

Features:

- Super High power 10W LED
- Circuit design: 5-8.8V
- ALN substrate with anti-UV crystal lens
- Customize peak wavelength

■ Type1. Single Chip Design Maximum Rating (Ta : 25°C)

Characteristics	Symbol	Min.	Typical	Max.	Unit
DC Forward Current ¹	I_F			1,000	mA
Pulse Forward Current ²	I_{PF}			1,500	mA
Forward Voltage	V_F	5.0		8.8	V
Reverse Voltage	V_R		-20		V
Leakage Current (5V)	UV			10	μ A
Junction Temperature ³	T_j		105		°C
Storage Temperature Range	T_{stg}	-40	–	100	°C
Soldering Temperature	T_{sol}		260		°C
Thermal Resistance Junction / Solder Point	R_{th}		3.0		°C/W
Viewing Angle	$2\theta_{1/2}$		60		Deg
Electrostatic Discharge (HBM)	ESD		2		KV
Operating Temperature Range	T_{opr}	-40°C		+80°C	°C

Notes:

1. For other ambient, limited setting of current will depend on de-rating curves.
2. D=0.01s duty 1/10.
3. When drive on maximum current , T_j must be kept below 105°C.
4. Viewing angle ($2\theta_{1/2}$) \pm 10°.

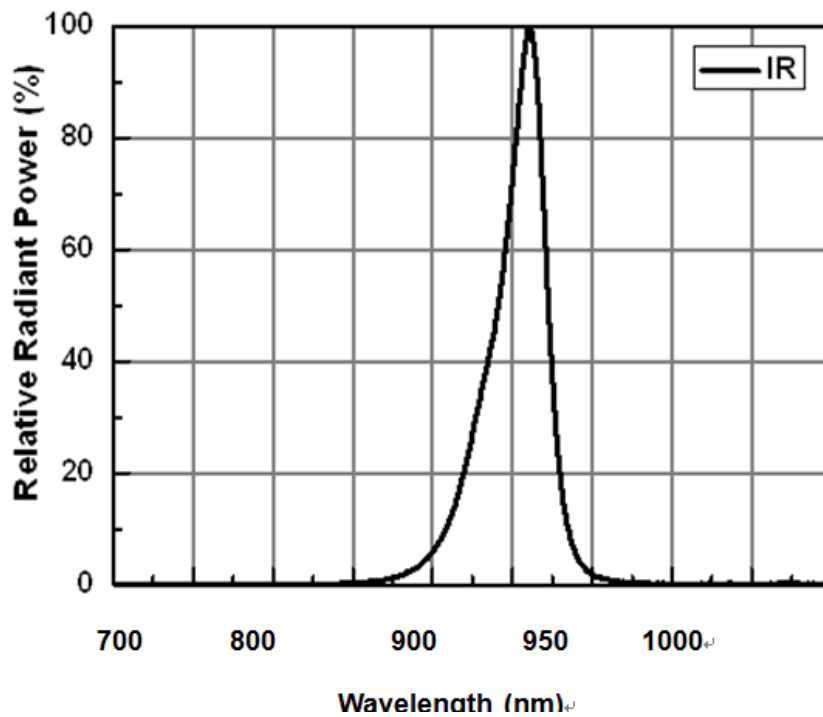
■ Circuit Design (High Power Type)

Color	Radiometric Power (mW) @1000mA/chip			Peak Wavelength (nm@1200mA)	Forward Voltage (V@1000mA)		Part Number
	Bin code	Min	Max		Min	Max	
IR	P	2000	3600	930-950	5.0	8.8	

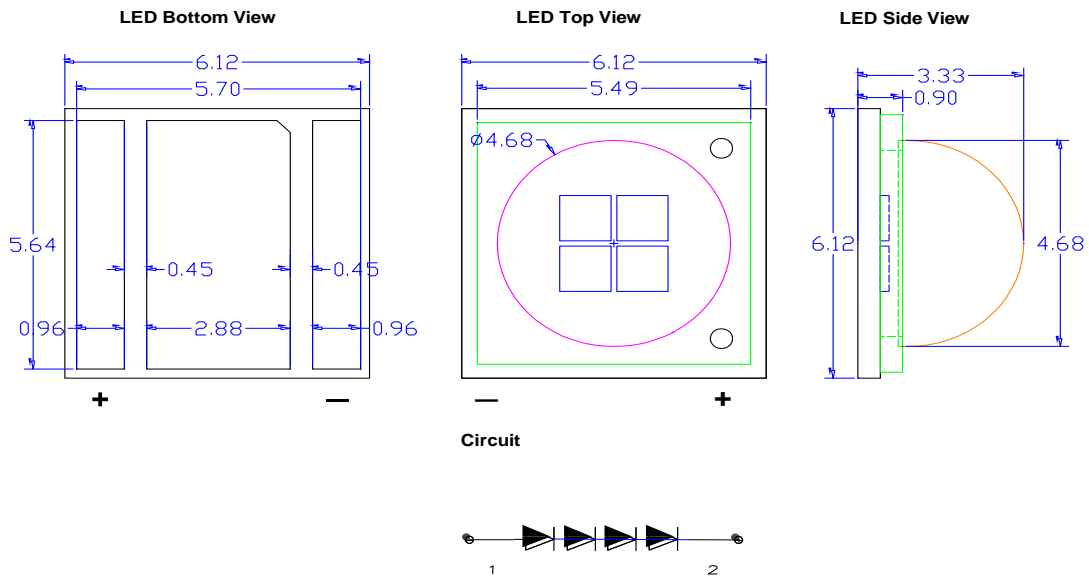
Notes :

1. Tolerance of Forward voltage (V_F) $\pm 0.2V$
2. Tolerance of Radiometric Power (P_o) $\pm 10\%$
3. Tolerance of Wavelength $\pm 2nm$

■ Relative spectral power distribution



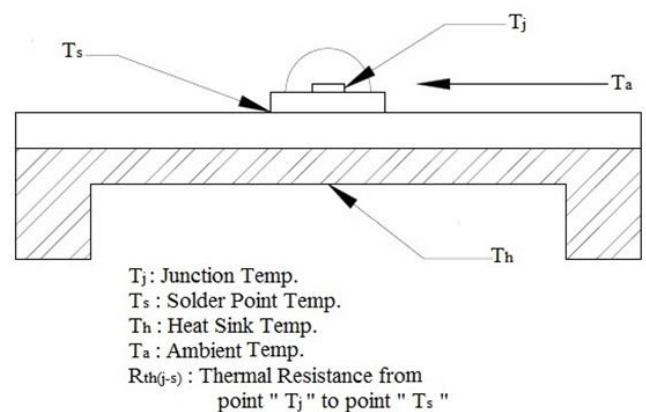
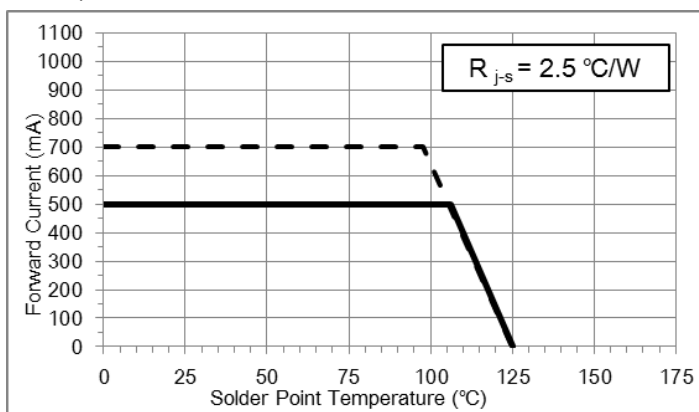
■ Dimensions & Circuit



- § All dimensions are in millimeters.
- § Tolerance is $\pm 0.13\text{mm}$ unless other specified.

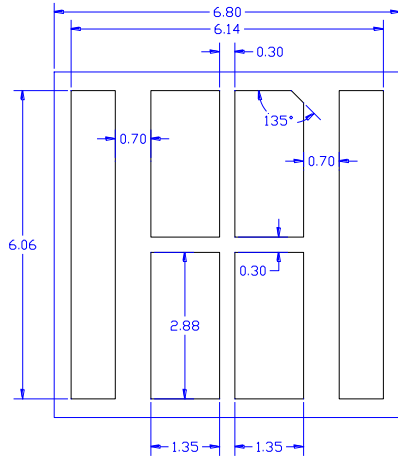
■ Thermal Design for De-rating

The maximum forward current is determined by the thermal resistance between the LED junctions and ambient. It is crucial for the end product to be designed in a manner that minimizes the thermal resistance from the solder point to ambient in order to optimize lamp life and optical characteristics.

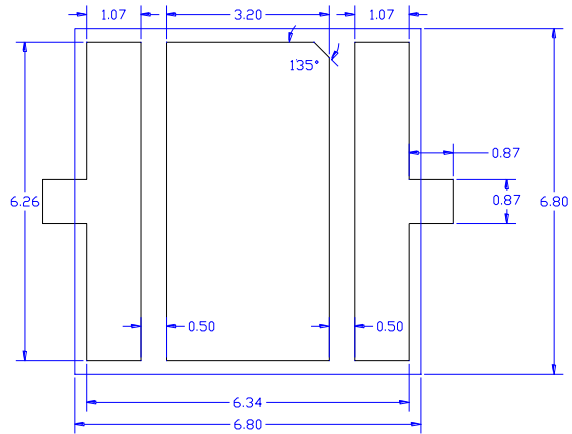


■ Suggest Stencil Pattern (Recommendations for reference)

**RECOMMENDED STENCIL PATTERN
(HATCHED AREA IS OPENING)**



RECOMMENDED PCB SOLDER PAD

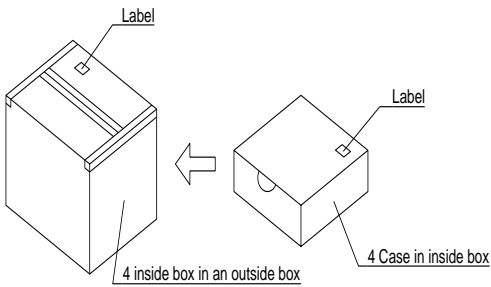
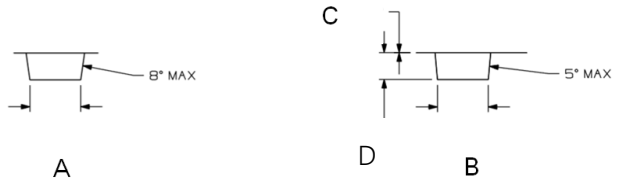
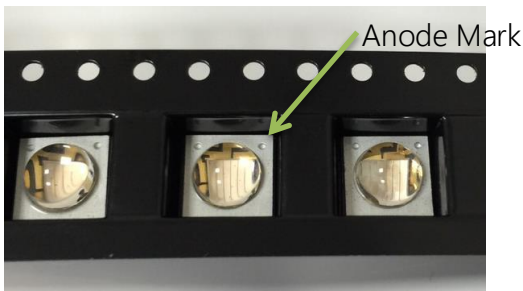
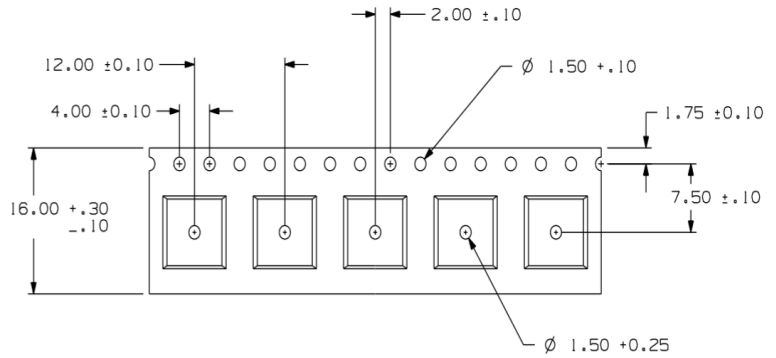
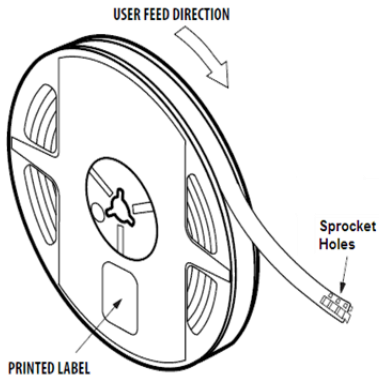


§ Suggest stencil $t = 0.12$ mm

§ All dimensions are in millimeters.

§ Tolerance is ± 0.13 mm unless other specified.

■ Packing



Item	Dimension	Tolerance	Unit
A	7.35	±0.10	mm
B	7.25	±0.10	mm
C	0.33	±0.02	mm
D	4.35	±0.10	mm

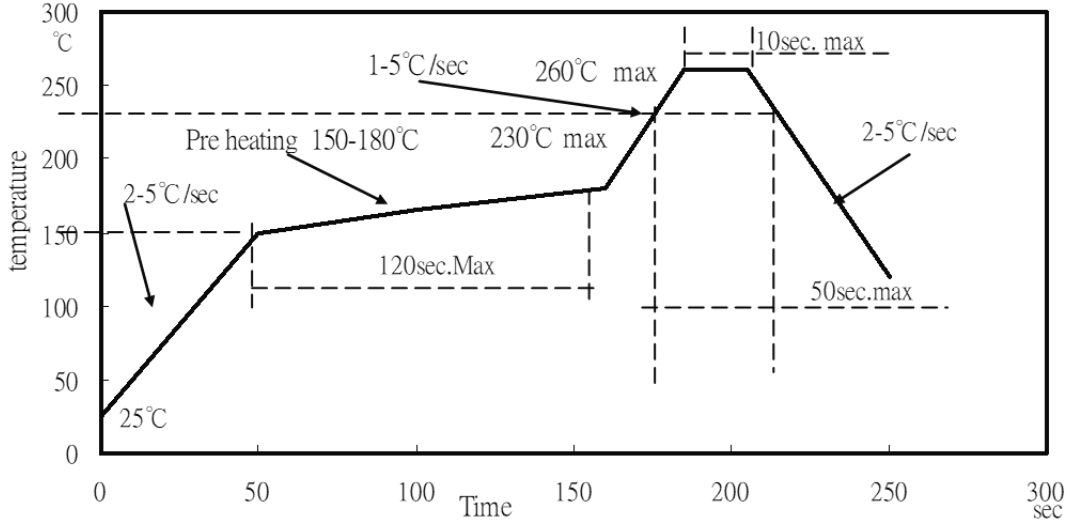
Notes:

1. Each Reel (minimum 100 pcs and maximum 350 pcs) is packed in a moisture-proof bag along with 2 packs of desiccant and a humidity indicator card;
2. A maximum of 5 moisture-proof bags are packed in an inner box (size: 240mm x 200mm x 105mm ±5mm).
3. A maximum of 4 inner boxes are put in an outer box (size: 410mm x 255mm x 230mm ±5mm).
4. Part No., Lot No., quantity should be indicated on the label of the moisture-proof bag and the cardboard box.

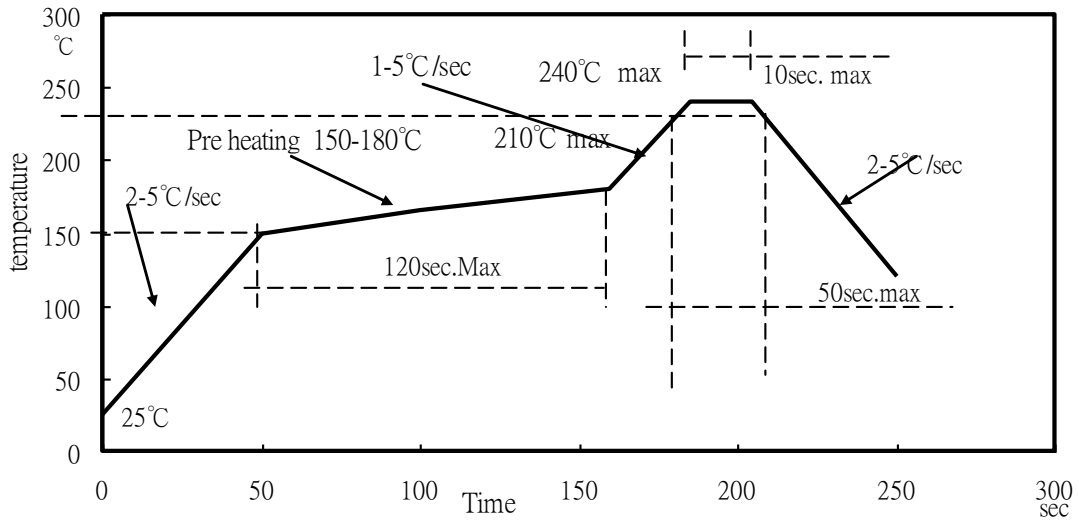
■ Reflow Profile

UV reflow soldering Profile

Lead Free solder



Lead solder



Notes:

1. The recommended reflow temperature is 240°C(±5°C). The maximum soldering temperature should be limited to 260°C.
2. Do not stress the silicone resin while it is exposed to high temperature.
3. The number of reflow process should not exceed 3 times.