

## Technical Data Sheet

### High Power Infrared LED

#### IR-S06-P120/L741-P03/TR



#### Features

- Small package with high efficiency
- Peak wavelength  $\lambda_p \approx 940$  nm
- Soldering methods: SMT
- Pb free
- Compliance with EU REACH
- Compliance Halogen Free (Br < 900ppm, Cl < 900ppm, Br+Cl < 1500ppm)
- The product itself will remain within RoHS compliant version.

#### Description

- IR-S06-P120/L741-P03/TR series is an infrared emitting diode in miniature SMD package which is molded in a water clear epoxy with flat top view lens.
- The device is spectrally matched with silicon photo diode, phototransistor.

#### Applications

- CCD Camera
- Infrared applied system

#### Device Selection Guide

LED Part No.	Chip Material	Lens Color
IR-S06-P120/L741-P03/TR	GaAlAs	Water clear

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

Parameter	Symbol	Rating	Unit
Continuous Forward Current	$I_F$	1000	mA
Reverse Voltage	$V_R$	5	V
Operating Temperature	$T_{opr}$	-40 ~ +100	$^{\circ}\text{C}$
Storage Temperature	$T_{stg}$	-40 ~ +100	$^{\circ}\text{C}$
Junction temperature	$T_j$	145	$^{\circ}\text{C}$
Power Dissipation @ $I_F=700\text{mA}$	$P_d$	3	W

Notes:

- We suggest that customer should add the heat sink with IR-S06-P120/L741-P03/TR to exclude the heat.

## Electro-Optical Characteristics ( $T_A=25^{\circ}\text{C}$ )

Parameter	Symbol	Min.	Typ.	Max.	Unit	Condition
Total Radiated Power	$P_o$	--	355	--	mW	$I_F=350\text{ mA}$
		--	700	--		$I_F=700\text{ mA}$
		--	1000	--		$I_F=1\text{ A}$
Radiant Intensity	$I_E$	--	120	--	mW/sr	$I_F=350\text{ mA}$
		--	250	--		$I_F=700\text{ mA}$
		--	360	--		$I_F=1\text{ A}$
Peak Wavelength	$\lambda_P$	--	940	--	nm	$I_F=350\text{ mA}$
Spectral Bandwidth	$\Delta\lambda$	--	25	--	nm	$I_F=350\text{ mA}$
Forward Voltage	$V_F$	--	2.6	--	V	$I_F=350\text{ mA}$
		--	2.8	--		$I_F=700\text{ mA}$
		--	2.9	--		$I_F=1\text{ A}$
Reverse Current	$I_R$	--	--	10	$\mu\text{A}$	$V_R=5\text{ V}$
View Angle	$2\theta_{1/2}$	--	120	--	deg	$I_F=20\text{ mA}$

## Typical Electro-Optical Characteristics Curves

Fig.1

Forward Current vs. Forward Voltage

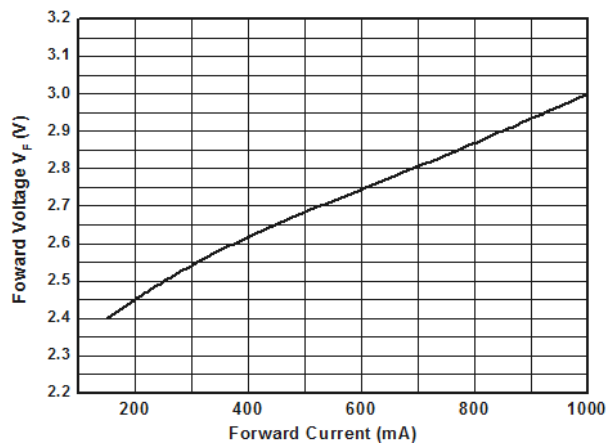


Fig.2

Forward Current vs. Intensity

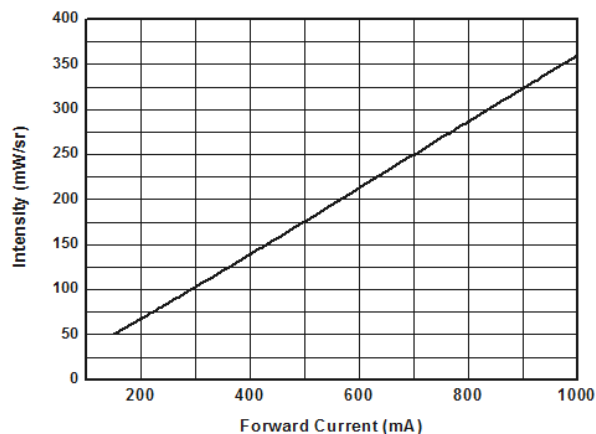


Fig.3

Forward Current vs. Total Power

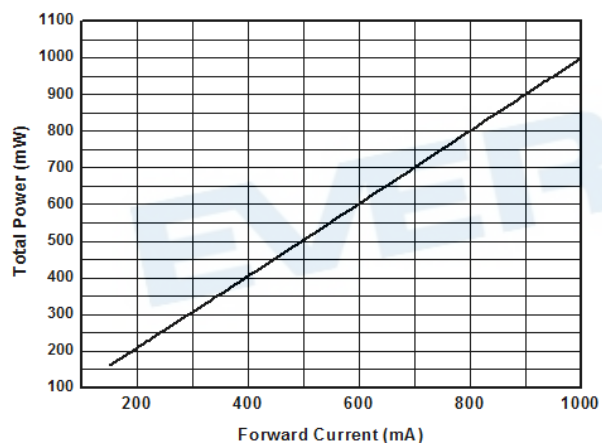
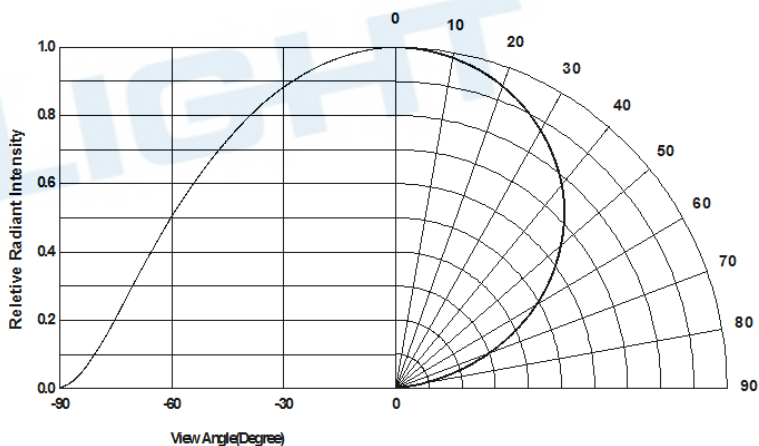
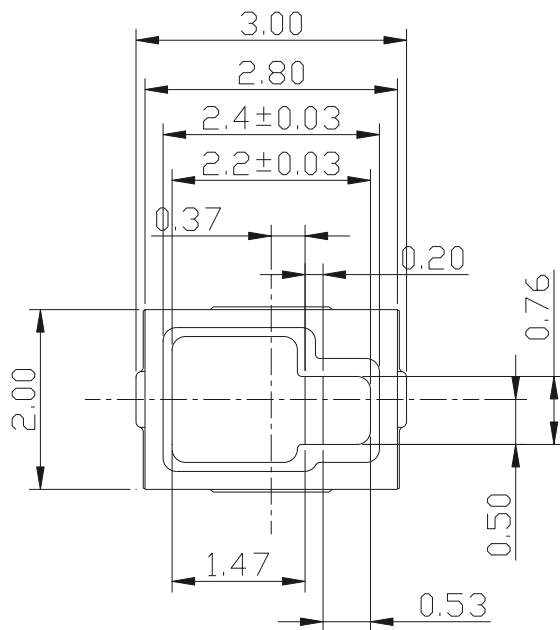


Fig.4

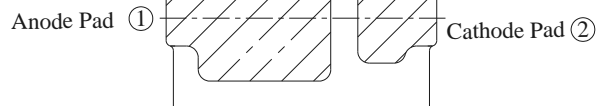
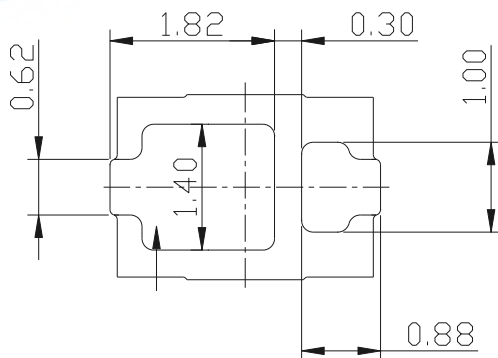
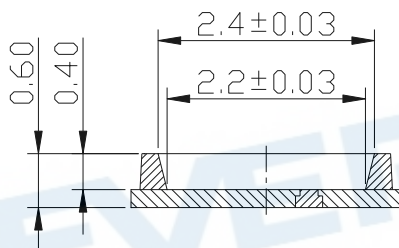
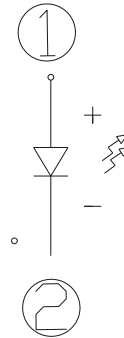
Relative Radiant Intensity vs. Angular Displacement



## Package Dimension

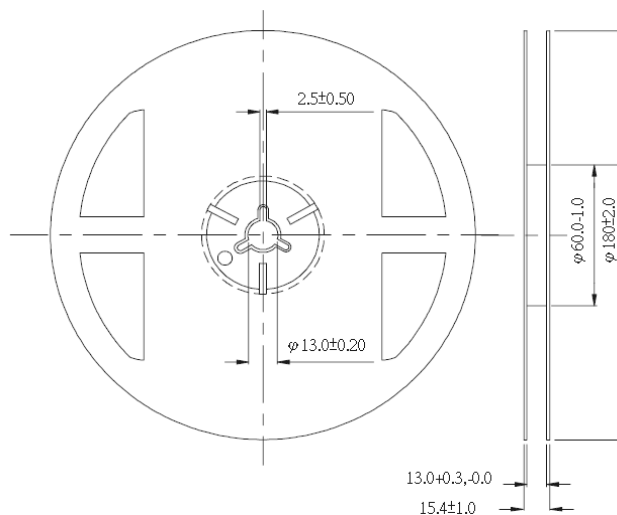


### Polarity



1. Dimensions are in millimeters.
2. Tolerances unless mentioned are  $\pm 0.1\text{mm}$ .
3. Do not handle the device by the lens. Incorrect force applied to the lens may lead to the failure of devices.

## Package Dimensions

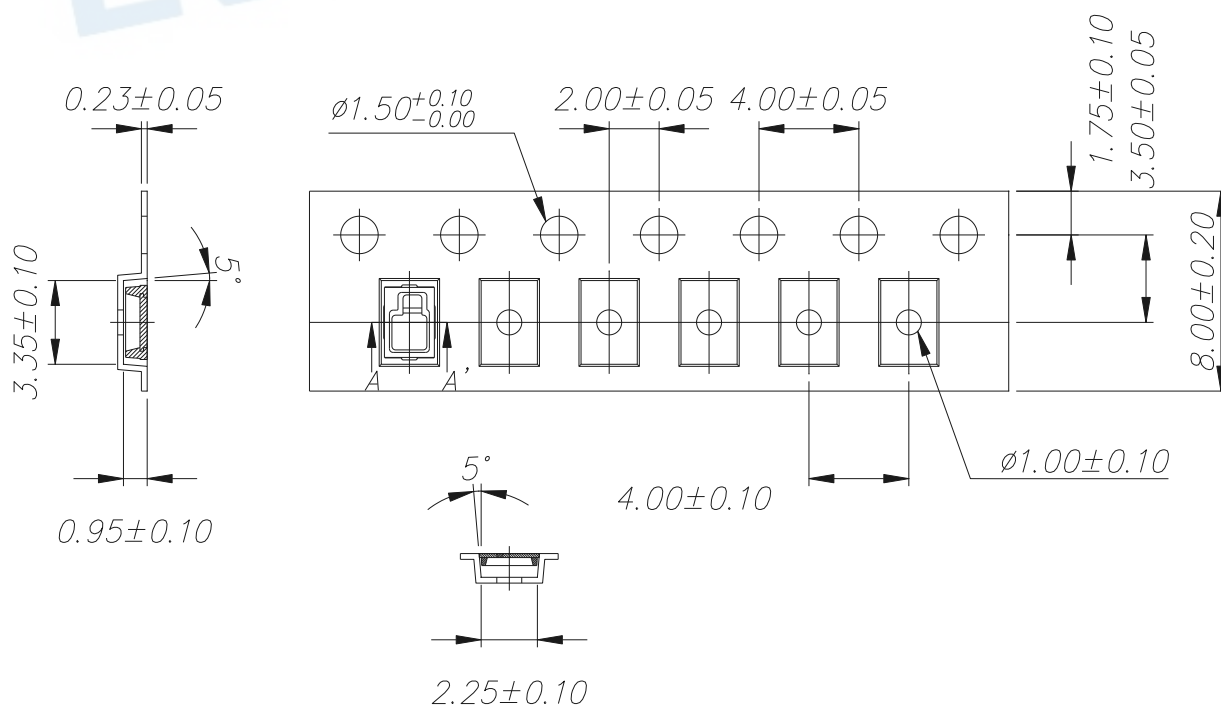


Note:

1. Dimensions are in millimeters
2. The tolerances unless mentioned is  $\pm 0.1$  mm

## Carrier Tape Dimensions:

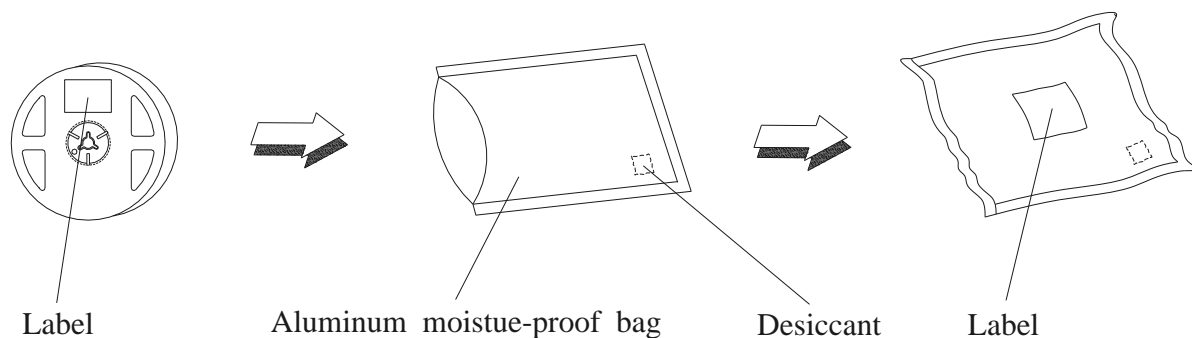
Loaded quantity 800 pcs per reel.



Note:

1. Dimensions are in millimeters
2. The tolerances unless mentioned is  $\pm 0.1\text{mm}$

## Moisture Resistant Packaging



## Moisture Resistant Packing Materials

### Label Form Specification

RoHS		Pb		EVERLIGHT	
CPN :					
XXXXXXXXXX-XXXXXXXXXX-XXXXXXXXXX-XXXXXXXXXX-XXXXXX					
P/N :					
XXXXXXXXXX-XXXXXXXXXX-XXXXXXXXXX-XXXXXXXXXX-XXXXXX					
LOT NO :					
QTY :					
HUE :					
CAT :					
REF :					
REFERENCE :					

- CPN: Customer's Product Number
- P/N: Product Number
- QTY: Packing Quantity
- CAT: Luminous Intensity Rank
- HUE: Dom. Wavelength Rank
- REF: Forward Voltage Rank
- LOT No: Lot Number
- X: Month
- Reference: Identify Label Number

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2. The product meets EVERLIGHT published specification for a period of twelve (12) months from date of shipment.
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