

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 ≤ 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 _F =20mA |
| Peak Wavelength | λ _p | - | 940 | - | nm | I _F =20mA |
| Spectral Bandwidth | Δλ | - | 45 | - | nm | I _F =20mA |
| Forward Voltage | V _F | - | 1.2 | 1.5 | V | I _F =20mA |
| Reverse Current | I _R | - | - | 10 | μA | V _R =5V |
| View angle | 2θ1/2 | - | 50 | - | degree | I _F =20mA |

Rank

Condition : I_F=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

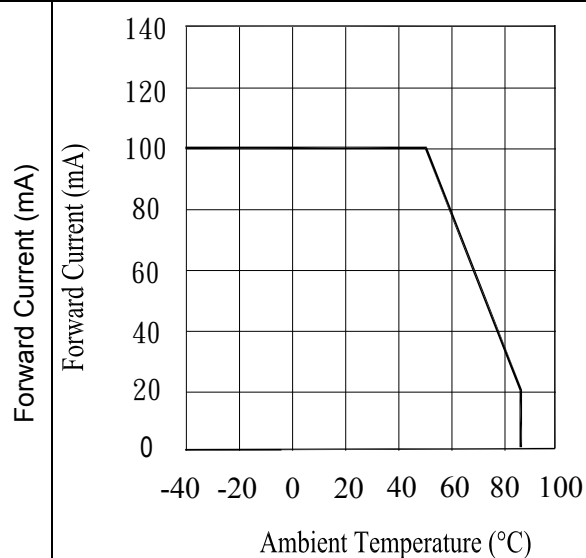
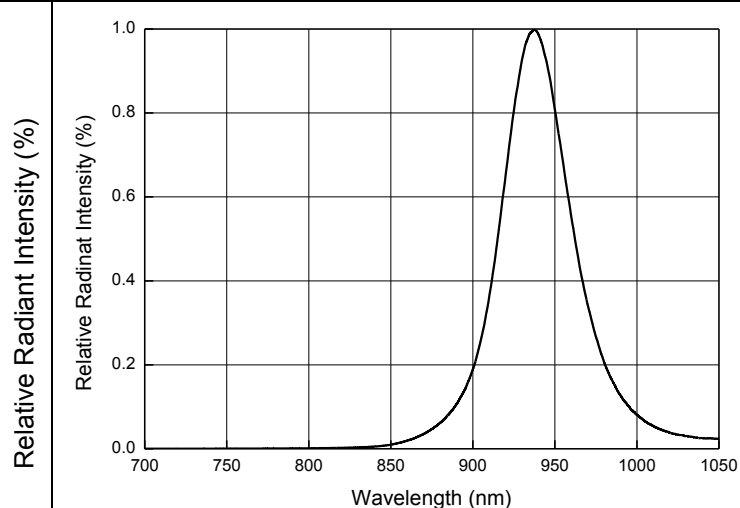


Fig.2 Spectral Distribution



Ambient Temperature(°C)

Wavelength λ (nm)

Fig.3 Radiant Intensity vs. Forward Current

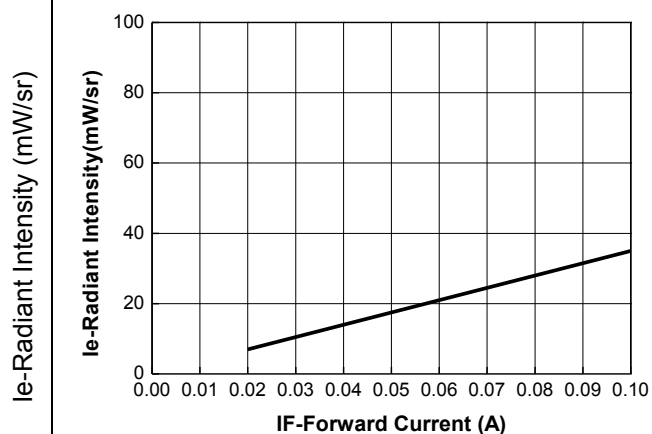
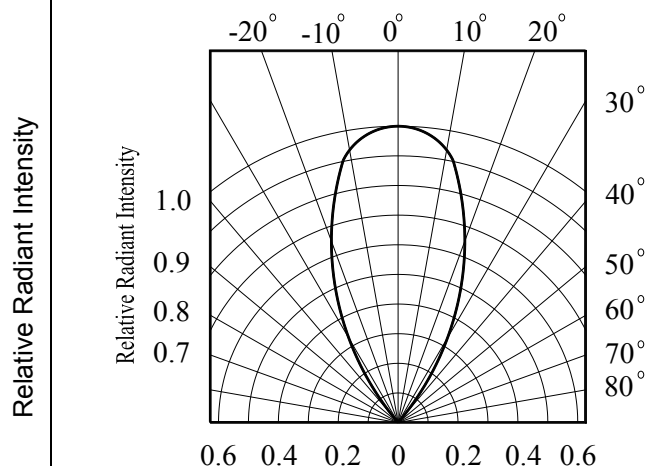
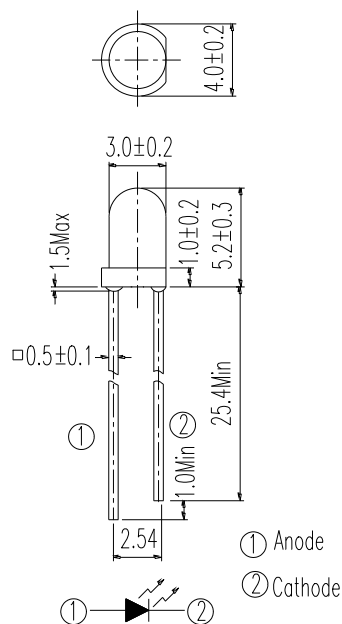


Fig.4 Relative Radiant Intensity vs. Angular Displacement



Packing Quantity Specification

1. 200~1000PCS/1Bag,4Bags/1Box
2. 10Boxes/1Carton




- Notes: 1. All dimensions are in millimeters
2. Tolerances unless dimensions $\pm 0.25\text{mm}$

Moisture Resistant Packing Materials

Label Form Specification

| | | | |
|----------------------------------------------------|-----------|------------------|----------|
| RoHS | Pb | EVERLIGHT | 5 |
| CPN : XXXXXXXXXXXXXXXXXXXX | | | |
| XXXXXXXXXX-XXXXXXXXXX-XXXXXXXXXX-XXXXXXXXXX-XXXXXX | | | |
| P/N : XXXXXXXXXXXX | | | |
| XXXXXXXXXX-XXXXXXXXXX-XXXXXXXXXX-XXXXXXXXXX-XXXXXX | | | |
| 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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