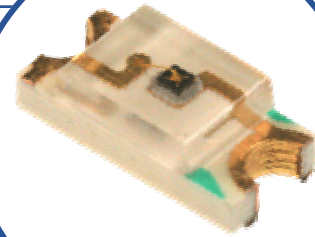


Infrared Light Emitting Diode in Miniature SMD Package

OP250

- Flat Lens
- High Power
- 1206 Package Size
- 880nm Wavelength

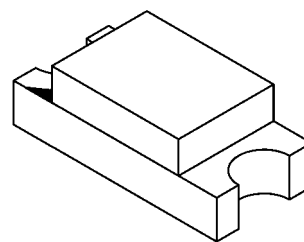
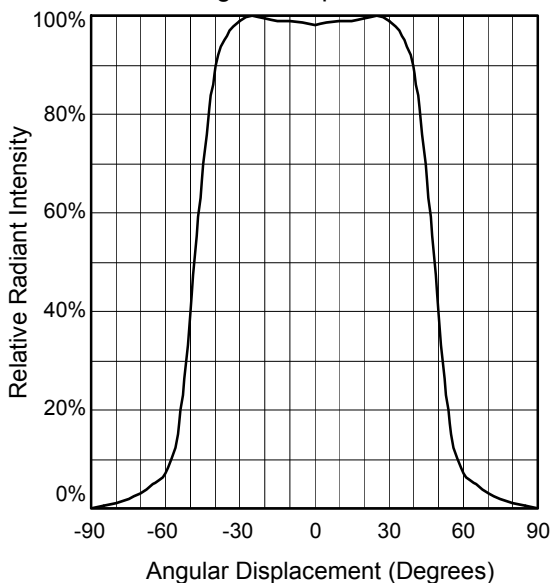


The OP250 is a GaAlAs infrared LEDs mounted in a miniature SMT package. The device incorporates a flat molded lens which enables a wide beam angle and provides an even emission pattern. This device is packaged in a 1206 size chip carrier that is compatible with most automated mounting equipment. The OP250 is mechanically and spectrally matched to the OP520 series phototransistors.

Applications

- Non-Contact Position Sensing
- Datum detection
- Machine automation
- Optical encoders

Relative Radiant Intensity vs. Angular Displacement



OP250



RoHS

Optek reserves the right to make changes at any time in order to improve design and to supply the best product possible.

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A subsidiary of
TT electronics plc

SMD Infrared LED

OP250



Absolute Maximum Ratings

$T_A = 25^\circ\text{C}$ unless otherwise noted

Storage Temperature Range	-40° C to +85° C
Operating Temperature Range	-25° C to +85° C
Lead Soldering Temperature	260° C ⁽¹⁾
Reverse Voltage	30 V
Continuous Forward Current	50 mA
Power Dissipation	130 mW ⁽²⁾

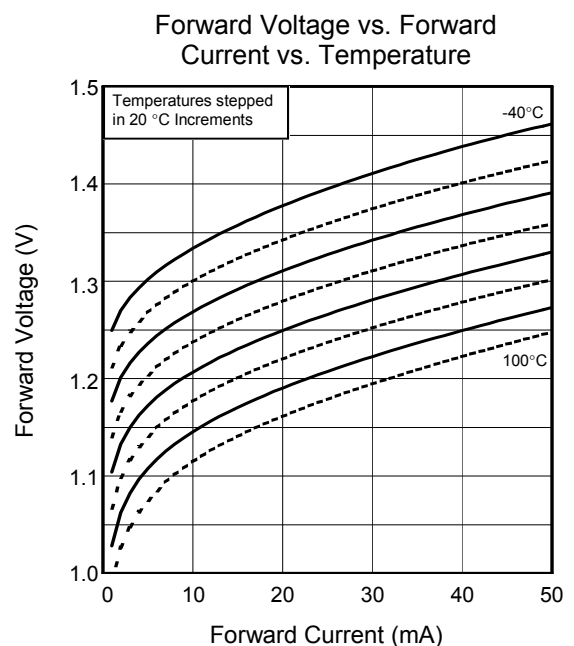
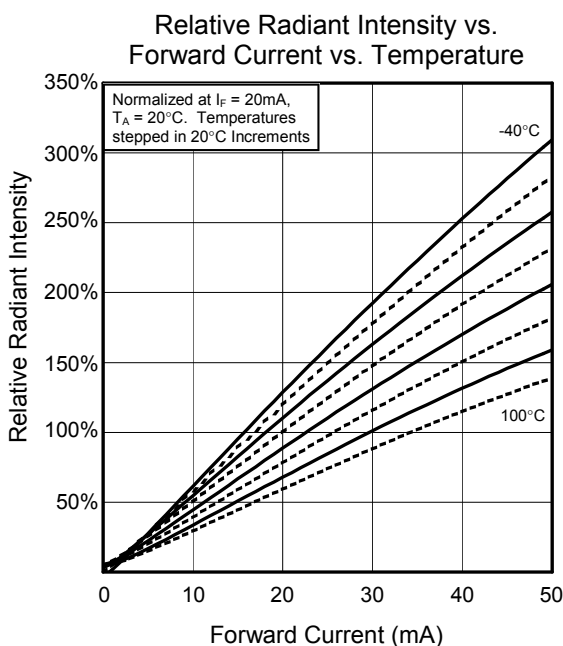
Notes:

- Solder time less than 5 seconds at temperature extreme.
- De-rate linearly at 2.17 mW/° C above 25° C.

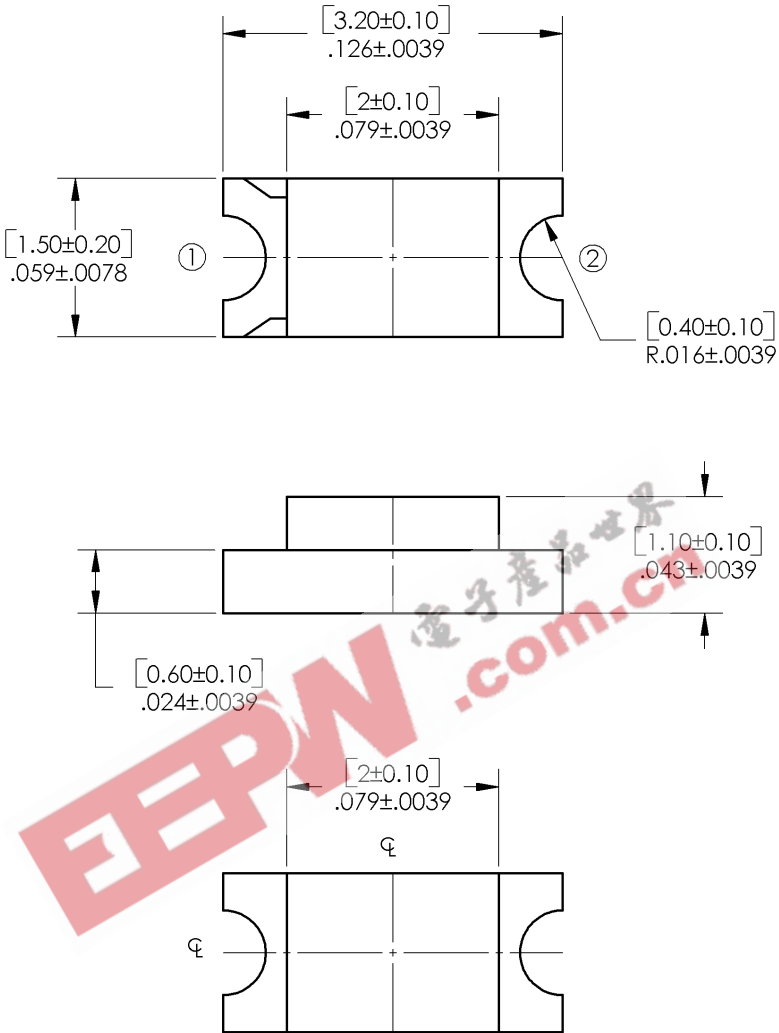
Electrical Characteristics ($T_A = 25^\circ\text{C}$ unless otherwise noted)

SYMBOL	PARAMETER	MIN	TYP	MAX	UNITS	CONDITIONS
$E_{e(APT)}$	Apertured Radiant Incidence	0.2			mW/cm ²	$I_F = 20\text{mA}^{(3)}$
V_F	Forward Voltage		1.5		V	$I_F = 20\text{mA}$
I_R	Reverse Current			100	μA	$V_R = 2.0\text{V}$
λ_P	Peak Emission Wavelength		890		nm	$I_F = 10\text{mA}$
Θ_{HP}	Emission Angle at Half Power Points		100		Deg.	$I_F = 20\text{mA}$
t_r, t_f	Rise and Fall Time			500	ns	$I_{F(PEAK)} = 100\text{mA}, \text{PW} = 10\mu\text{s}, 10\% \text{ D.C.}$

- $E_{e(APT)}$ is a measurement of the apertured radiant incidence upon a sensing area 0.081" (2.06mm) in diameter, perpendicular to and centered on the mechanical axis of the lens, and 0.590" (14.99mm) from the measurement surface. $E_{e(APT)}$ is not necessarily uniform within the measured area.



SMD Infrared LED OP250



DIMENSIONS ARE IN INCHES AND [MILLIMETERS].

RECOMMENDED SOLDER PADS

