

Xeon 1 Power 850nm Infrared Emitter LED

OSI3XNE1E1E

VER C.2

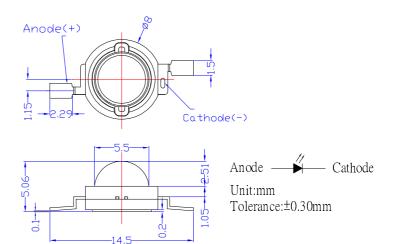
■Features

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

Applications

- · Night Vision
- Camera
- · Outdoor./Indoor applications

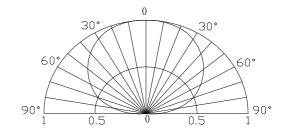
■Outline Dimension



■Absolute Maximum Rating

| Item | Symbol | Value | Unit |
|----------------------------|----------------|------------|------------------------|
| DC Forward Current | I_F | 1000 | mA |
| Pulse Forward Current* | I_{FP} | 2000 | mA |
| Reverse Voltage | V_R | 5 | V |
| Power Dissipation | P _D | 1700 | mW |
| Operating Temperature | Topr | -30 ~ +85 | $^{\circ}\!\mathbb{C}$ |
| Storage Temperature | Tstg | -40~ +100 | $^{\circ}\mathbb{C}$ |
| Lead Soldering Temperature | Tsol | 260°€/5sec | _ |

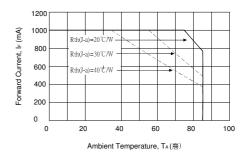
■Directivity



Electrical -Optical Characteristics

| Item | Symbol | Condition | Min. | Тур. | Max. | Unit |
|--------------------|------------------|-----------------------|------|------|------|------|
| DC Forward Voltage | V_{F} | I _F =350mA | 1 | 1.5 | 1.7 | V |
| DC Reverse Current | I_R | V _R =5V | - | - | 10 | μΑ |
| Peak Wavelength | $\lambda_{ m P}$ | I _F =350mA | - | 850 | - | nm |
| Radiant Power | Po | I _F =350mA | 110 | - | - | mW |
| 50% Power Angle | 2θ1/2 | I _F =350mA | - | 140 | - | deg |

■Forward Operating Current (DC)



Note: Advises please attach heat sink to use if Power Dissipation is more than 0.5W.



(Ta=25℃)

(Ta=25℃)







^{*}Pulse width Max.10ms Duty ratio max 1/10

^{*1} Tolerance of measurements of peak wavelength is ±1nm

^{*2} Tolerance of measurements of radiant power is $\pm 15\%$

^{*3} Tolerance of measurements of forward voltage is±0.1V



Xeon 1 Power 850nm Infrared Emitter LED

OSI3XNE1E1E VER C.2

■ 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,

characteristics of the LEDs will or will not be damaged by repairing.

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

