



D4825U-UNW0 Series

High Power UV LED Module

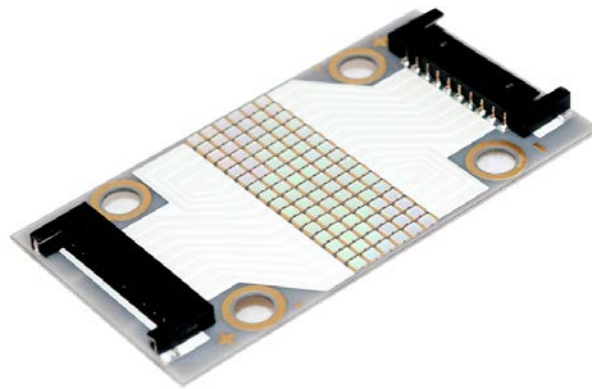


Table of Contents

Characteristics	1
Mechanical Dimensions	2
Electrical Connector.....	3
Recommended Stencil Pattern Design for Thermal Grease.....	3
Typical Relative Spectral Power Distribution.....	4
Input Current vs. Irradiance Characteristics	4
Input Current vs. Voltage Characteristics	5
Safety Precautions.....	5

Characteristics

Absolute Maximum Ratings ($T_{hs}=50^{\circ}\text{C}$)

Parameter	Rating
	D4825U-UNW0 Series
DC Forward Current	5.6 A (0.7A per channel)
Power Consumption	246 W
LED Junction Temperature	125°C
Operating Temperature	-40°C~70°C
Storage Temperature	-40°C~110°C

T_{hs} – Temperature at heat sink

General Characteristics (under the conditions set forth in the Notes section below)

Parameter	Rating
	D4825U-UNW0 Series
Dimensions	25.6mm x 48mm x 0.95mm
Chip Connection Arrangement	12S, 4 independent channels * 2 sets
Emitting Area Size	24.55mm x 9.4mm
Typical input current	4A (0.5A per channel)
Typical Input voltage	35V-42V typ. 40V
Connector housing type	Molex 504051-1001 (10 pin) * 2

Electro-Optical Characteristics (Driving current = 5.6A)

Part number	Color Bin	Power Bin	Minimum Peak Irradiance ² (W/cm^2) ^{Note 2} Distance = 1mm from LED surface	Vf (V)	
				Min.	Max.
D4825U-UNW0	U40	U18	18-20	37	44
	U40	U20	20-22	37	44
	U40	U22	22-24	37	44
	U50	U20	20-22	37	44
	U50	U22	22-24	37	44
	U50	U24	24-26	37	44
	U60	U22	22-24	37	44
	U60	U24	24-26	37	44
	U60	U26	26-28	37	44

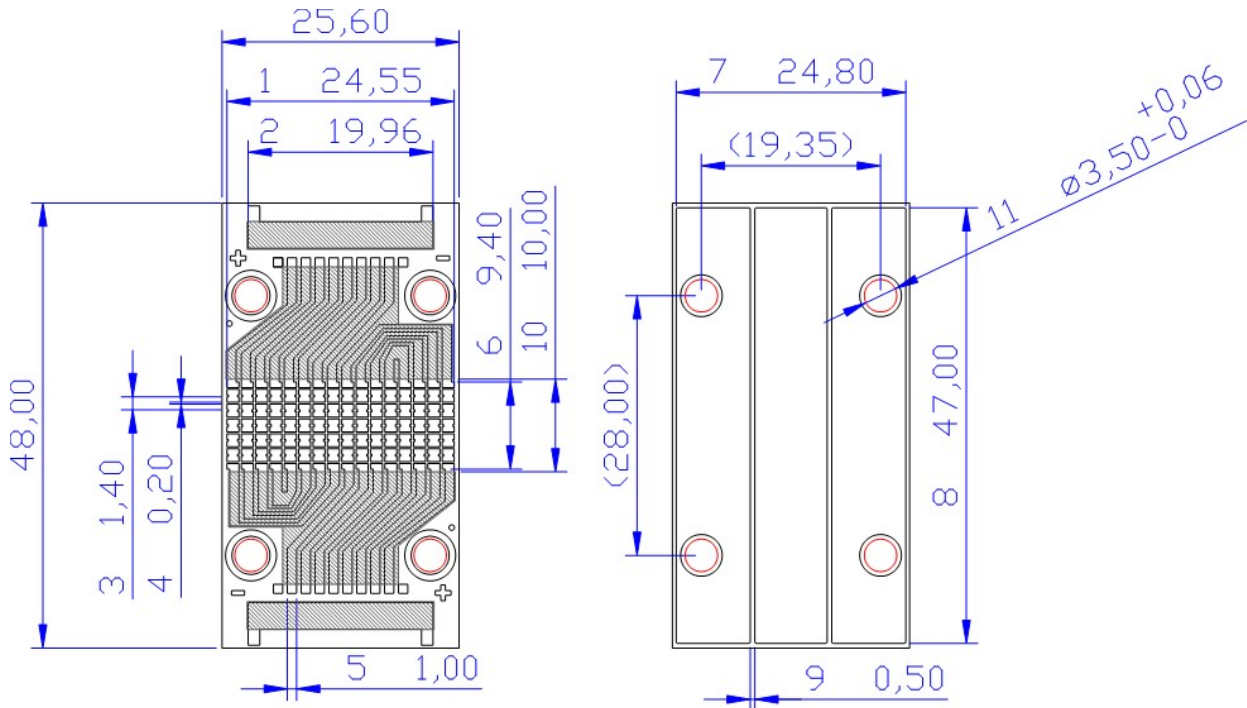
Notes:

1. The peak wavelength is measured with an accuracy of $\pm 1\text{nm}$
2. Peak Irradiance refers to measurements with EIT UVICURE PLUS II in UVV program and/or UVA program at the emitting surface. Irradiance value can vary significantly by the type of measurement device and measurement conditions. The values stated are subject to the limits and set up of TSLC testers. All other measurement data are defined as long-term production mean values and are only given for reference.
3. Data measurements are based on testing conditions with a constant substrate temperature at or below 50°C under pulse testing conditions. All values stated are subject to the limits and set up of TSLC's testers. All other measurement data are defined as long-term production mean values and are only given for reference.



4. A critical component is a component used in a life-support device or system whose failure can reasonably be expected to cause the failure of that life-support device or system, or to affect its safety or effectiveness of that device or system. Life support devices or systems are intended (i) to be implanted in the human body, or (ii) to support and/or maintain and sustain human life. If they fail, it is reasonable to assume that the health of the user may be endangered. Components used as a critical component must be approved in writing by TSLC
5. These devices emit high intensity UV/NUV light. Necessary precautions must be taken during operation. Do not look directly into the light or look through the optical system when in operation. Protective eyewear should be worn at all times during operation.
6. This product has been designed to operate only with a constant current power source.
7. Always follow thermal design recommendations in the relevant Application Note.

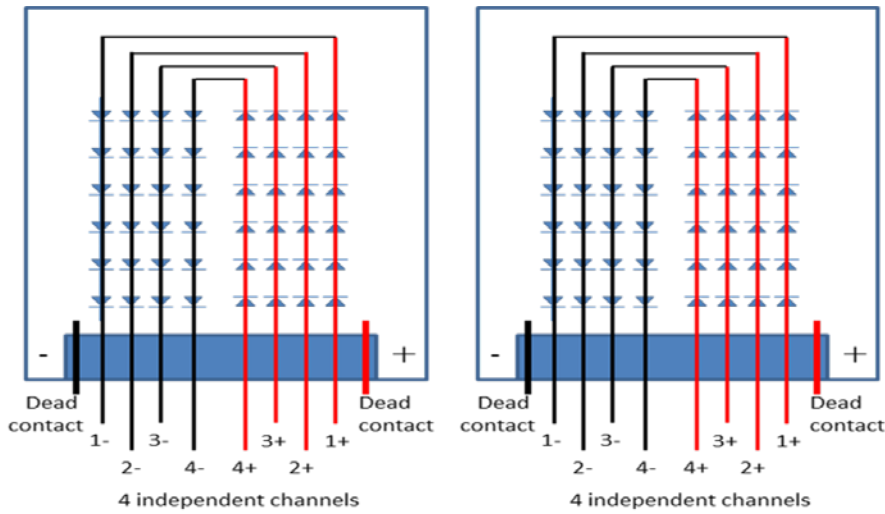
Mechanical Dimensions



Notes :

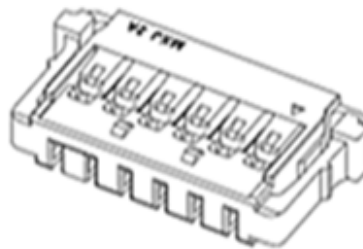
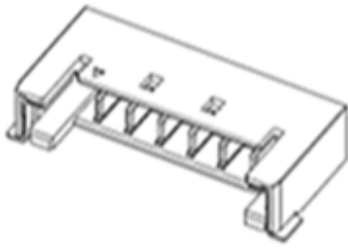
1. Drawings are not to scale
2. All dimensions are in millimeter
3. Dimensions are ± 0.13 mm unless otherwise indicated

Two Electrical Connectors

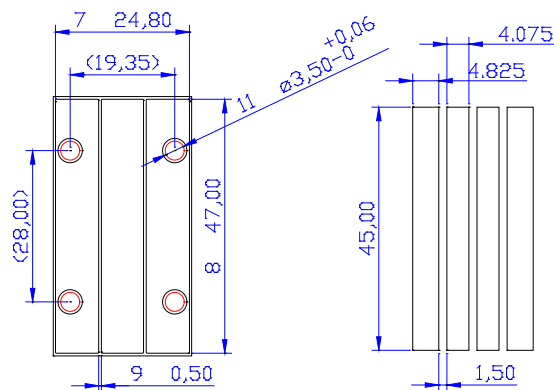


Header (10 pin)
Molex 504050-1091

Housing (10 pin)
Molex 504051-1001



Recommended Stencil Pattern Design for Thermal Grease

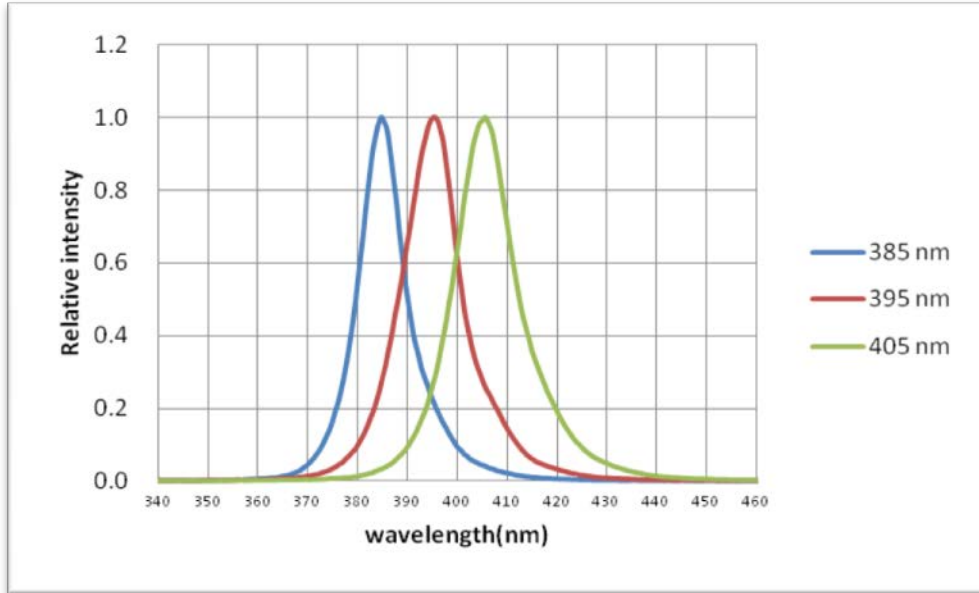


Notes:

1. All dimensions is millimeter
2. Drawing is not to scale
3. Stencil thickness is dependent on selected thermal interface material (TIM). Please consult TIM provider.
4. Excess TIM should be avoided.

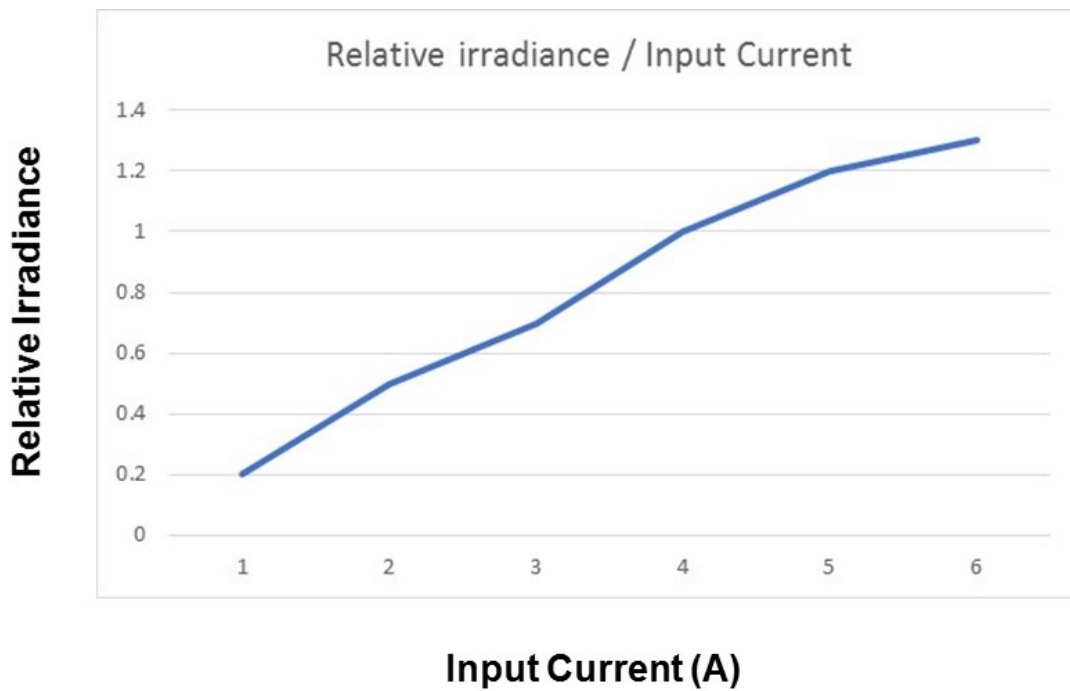
Typical Relative Spectral Power Distribution

D4825U-UNW0 Series

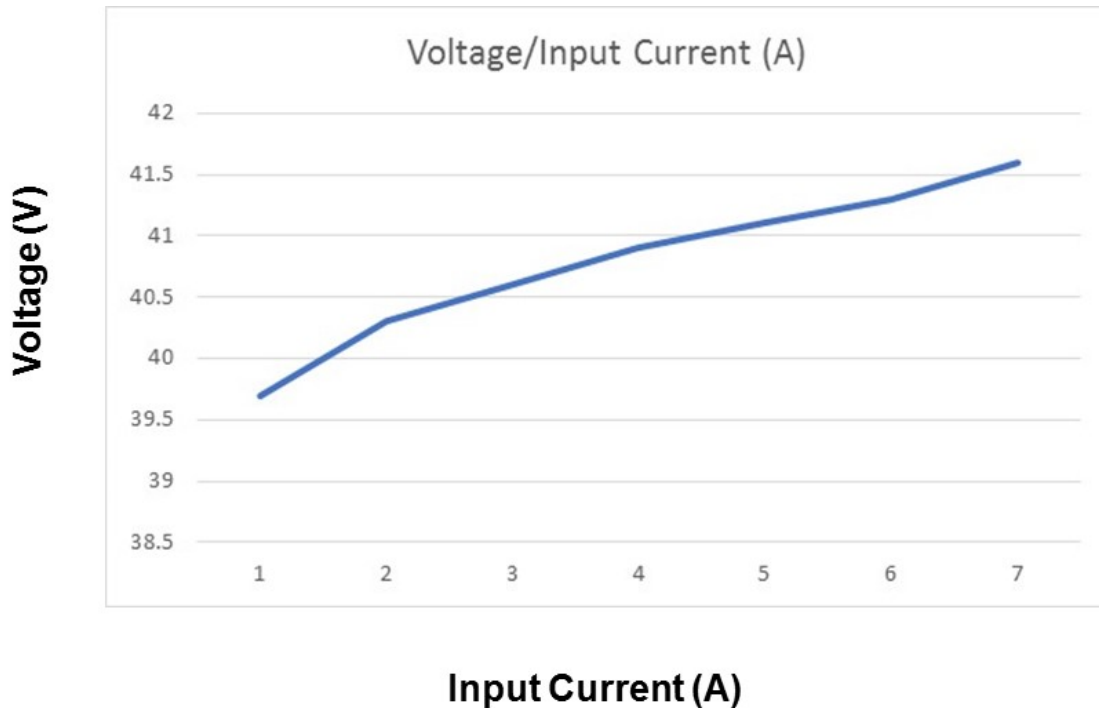


Input Current vs. Irradiance Characteristics

D4825U-UNW0 Series



Input Current vs. Voltage Characteristics



Safety Precautions



The UV LED COB module emits a strong UV light in the UVA range. It is strongly recommended to use the appropriate eye and body protection while using the product and to follow the recommended safety and handling precautions.

- Do not look directly into the UV module when it is operating.
- Always wear a UV-proof face shield and cover all exposed skin while the UV module is in operation.
- Hold the UV module so that the light beams are facing away from you.
- Always turn off the device and unplug the power cord before handling the module.
- Keep the module dry at all times.
- For indoor use only.
- Do not attempt to repair the product.

About Us

TSLC Corporation is devoted to developing high-density and multi-size emitters with powerful output to satisfy the needs of every customer.

TSLC Corporation is the leader in LED solutions. Unlimited design flexibility for interior and exterior spaces with high-end lighting effect; energy-efficient for UV curing to improve the quality of medical care; horticulture solutions create a better environment for everyone; high-intensity rotatable lightings for the entertainment industry, TSLC is always there for your lighting needs.

For further company or product information, please visit us at www.tslc.com.tw or please contact sales@tslc.com.tw.



www.tslc.com.tw

ASIA PACIFIC

1F, No. 11, Ke Jung Rd.
Chu-Nan Site
Hsinchu Science Park
Chu-Nan 350, Miao-Li City
Taiwan, ROC

Tel: +886-37-587098

Fax: +886-37-587099

sales@tslc.com.tw

