



# Technical Data Sheet

## 3mm Infrared LED, T-1

### **IR204/H60**

#### **Features**

- High reliability
- 2.54mm lead spacing
- Low forward voltage
- Good spectral matching to Si photodetector
- Pb free
- The product itself will remain within RoHS compliant version.

#### **Descriptions**

EVERLIGHT's infrared emitting diode (IR204/H60) is a high intensity diode, molded in a blue transparent plastic package. The device is spectrally matched with phototransistor, photodiode and infrared receive module.



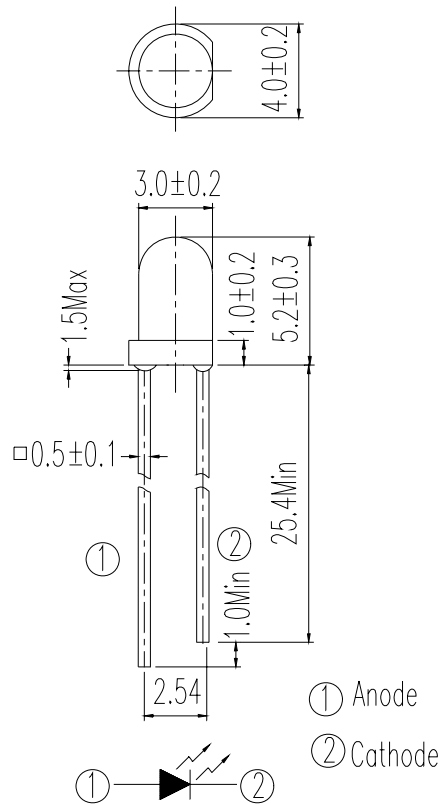
#### **Applications**

- Infrared applied system

### **Device Selection Guide**

LED Part No.	Chip	Lens Color
	Material	
IR204/H60	GaAlAs	Blue

**Package Dimensions**



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

**Absolute Maximum Ratings (Ta=25°C)**

Parameter	Symbol	Rating	Units
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	Condition	Min.	Typ.	Max.	Units
Radiant Intensity	I <sub>E</sub>	I <sub>F</sub> =20mA	4.0	7.0	--	mW/sr
		I <sub>F</sub> =80mA	16	22	--	
		I <sub>F</sub> =100mA	20	30	--	
		I <sub>F</sub> =1A Pulse Width ≤ 100 μs and Duty ≤ 1%	--	300	--	
Peak Wavelength	λ <sub>p</sub>	I <sub>F</sub> =20mA	--	940	--	nm
Spectral Bandwidth	Δ λ	I <sub>F</sub> =20mA	--	45	--	nm
Forward Voltage	V <sub>F</sub>	I <sub>F</sub> =20mA	--	1.2	1.5	V
		I <sub>F</sub> =100mA	--	1.4	1.8	
		I <sub>F</sub> =1A Pulse Width ≤ 100 μs and Duty ≤ 1%	--	2.6	4.0	
Reverse Current	I <sub>R</sub>	V <sub>R</sub> =5V	--	--	10	μA
View Angle	2 θ 1/2	I <sub>F</sub> =20mA	37	50	63	deg

**Typical Electro-Optical Characteristics Curves**

Fig.1 Forward Current vs. Ambient Temperature

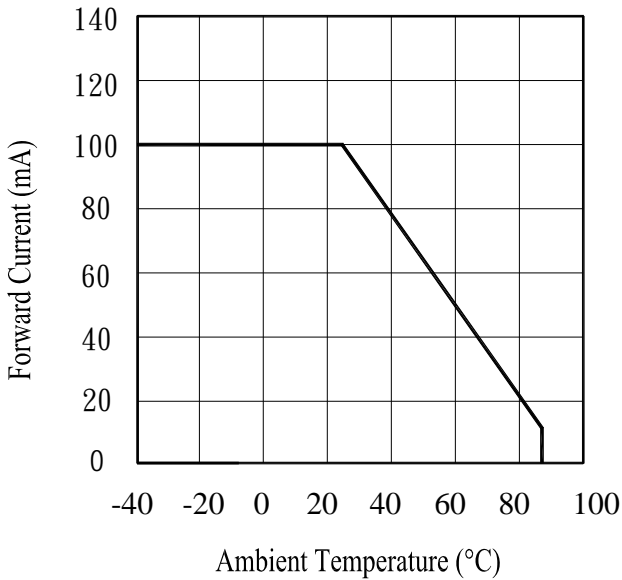


Fig.2 Spectral Distribution

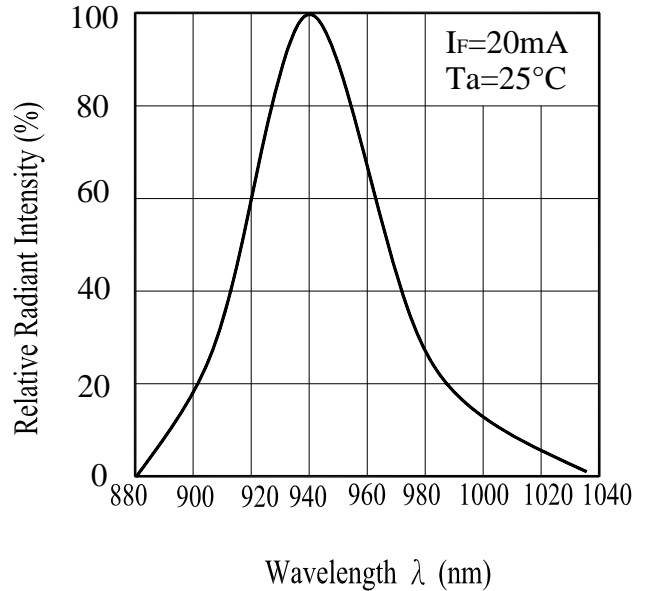


Fig.3 Peak Emission Wavelength vs. Ambient Temperature

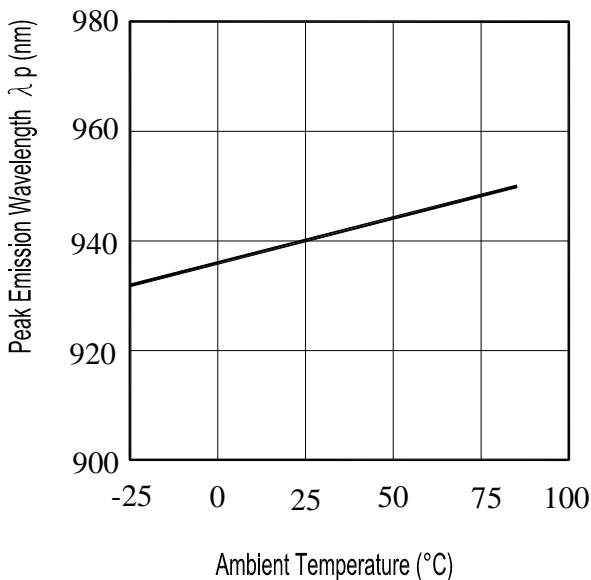
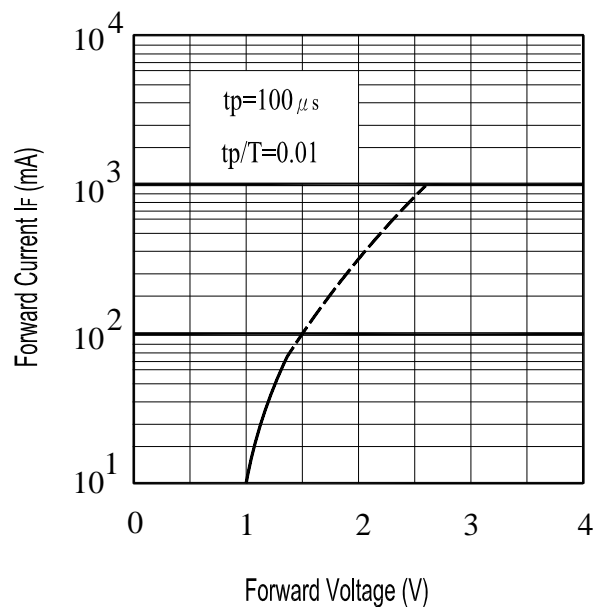


Fig.4 Forward Current vs. Forward Voltage



**Typical Electro-Optical Characteristics Curves**

Fig.5 Relative Intensity vs.

Forward Current

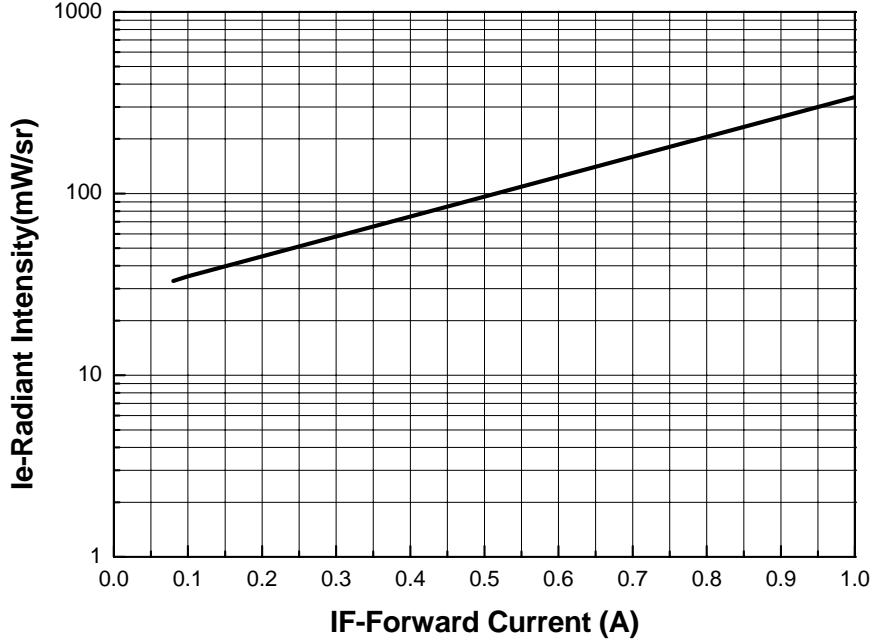
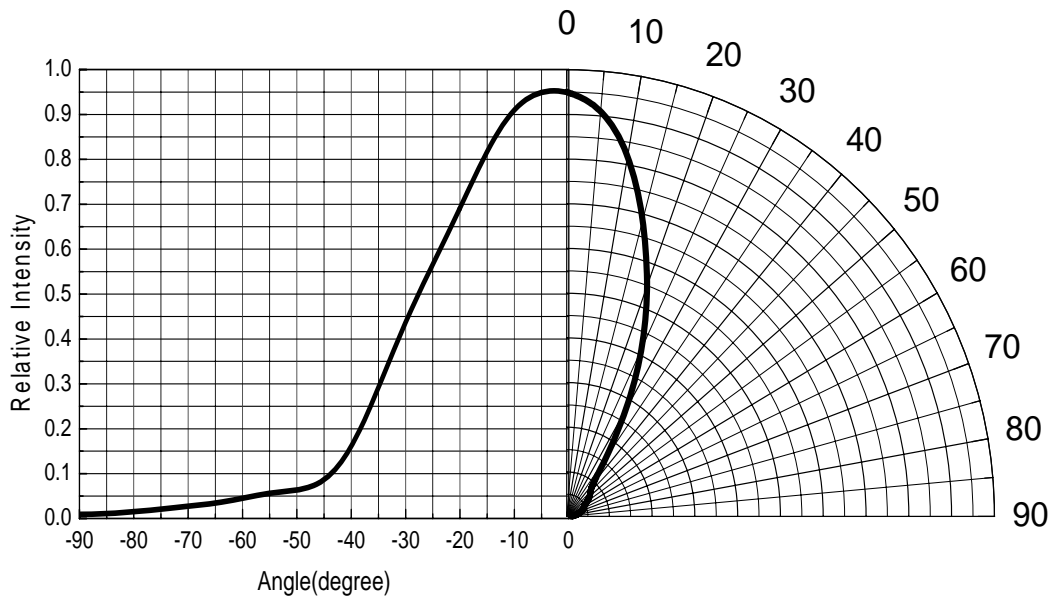


Fig.6 Relative Radiant Intensity vs.

Angular Displacement

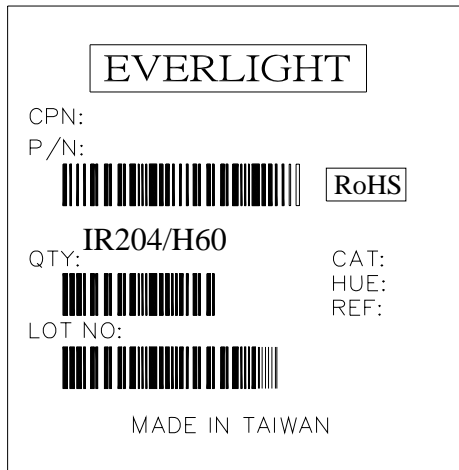




**Packing Quantity Specification**

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

**Label Form Specification**



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

**Notes**

- 1. Above specification may be changed without notice. EVERLIGHT will reserve authority on material change for above specification.
- 2. When using this product, please observe the absolute maximum ratings and the instructions for using outlined in these specification sheets. EVERLIGHT assumes no responsibility for any damage resulting from use of the product which does not comply with the absolute maximum ratings and the instructions included in these specification sheets.
- 3. These specification sheets include materials protected under copyright of EVERLIGHT corporation. Please don't reproduce or cause anyone to reproduce them without EVERLIGHT's consent.

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