DATASHEET

3mm Infrared LED
IR204/H60

Features

- High reliability
- High radiant intensity
- Peak wavelength λp=940nm
- 2.54mm Lead spacing
- Low forward voltage
- Pb Free
- This 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 Diode (IR204/H60/TR1-4(A)) is a high intensity diode , molded in a blue transparent plastic package.
- The device is spectrally matched with phototransistor , photodiode and infrared receiver module.

Applications

- Free air transmission system
- Infrared remote control units with high power requirement
- Smoke detector
- Infrared applied system

Device Selection Guide

Chip Materials	Lens Color
GaAlAs	Blue

Absolute Maximum Ratings (Ta=25℃)

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}	-25 ~ +85	℃
Storage Temperature	T_{stg}	-40 ~ +100	℃
Soldering Temperature(*2)	T_{sol}	260	℃
Power Dissipation at (or below) 25℃ Free Air Temperature	P_d	150	mW

Notes: *1:I_{FP} Conditions--Pulse Width≦100μs and Duty≦1%.
*2:Soldering time≦5 seconds.

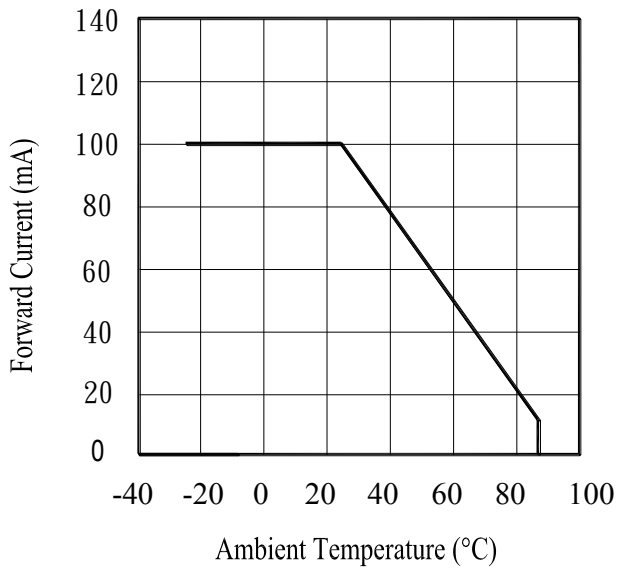
Electro-Optical Characteristics (Ta=25℃)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Condition
Radiant Intensity	I_e	4.0	7.0	-----	mW/sr	I_F=20mA
		-----	35	-----		I_F=100mA Pulse Width≦100μs and Duty≦1%
Peak Wavelength	λp	-----	940	-----	nm	I_F=20mA
Spectral Bandwidth	Δλ	-----	45	-----	nm	I_F=20mA
Forward Voltage	VF	-----	1.2	1.5	V	I_F=20mA
		-----	1.4	1.8		I_F=100mA Pulse Width≦100μs and Duty≦1%
Reverse Current	I_R	----	----	10	uA	V_R=5V
View Angle	2θ1/2	----	50	----	deg	I_F=20mA

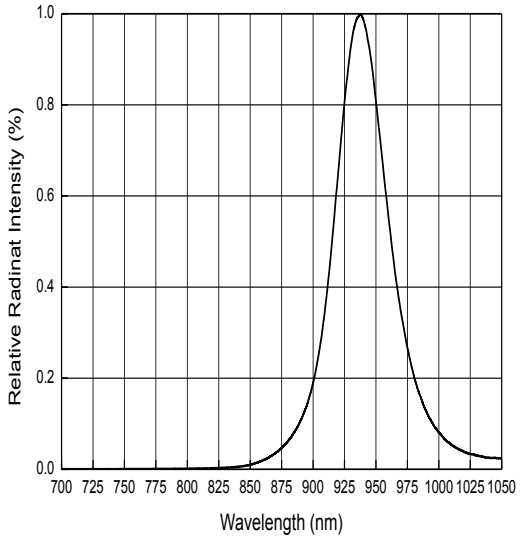
Note:
*Measurement Uncertainty of Forward Voltage: ±0.1V
*Measurement Uncertainty of Luminous Intensity: ±10%
*Measurement Uncertainty of Dominant Wavelength ±1.0nm

Typical Electro-Optical Characteristics Curves

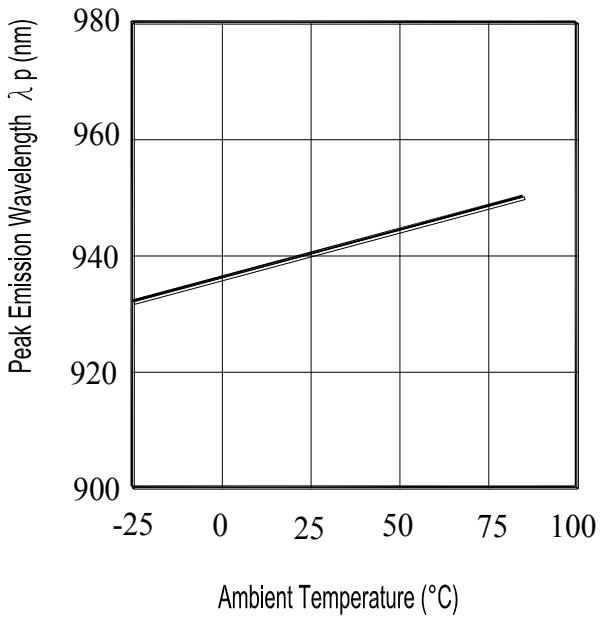
Forward Current vs. Ambient Temperature



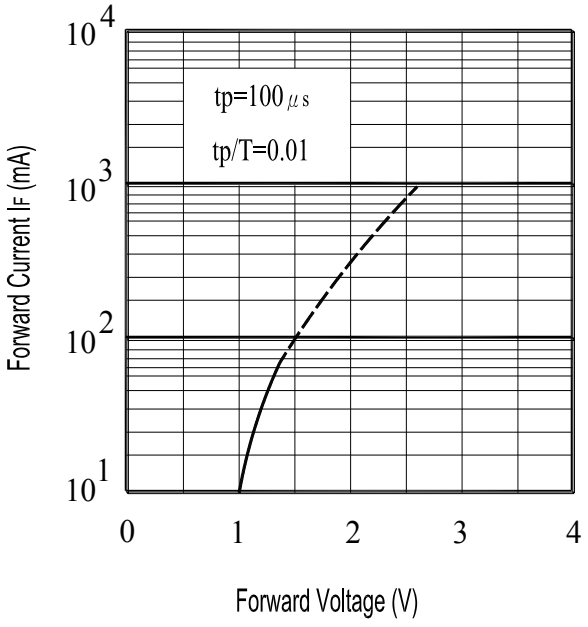
Spectral Distribution

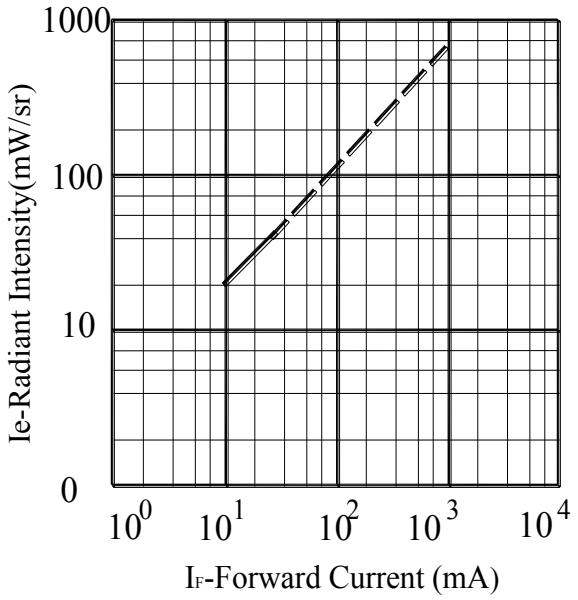
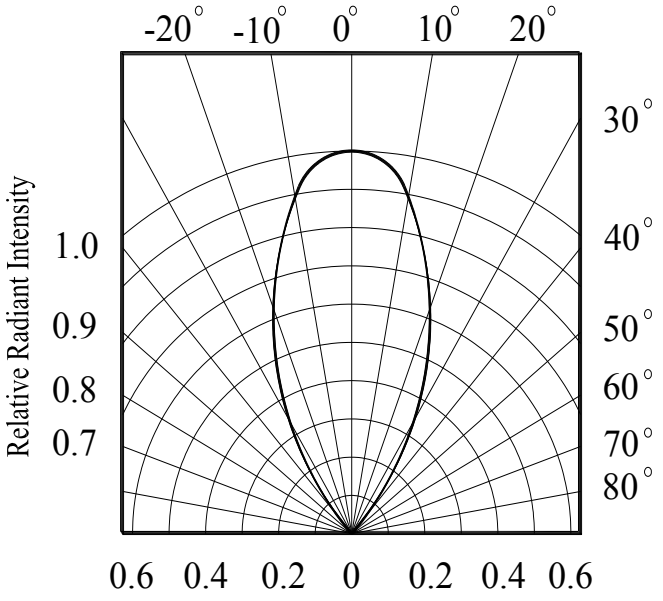


Peak Emission Wavelength vs. Ambient Temperature

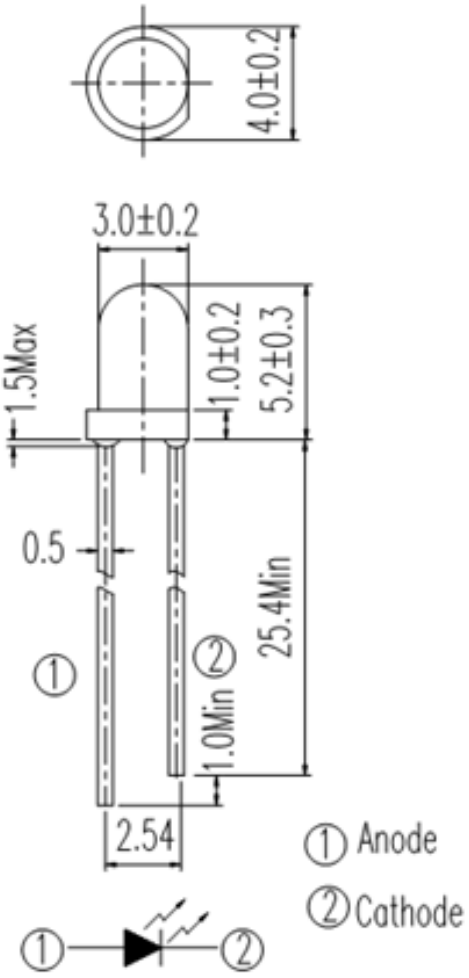


Forward Current vs. Forward Voltage



Radiant Intensity vs. Forward Current	Relative Radiant Intensity vs. Angular Displacement
	

Package Dimension

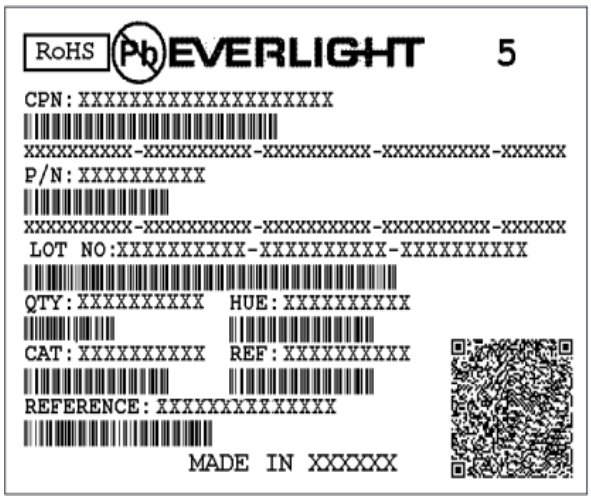


Note: Tolerances unless dimensions ±0.25mm

Packing Quantity Specification

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

Label Form Specification



- 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

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 using 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.
5. These specification sheets include materials protected under copyright of EVERLIGHT. Reproduction in any form is prohibited without obtaining EVERLIGHT's prior consent.
6. This product is not intended to be used for military, aircraft, automotive, medical, life sustaining or life saving applications or any other application which can result in human injury or death. Please contact authorized Everlight sales agent for special application request.