## Features

Pb free product—RoHS compliant

IR light source with high efficiency

Low thermal resistance

Center of spectral emission at 850nm

Radiant angle: 60°

## Applications

Infrared Illumination for cameras

Surveillance system

Machine vision systems

Wireless communication

## Safety Advices

Depending on the mode of operation, these devices emit highly concentrated non visible infrared light which can be hazardous to the human eye. Products which incorporate these devices have to follow the safety precautions given in IEC 60825-1 and IEC 62471.


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**Absolute Maximum Ratings at Ta=25**

| Parameter | Symbol | MAX. | Unit |
|---|---|---|---|
| Power Dissipation | PD | 2300 | mW |
| Continuous Forward Current | IF | 1000 | mA |
| Peak Forward Current | IFp | 3000 | mA |
| ReverseVoltage | V | 10 | V |
| Electrostatic Discharge (HBM) | ESD | 2000 | V |
| Operating Temperature | Topr | -40 to + 85 | |
| Storage Temperature | Tstg | -55 to + 100 | |
| IR Reflow Temperature | Tsol | Max.260 for 10sec Max. | --- |
| Thermal Resistance (junction to leadframe) | Rth(j-L) | 6 | /W |
| Junction Temperature | Tj | 140 | |

**Electrical Optical Characteristics at Ta=25**

| Parameter | Symbol | Min. | Typ. | Max. | Unit | Test Condition |
|---|---|---|---|---|---|---|
| Total Radiated Power | Po | 700 | 810 | --- | mW | $I_F$=1000mA |
| Radiant Intensity | Ie | 500 | 650 | --- | mW/sr | $I_F$=1000mA |
| Viewing Angle | $2\theta_{1/2}$ | --- | 60 | --- | Deg. | $I_F$=1000mA |
| Peak Wavelength | λp | --- | 850 | --- | nm | $I_F$=1000mA |
| Spectral Line Half- Width | λ | --- | 45 | --- | nm | $I_F$=1000mA |
| Forward Voltage | $V_F$ | --- | 1.7 | 2.3 | V | $I_F$=1000mA |
| Reverse Current | $I_R$ | --- | --- | 10 | μA | $V_R$=10V |

**Note:**

1. Point sources of the amount of radiation per unit time in a given direction within the unit solid Angle radiated energy.
2. $\theta_{1/2}$ is the off-axis angle at which the Radiant Intensity is half the axial Radiant Intensity.
3. The Po and Ie guarantee should be added ±15% tolerance.