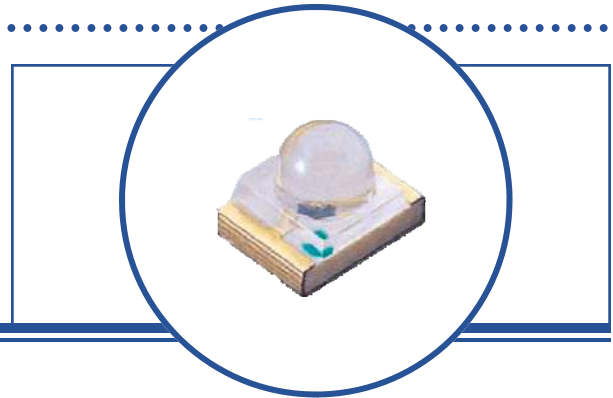


# Infrared Light Emitting Diode in 1210 SMD Package OP225



- 850nm Wavelength
- Narrow Beam Angle
- High Power
- Water Clear dome lensed
- EIA Standard Package



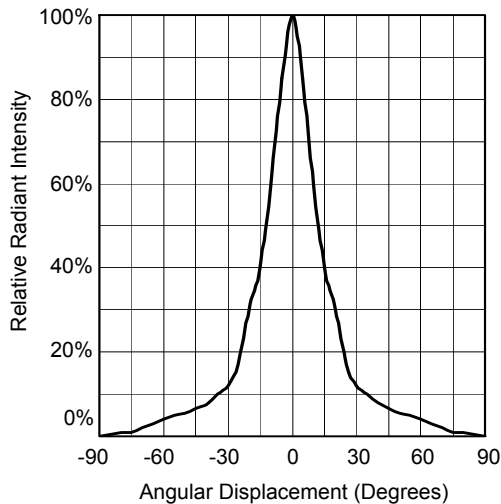
## Description:

The OP225 is a GaAlAs infrared LED mounted in an SMT package. The OP225 incorporates an integral molded lens which enables a narrow beam angle and provides an even emission pattern. The narrow irradiance pattern provides high on-axis intensity for excellent coupling efficiency. The OP225 LED is mechanically and spectrally matched to the OP525 series photosensors. The package is compatible with most automated mounting equipment.

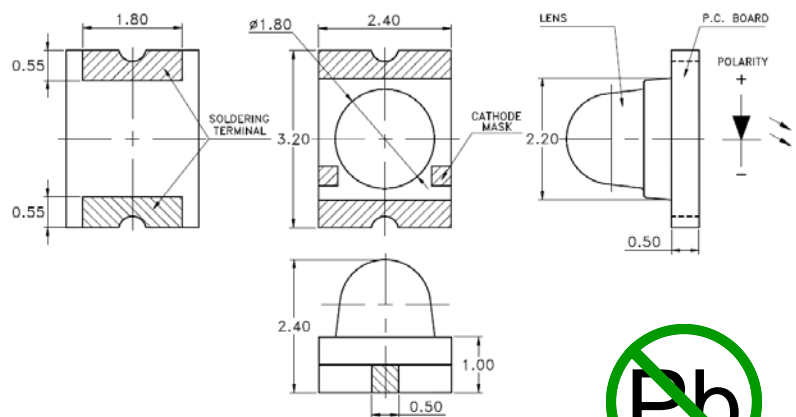
## Applications

- Non-Contact Position Sensing
- Datum detection
- Machine automation
- Light curtains
- Counters
- Optical encoders
- IrDA
- Reflective and Transmissive Sensors

Relative Radiant Intensity vs.  
Angular Displacement



## Package Dimension



Dimensions in mm



RoHS



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

# Infrared Light Emitting Diode in 1210 SMD Package OP225



## Absolute Maximum Ratings ( $T_A = 25^\circ\text{C}$ unless otherwise noted)

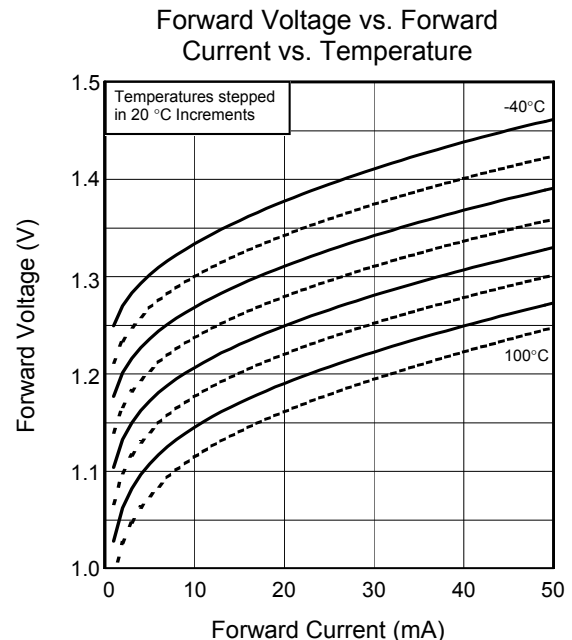
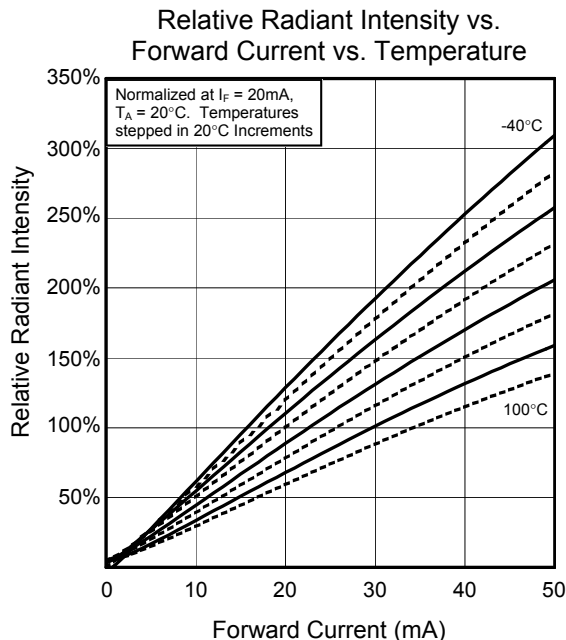
PARAMETER	SYMBOL	MAXIMUM	UNITS
Continuous Forward Current	$I_F$	50	mA
Power Dissipation	$P_d$	75	mW
Reverse Voltage	$I_R$	5	V
Peak Forward Current (1 $\mu\text{s}$ pulse width, 300 pps)	$I_{FP}$	1	A
Lead Soldering Temperature (1.6mm to epoxy for 5 sec.)	$T_{SOL}$	260°	C
Operating Temperature Range	$T_{OPR}$	-40°C to +85°C	
Storage Temperature Range	$T_{STG}$	-55°C to +85°C	

### 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
$E_e$	Radiant Intensity	20	45		mW/sr	$I_F = 100\text{mA}$ (300pps, 10us pulse)
$V_F$	Forward Voltage	1.30	1.45	1.65	V	$I_F = 20\text{mA}$
$I_R$	Reverse Current			10	$\mu\text{A}$	$V_R = 5.0\text{V}$
$\lambda_P$	Peak Emission Wavelength		850		nm	$I_F = 10\text{mA}$
$\Theta_{HP}$	Emission Angle at Half Power Points		20		Deg.	$I_F = 20\text{mA}$
$t_r, t_f$	Rise and Fall Time		30		ns	$I_{F(PK)} = 100\text{mA}$ , PW = 10 $\mu\text{s}$ , 10% D.C.

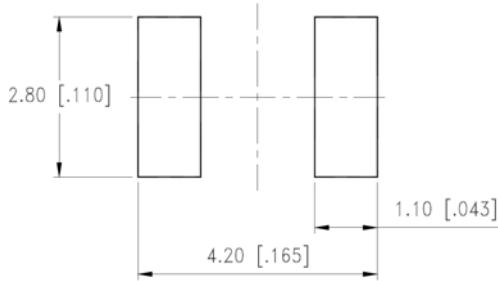


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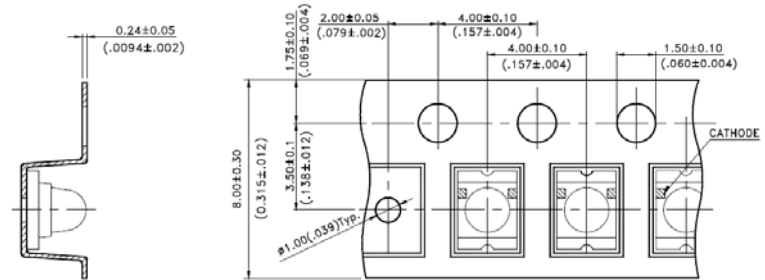
# Infrared Light Emitting Diode in 1210 SMD Package OP225



## Recommended Soldering Pad Pattern

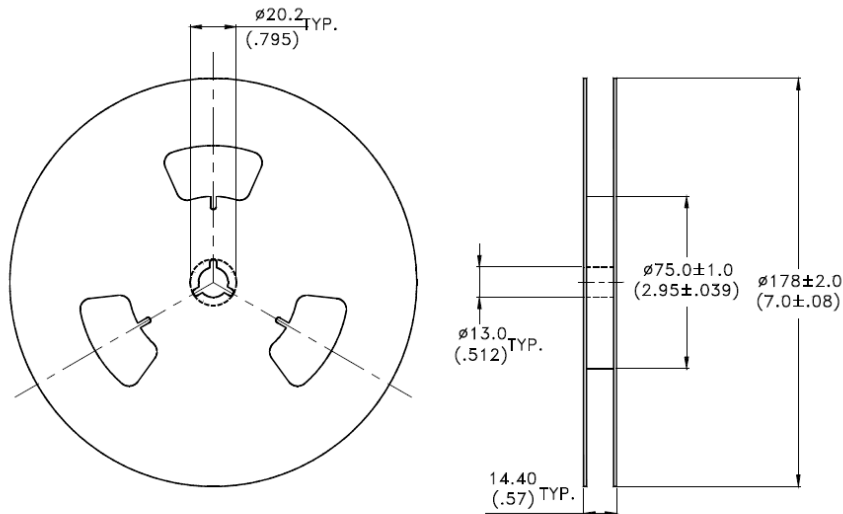


## Tape Dimensions



All dimensions are in millimeters (inches)

## Reel Dimensions



All dimensions are in millimeters (inches)

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