OptoSupply
Light It Up

Xeon 1 Power Red Emitter

OSR7XNE1E1E

▪Features

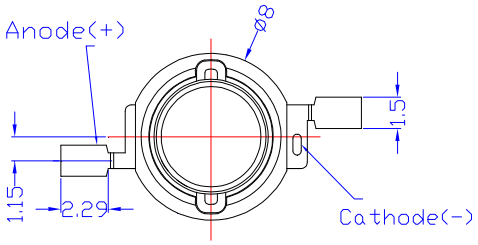
- Highest luminous flux
- Super energy efficiency
- Very long operating life
- Superior ESD protection

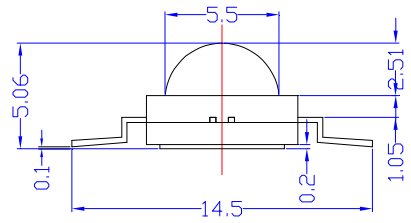
▪Applications

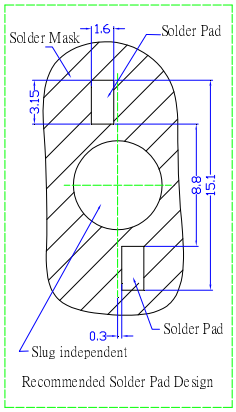
- Green House Applications
- Red : Blue LED Iv Ratio is 8:1*

*The ratio is summarized by the photosynthesis test on Phalaenopsis and provided from plant workshop in Taiwan.

▪Outline Dimension







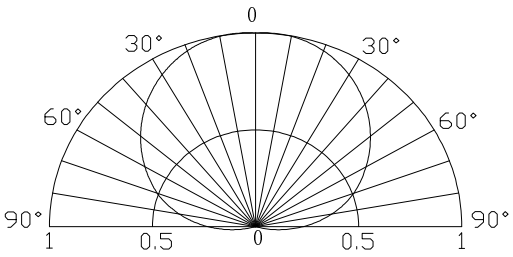
Unit:mm
Tolerance:±0.20mm
unless otherwise noted

▪Absolute Maximum Rating (Ta=25℃)

Item	Symbol	Value	Unit
DC Forward Current	I_F	500	mA
Pulse Forward Current#	I_{FP}	700	mA
Reverse Voltage	V_R	5	V
Power Dissipation	P_D	2450	mW
Operating Temperature	Topr	-30 ~ +85	℃
Storage Temperature	Tstg	-40~ +100	℃
Manual Soldering Temperature	Tsol	260℃/5sec	-

#Pulse width Max.10ms, Duty ratio max 1/10

▪Directivity



▪Electrical -Optical Characteristics (Ta=25℃)

Item	Symbol	Condition	Min.	Typ.	Max.	Unit
DC Forward Voltage*1	V_F	I_F=350mA	2.0	2.3	3.0	V
DC Reverse Current	I_R	V_R=5V	-	-	10	μA
Peak Wavelength*2	λ_P	I_F=350mA	650	660	670	nm
Radiant Power*3	Po	I_F=350mA	120	150	-	mW
50% Power Angle	$2\theta_{1/2}$	I_F=350mA	-	140	-	deg

*1 Tolerance of measurements of forward voltage is±0.1V
*2 Tolerance of measurements of peak wavelength is ±1nm
*3 Tolerance of measurements of radiant power is ±15%

Note: Don't drive at rated current more than 5s without heat sink for Xeon 1 emitter series.

■ **Soldering Heat Reliability:**

Reflow soldering Profile

· Reflow soldering should not be done more than two times.

· When soldering, do not put stress on the LEDs during heating.

· After soldering, do not warp the circuit board.

· Repairing should not be done after the LEDs have been soldered. When repairing is unavoidable, a double-head soldering iron should be used. It should be confirmed beforehand whether the **characteristics of the LEDs will or will not be damaged by repairing.**

Solder
Average ramp-up rate = 3ºC/sec. max.
Preheat temperature: 150º~180ºC
Preheat time = 120 sec. max.
Ramp-down rate = 6ºC/sec. max.
Peak temperature = 220ºC max.
Time within 3ºC of actual peak temperature = 25 sec. max.
Duration above 200ºC is 40 sec. max.