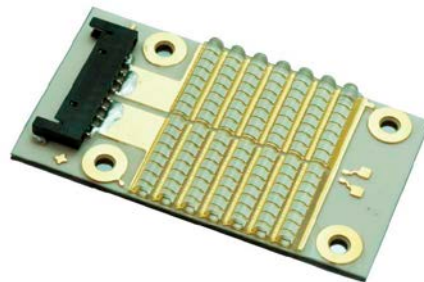




# D4525U-UND2 Series High Power UV LED Module



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## Characteristics

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

Parameter	Rating
	D4525U-UND2 Series
DC Forward Current	5.6 A
Power Consumption	270 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
	D4525U-UND2 Series
Dimensions	45.5 mm x 25.2 mm x 3.1mm
Chip Connection Arrangement	14S8P
Emitting Area Size	20 mm x 25mm
Typical input current	4 A
Typical Input voltage	45 -50 V
Connector housing type	Molex 504051-1001 (10 pin)

### Electro-Optical Characteristics

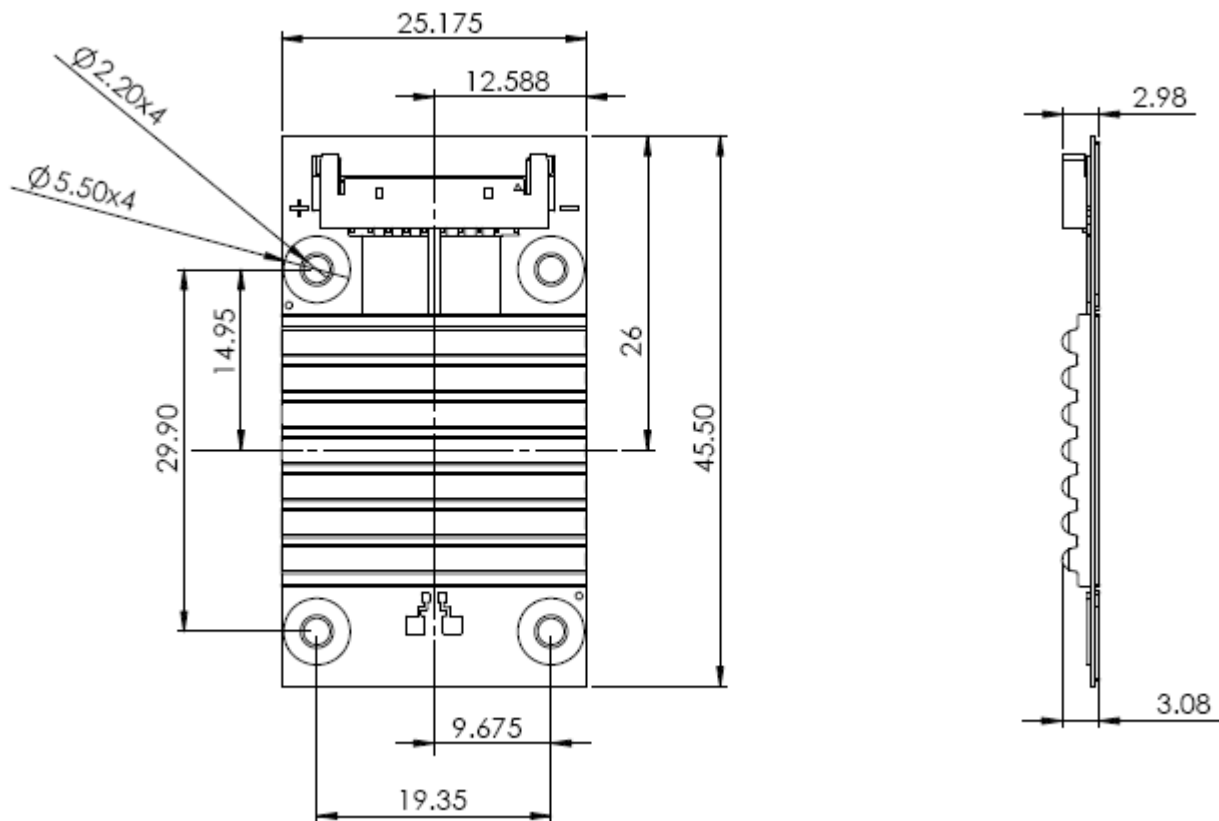
Part number	Bin Code	Peak Wavelength (nm)	Minimum Peak Irradiance <sup>2</sup> (W/cm <sup>2</sup> )
			Driving current = 5.6A Distance = 1mm from LED surface
D4525U-UND2 series	U40	380-390	12-14W/cm2
	U50	390-400	16-18W/cm2
	U60	400-410	18-20W/cm2

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.
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 Corporation.
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.



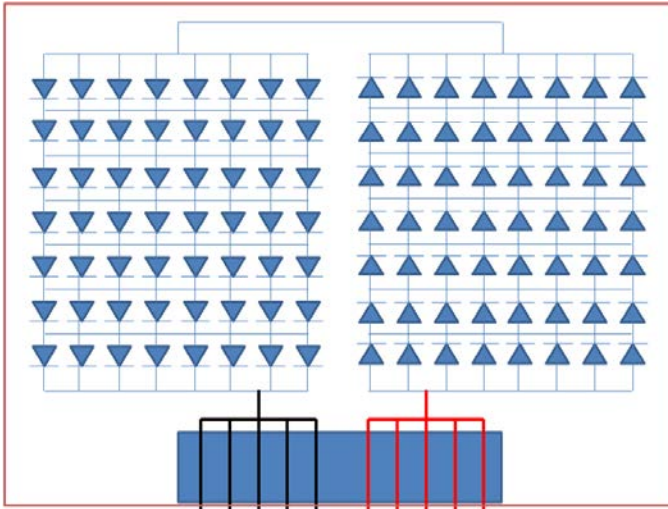
## Mechanical Dimensions



Notes :

1. Drawings are not to scale
2. All dimensions are in millimeter
3. Dimensions are  $\pm 0.13\text{mm}$  unless otherwise indicated

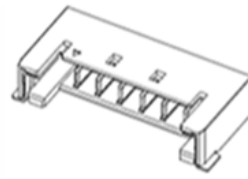
## Electrical Connector



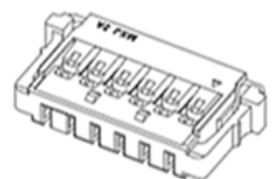
**Cathode ( 5 pin )**

**Anode ( 5 pin )**

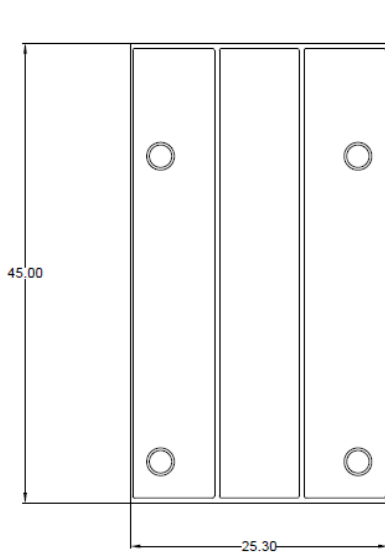
**Header (10 pin)**  
Molex 504050-1091



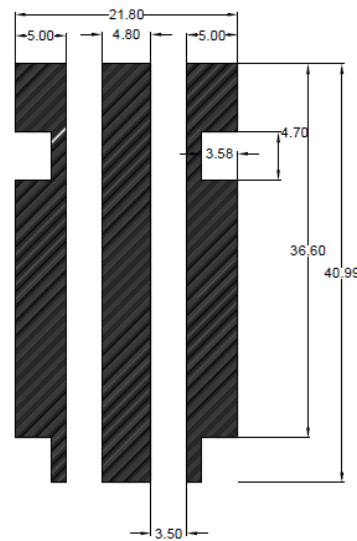
**Housing ( 10 pin)**  
Molex 504051-1001



## Recommended Stencil Pattern Design for Thermal Grease



**COB bottom side**



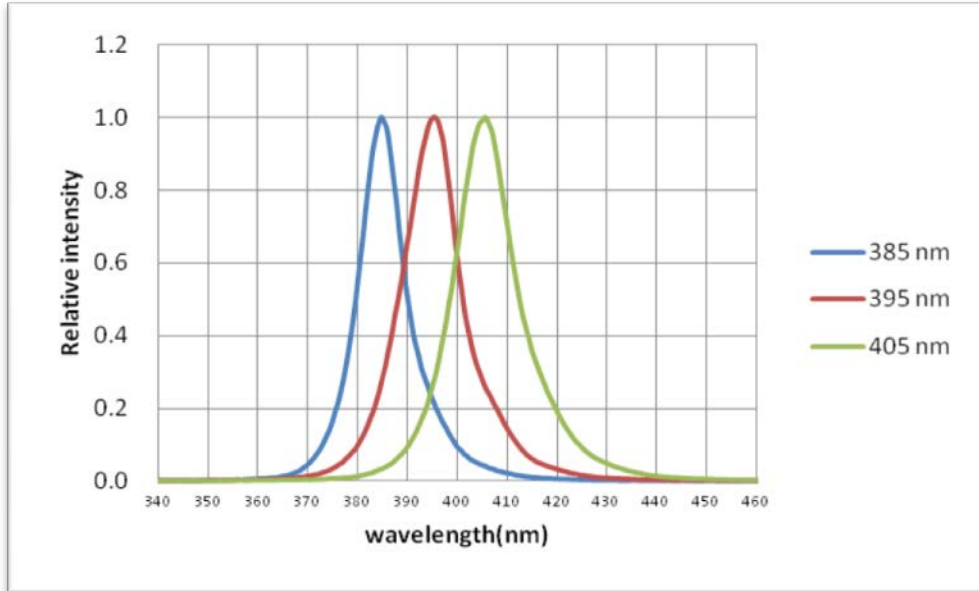
**Thermal Grease Mask Area**

### 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.

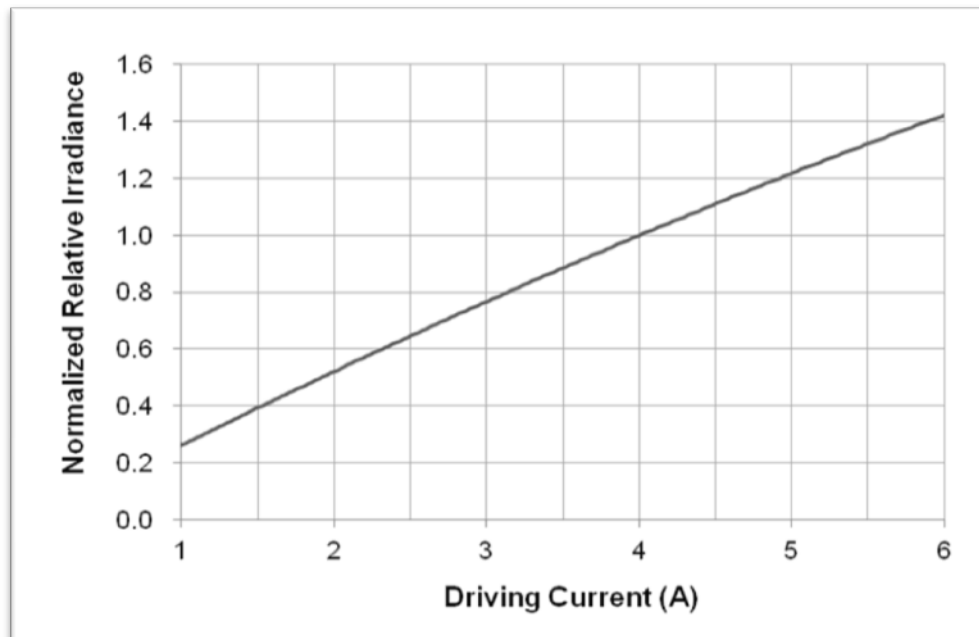
### Typical Relative Spectral Power Distribution

#### D4525U-UND2 Series



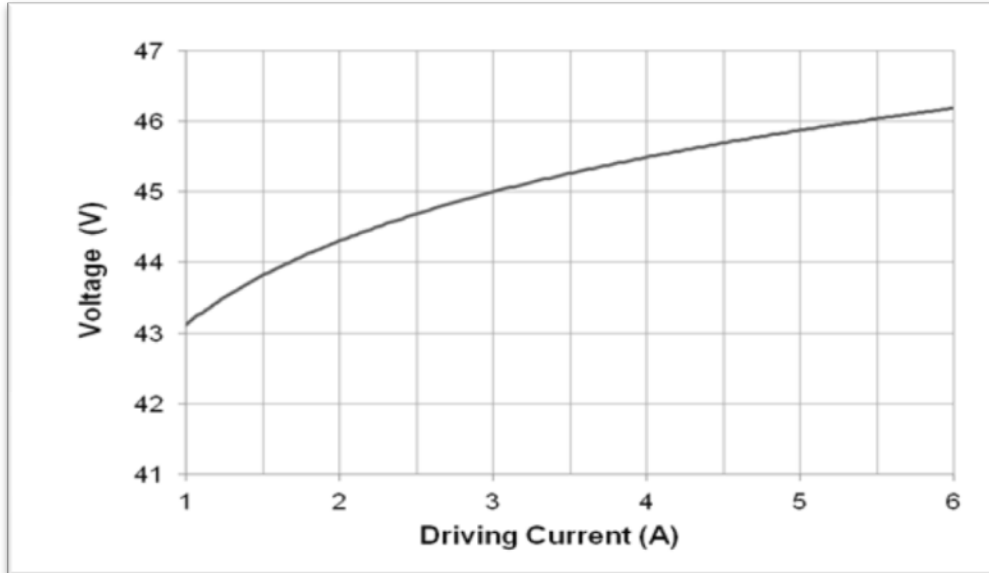
### Input Current vs. Irradiance Characteristics

#### D4525U-UND2 Series



## Input Current vs. Voltage Characteristics

### D4525U-UND2-Series



## 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](http://www.tslc.com.tw) or please contact [sales@tslc.com.tw](mailto:sales@tslc.com.tw).



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