

### Technical Data Sheet

### 3mm Infrared LED, T-1

### IR204/H16/L10



#### Features

- High reliability
- 2.54mm lead spacing
- Low forward voltage
- Good spectral matching to Si photodetector
- High radiant intensity
- Pb free
- The product itself will remain within RoHS compliant version.
- Compliance with EU REACH
- Compliance Halogen Free(Br < 900ppm, Cl < 900ppm, Br+Cl < 1500ppm)

## Description

EVERLIGHT's infrared emitting (IR204/H16/L10)

is a high intensity diode, molded in a blue transparent plastic package.

The device is spectrally matched with phototransistor, photodiode and infrared receive module.

## Applications

•Infrared applied system

## Device Selection Guide

LED Part No.	Chip Material	Lens Color
IR204/H16/L10	GaAlAs	Blue

## Absolute Maximum Ratings (Ta=25°C)

Parameter	Symbol	Rating	Unit
Continuous Forward Current	$I_F$	100	mA
Peak Forward Current *1	$I_{FP}$	1.0	A
Reverse Voltage	$V_R$	5	V
Operating Temperature	$T_{opr}$	-40~ +85	°C
Storage Temperature	$T_{stg}$	-40 ~ +100	°C
Soldering Temperature *2	$T_{sol}$	260	°C
Power Dissipation at(or below) 25°C Free Air Temperature	$P_d$	150	mW

Notes: \*1: $I_{FP}$  Conditions--Pulse Width  $\leq 100\mu s$  and Duty  $\leq 1\%$ .

\*2:Soldering time  $\leq 5$  seconds.

## Electro-Optical Characteristics (Ta=25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Condition
Radiant Intensity	IE	4.0	-	17.6	mW/sr	I <sub>F</sub> =20mA
Peak Wavelength	λ <sub>p</sub>	-	940	-	nm	I <sub>F</sub> =20mA
Spectral Bandwidth	Δλ	-	45	-	nm	I <sub>F</sub> =20mA
Forward Voltage	V <sub>F</sub>	-	1.2	1.5	V	I <sub>F</sub> =20mA
Reverse Current	I <sub>R</sub>	-	-	10	μA	V <sub>R</sub> =5V
View angle	2θ1/2	-	50	-	degree	I <sub>F</sub> =20mA

## Rank

Condition : I<sub>F</sub>=20mA

Unit : mW/sr

Bin Number	K	L	M	N
Min	4.0	5.6	7.8	11.0
Max	6.4	8.9	12.5	17.6

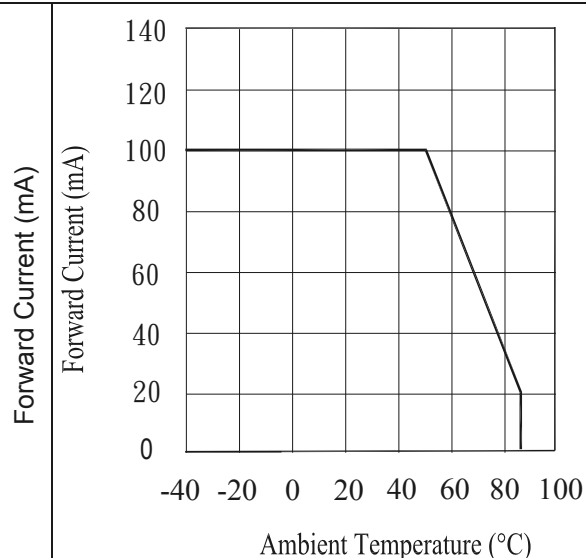
Note:

\*Measurement Uncertainty of Forward Voltage: ±0.1V

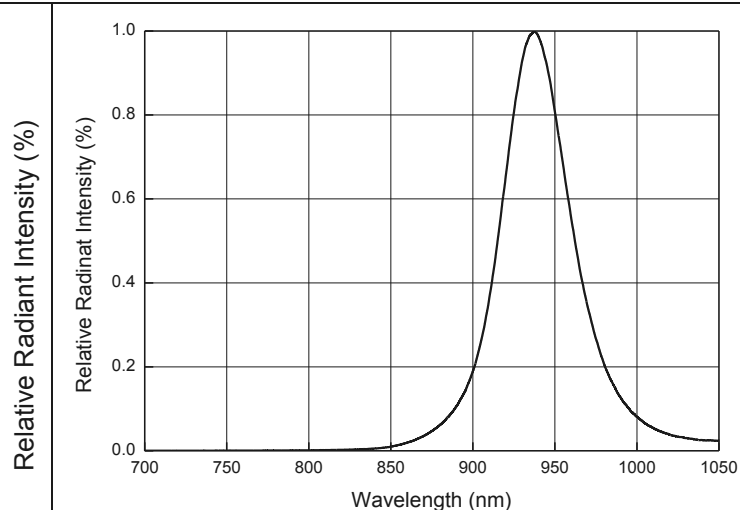
\*Measurement Uncertainty of Luminous Intensity: ±10%

\*Measurement Uncertainty of Dominant Wavelength ±1.0nm

**Fig.1 Forward Current vs. Ambient Temperature**



**Fig.2 Spectral Distribution**



Ambient Temperature(°C)

Wavelength λ (nm)

Fig.3 Radiant Intensity vs. Forward Current

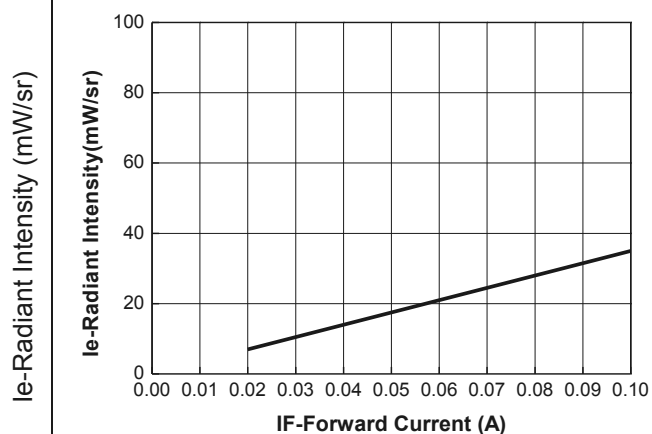
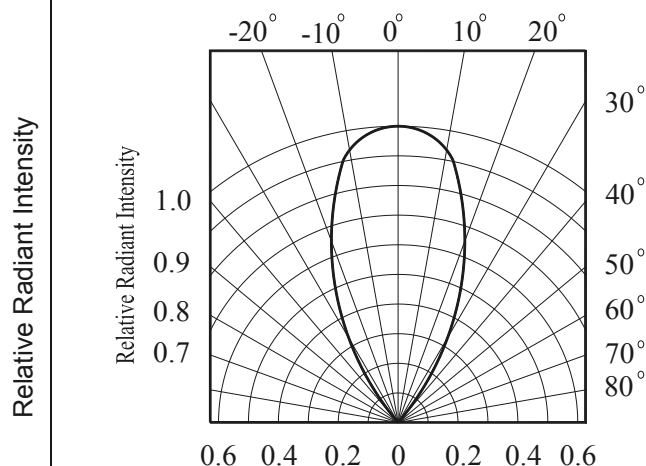
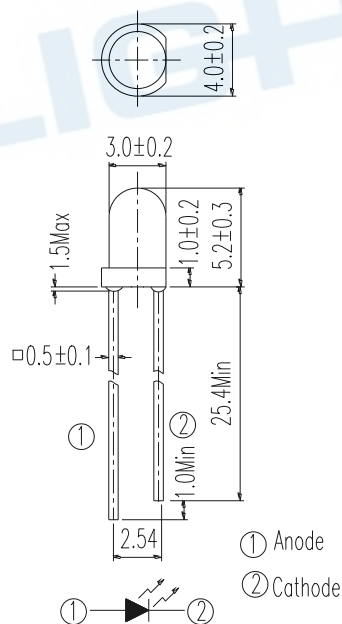


Fig.4 Relative Radiant Intensity vs. Angular Displacement



## Packing Quantity Specification

- 200~1000PCS/1Bag,4Bags/1Box
- 10Boxes/1Carton




- Notes:
- All dimensions are in millimeters
  - Tolerances unless dimensions  $\pm 0.25$ mm

## Moisture Resistant Packing Materials

### Label Form Specification

RoHS	<b>Pb</b>	<b>EVERLIGHT</b>	<b>5</b>
CPN : XXXXXXXXXXXXXXXXXXXX			
XXXXXXXXXX-XXXXXXXXXX-XXXXXXXXXX-XXXXXXXXXX-XXXXXXXXXX			
P/N : XXXXXXXXXXXX			
XXXXXXXXXX-XXXXXXXXXX-XXXXXXXXXX-XXXXXXXXXX-XXXXXXXXXX			
LOT NO:XXXXXXXXXX-XXXXXXXXXX-XXXXXXXXXX			
QTY : XXXXXXXXXXXX HUE : XXXXXXXXXXXX			
CAT : XXXXXXXXXXXX REF : XXXXXXXXXXXX			
REFERENCE : XXXXXXXXXXXX			
MADE IN XXXXXX			



CPN: Customer's Production Number

P/N : Production Number

QTY: Packing Quantity

CAT: Ranks

HUE: Peak Wavelength

REF: Reference

LOT No: Lot Number

MADE IN TAIWAN: Production Place

### DISCLAIMER

1. EVERLIGHT reserves the right(s) on the adjustment of product material mix for the specification.
2. The product meets EVERLIGHT published specification for a period of twelve (12) months from date of shipment.
3. The graphs shown in this datasheet are representing typical data only and do not show guaranteed values.
4. When using this product, please observe the absolute maximum ratings and the instructions for use outlined in these specification sheets. EVERLIGHT assumes no responsibility for any damage resulting from the use of the product which does not comply with the absolute maximum ratings and the instructions included in these specification sheets.
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