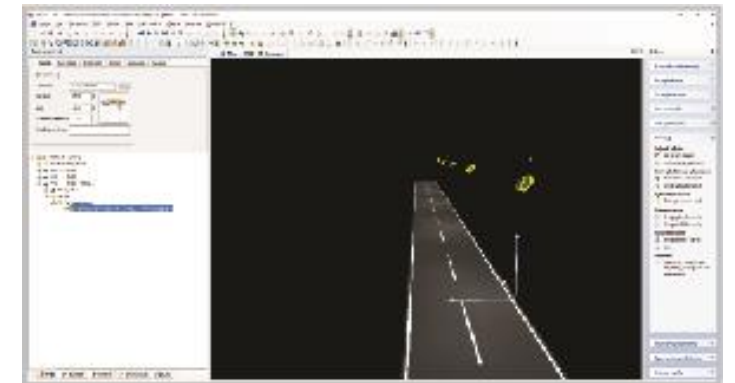
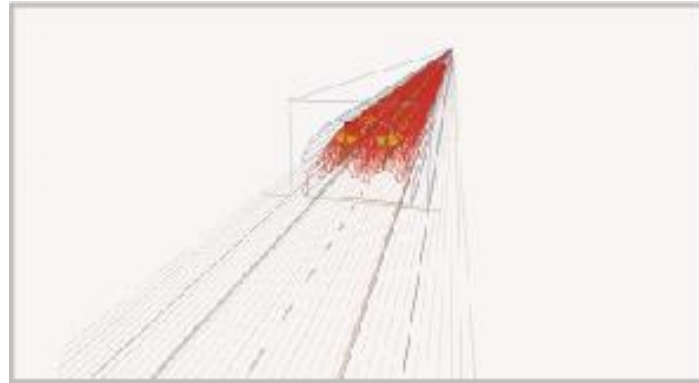
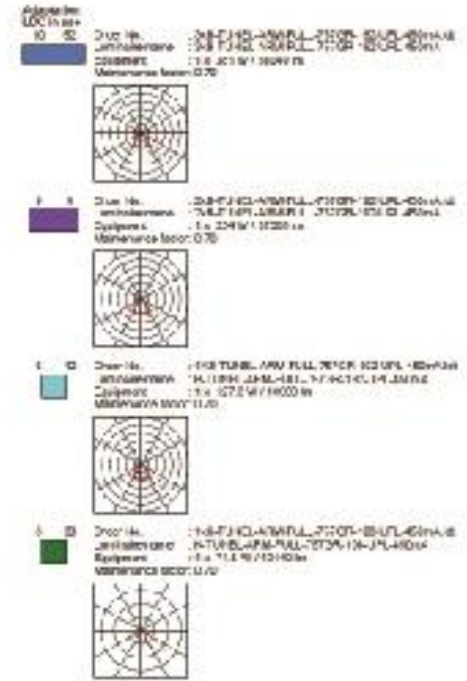
- Optimum number of fixtures
- Correct luminaire angle
- Lighting that won't affect the human eye



R&D Design Center Service

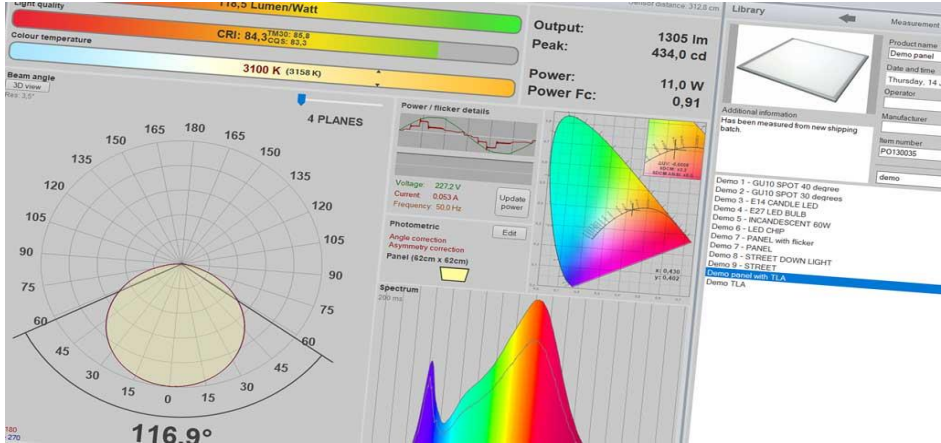
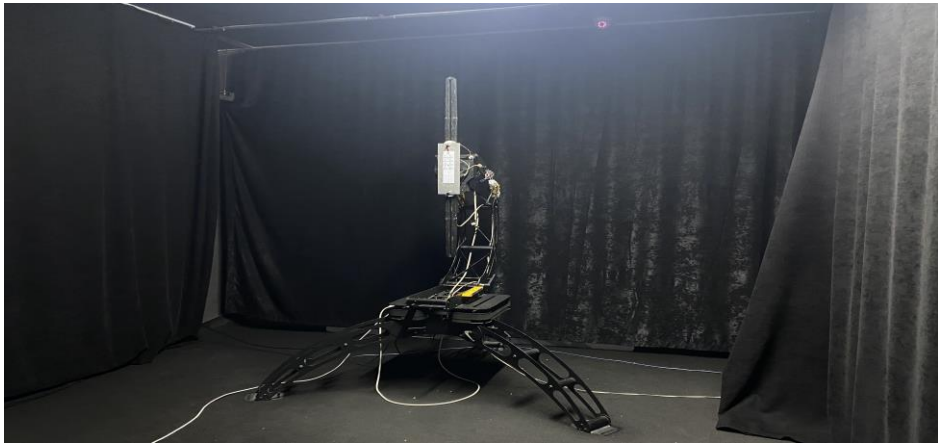
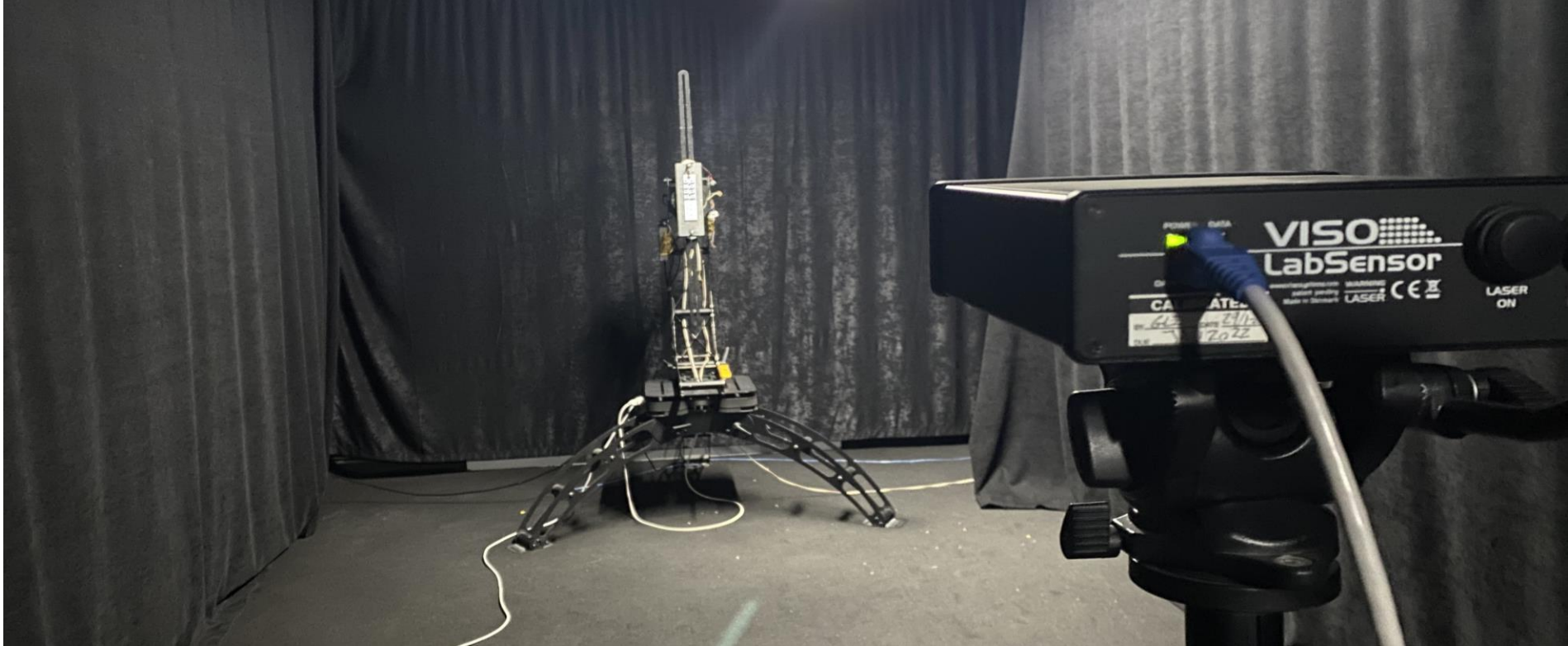
Relux Analysis

- Separate optical operation for adaptation, input and interior areas.
- To perform armature placement and analysis by considering the differences between day and night during analysis. (Daytime 4 cd / m², Night 2cd / m²)
- Optimize the analysis according to the switching frequency between the luminaires so that the human eye is at least exhausted. (Less than 2Hz or greater than 15Hz.)
- The traffic speed in the tunnel, the tunnel geometry to work one to one when analyzing.



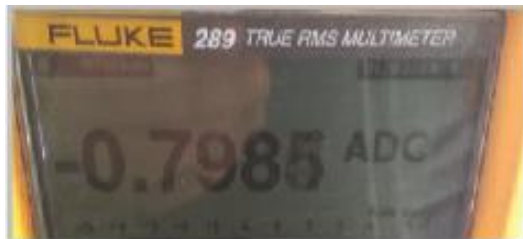
R&D Design Center Service

Photometric Measurements



R&D Design Center Service

Electrical Measurements



ELECTRICAL MEASUREMENT OF LA40E-700 25-58V														
No:	Vin (V AC)	Iin (mA AC)	S =VA AC	Var	PF	THD	Power AC (W)	I OUT(mA DC)	Vout max (V DC)	Vout min (V DC)	Power DC	Efficiency	LED Sayısı (Max-Min)	
1	200	0,381	76,2	200,000363	0,55	144,1	41	0,681	55,3	26,3	37,66	91,85	19	9
2	210	0,366	76,9	210,000319	0,54	153,7	41	0,680	55,1	26,3	37,47	91,39	19	9
3	220	0,368	81,0	220,000308	0,52	149,2	41	0,680	55	26,3	37,40	91,22	19	9
4	230	0,335	77,1	230,000244	0,54	147,9	41	0,679	54,9	26,3	37,28	90,92	19	9
5	240	0,334	80,2	240,000232	0,52	154,5	41	0,679	54,8	26,3	37,21	90,75	19	9



R&D Design Center Service

Thermal Measurements



No:	in (V AC)	Tarih	TEST B. SAATİ	Test Süresi	Test Kabini sıcaklığı °C	Kasa sıcaklığı°C(ıç)	Kasa sıcaklığı°C(dış)	Armatür iç ortam °C	Pcb Üst°C	Led 1 Katot sıcaklığı°C	Led 2 Katot ucu sıcaklığı°C
1	230	2.1.2018	11:30:00	630 dk.	40	x	x	x	x	x	x
2	230		17:00:00			53.4	52.8	49.7	55.9	57.5	58.2



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