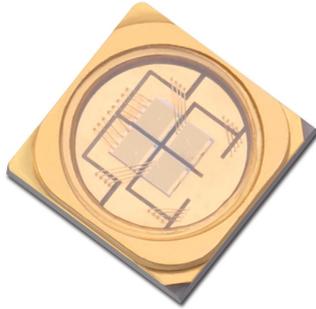


PRODUCT SPECIFICATION

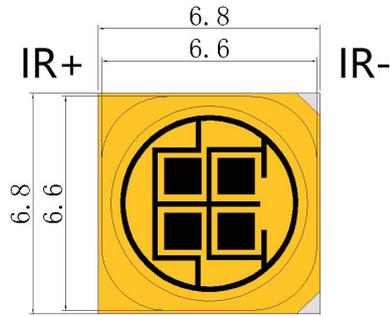


Part No.: WL-12P7070EP22IR-VS-940
SMD High Power LED

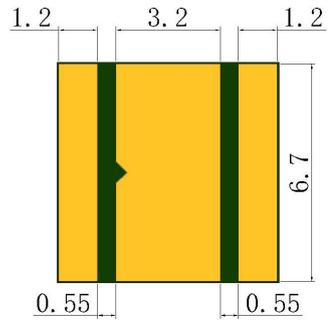
Catalog

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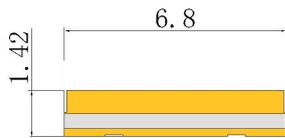
1. Dimensions



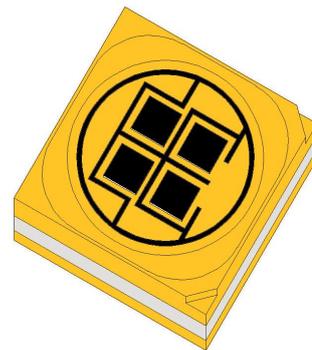
Top view



Bottom view



Side view



Perspective view



Notes:

1. All dimensions are in millimeters.
2. Tolerance is $\pm 0.1\text{mm}$ unless otherwise noted.

2. Electro-optical Characteristics

This parameter is a single chip parameter, the product is 4 chips in parallel, working current *4

Parameters	Symbol	Conditions	Specification/Rating			Unit
			Min.	Typ.	Max.	
Threshold current	I_{th}	T=50°C		0.45		A
Operating voltage	V_{op}	T=50 °C, I_{op} =3.5 A	1.75	2.0		V
Series resistance	R_s	T=50 °C,		0.19		Ω
Slope efficiency	η	T=50 °C,		0.9		W/A
Output power	P_o	T=50 °C, I_{op} =3.5 A	2.5	2.9		W
Beam divergence	θ_{FW1/e^2}	T=50 °C, I_{op} =3.5 A		23		deg.
Emission wavelength	λ	I_{op} =3.5 A	930	940	950	nm
Conversion efficiency	PCE	T=50 °C		37		%

Note: The testing condition is 0.3ms-pulse/1%-Duty.

3. Absolute Maximum Ratings

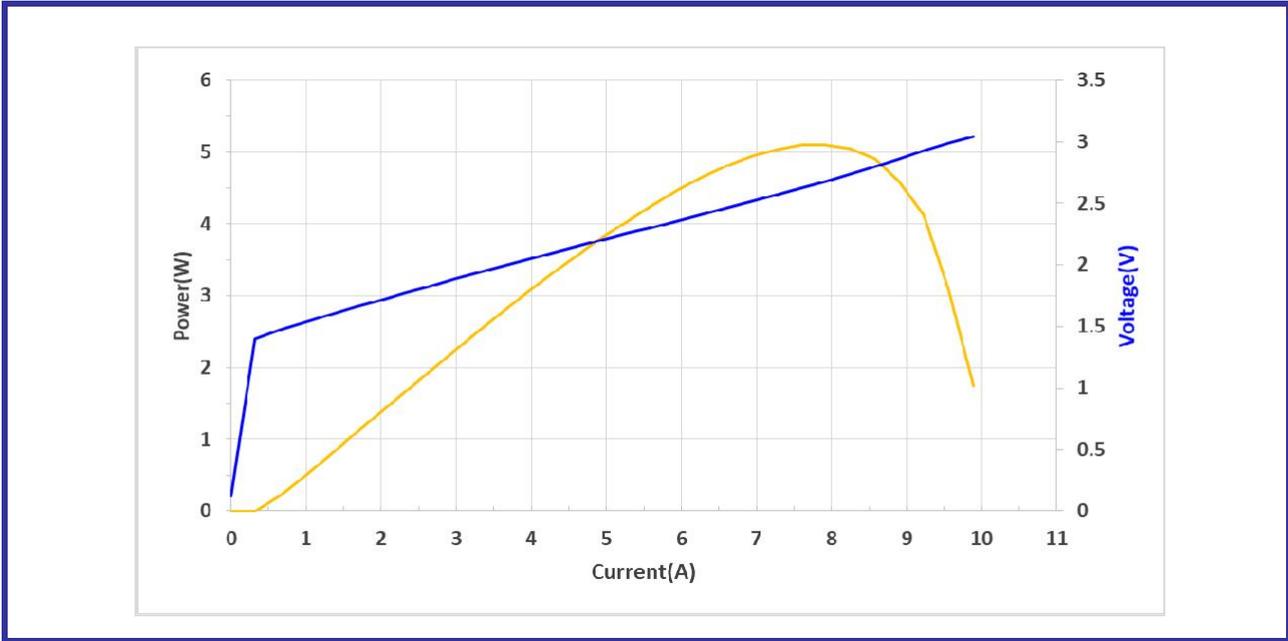
Stresses in excess of the absolute maximum ratings can cause permanent damage to the device. These are absolute stress ratings only. Functional operation of the device is not implied at these or any other conditions in excess of those given in the operational sections of the data sheet. Exposure to absolute maximum ratings for extended periods can adversely affect device reliability.

This parameter is a single chip parameter, the product is 4 chips in parallel, working current *4

Parameter	Symbol	Min	Max	Unit
Peak forward current	I_{max}	-	4.0	A
Optical output power	P_{max}	-	3.19	W
Reverse Voltage	V_r	-	-5	V
Operating Temperature	T_{op}	0	85	°C
Storage Temperature	T_{st}	-40	100	°C
Mounting Temperature (max. 10 sec)	T_m	-	260	°C

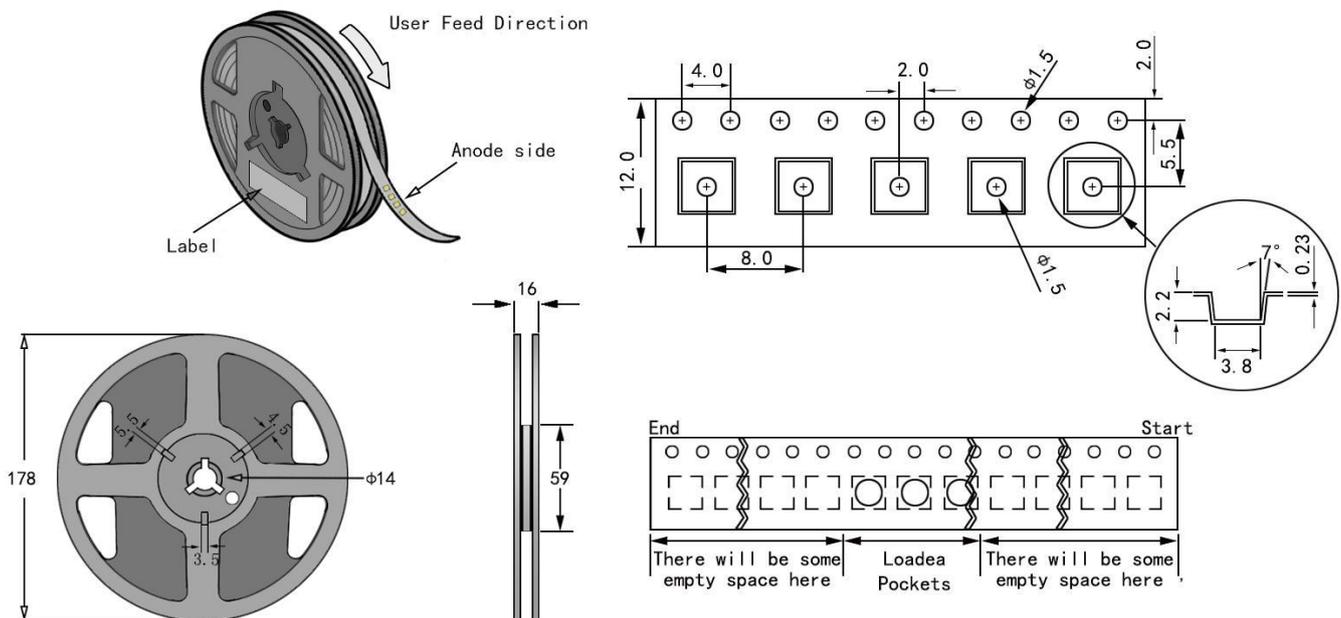
4.LIV Characteristics

Typical Performance Curves at 50 °C



5. Tape & Reel Packing

1. Recommend unpacked LED beads be welded within one day, if not, please vacuumize again and store in an environment of 20-35°C and 30-60% humidity. If can't vacuumize, please store LED beads in moisture proof box, control at 25°C ± 3°C, humidity 50-60%. If unpacked above 1 week, bake at 60 ± 5°C for 10-12 hours before weld.



Notes:

1. QTY: 300pcs/Reel
2. Tolerance ±0.2mm.
3. Package: P/N

6.Cautions

1. Electrostatic Treatment

Do a full range of anti-static measures (such as: anti-static ring, anti-static clothes, machine, equipment grounding wire, etc.)

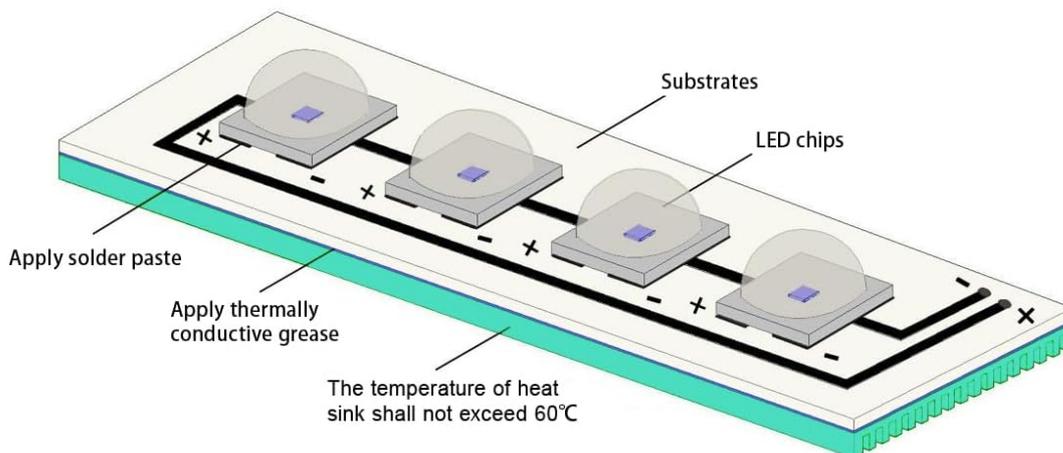


2. Heat Dissipation

- A、 It is recommend to configure reasonable heat dissipation device for the product.
- B、 The best working temperature range of the product is 40-60°. It is recommended to control the working temperature of the product within a reasonable range.

Instructions for the use of SMD LED chips with ceramic substrates

Welding Reference Diagram



Attention

1. Anti-static measures are recommended during use.
2. In order to minimize the loss, it is recommended that the product be equipped with a reasonable heat sink.
3. The optimum working temperature range of the product is 40-60°, it is recommended to control the working temperature of the product within a reasonable range.