Technical Data Sheet

High Power Infrared LED

Preliminary

HIR38-01C

Features

- High reliability
- High radiant intensity
- Peak wavelength λp=850nm
- Low forward voltage
- Pb free
- The product itself will remain within RoHS compliant version.

Descriptions

- EVERLIGHT'S Infrared Emitting Diode(HIR38-01C) is a high intensity diode , molded in a water clear plastic package.
- The device is spectrally matched with phototransistor , photodiode and infrared receiver module.

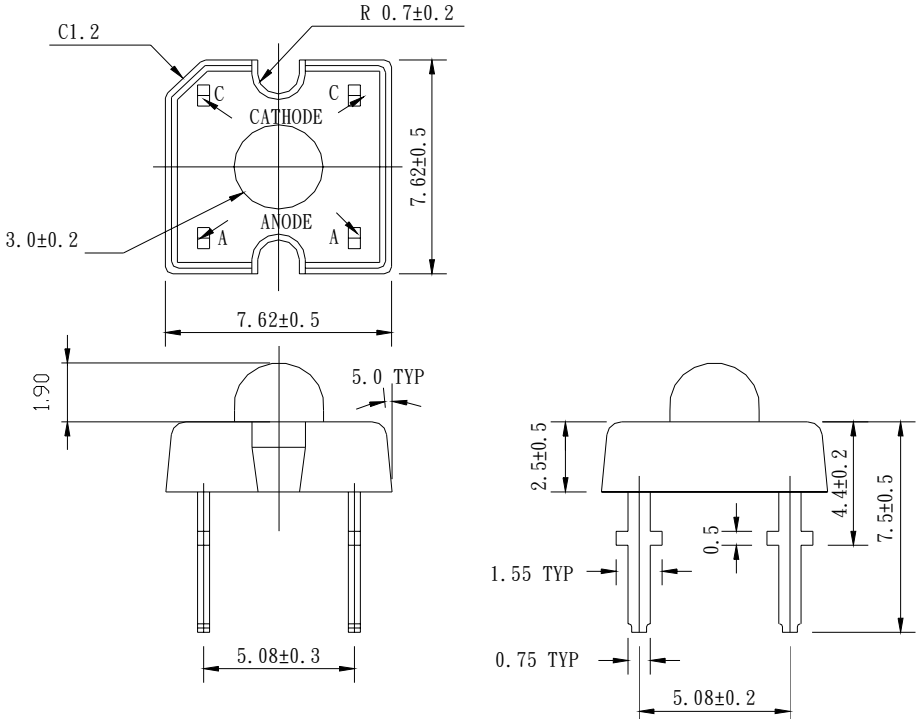
Applications

- CCTV
- Infrared applied system

Device Selection Guide

LED Part No.	Chip Material	Lens Color
HIR	GaAlAs	Water Clear

Package Dimensions



Notes: 1.All dimensions are in millimeters

2.Tolerances unless dimensions ±0.25mm

Absolute Maximum Ratings (Ta=25℃)

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	℃
Storage Temperature	T_{stg}	-40 ~ +100	℃
Soldering Temperature*2	T_{sol}	260	℃
Power Dissipation at(or below) 25℃ Free Air Temperature	P_d	200	mW

Notes: *1:I_{FP} Conditions--Pulse Width≦100 μ s and Duty≦1%.

*2:Soldering time≦5 seconds.

Electro-Optical Characteristics (Ta=25℃)

Parameter	Symbol	Condition	Min.	Typ.	Max.	Units
Radiant Intensity	Ie	I_F=20mA	4.0	9.0	--	mW/sr
		I_F=100mA	--	45	--	
Peak Wavelength	λp	I_F=20mA	--	850	--	nm
Spectral Bandwidth	Δλ	I_F=20mA	--	50	--	nm
Forward Voltage	V_F	I_F=20mA		1.45	1.65	V
		I_F=100mA Pulse Width≦100μs ,Duty≦1%	--	1.80	2.40	
Reverse Current	I_R	V_R=5V	--	--	10	μA
View Angle	2θ1/2	I_F=20mA	--	35	--	deg

Rank

Condition: I_F=20mA

Unit: mW/sr

Bin number	K	L	M	N
Min	4.0	5.6	7.8	11.0
Max	6.8	8.9	12.5	17.6

Typical Electro-Optical Characteristics Curves

Fig.1 Forward Current vs. Ambient Temperature

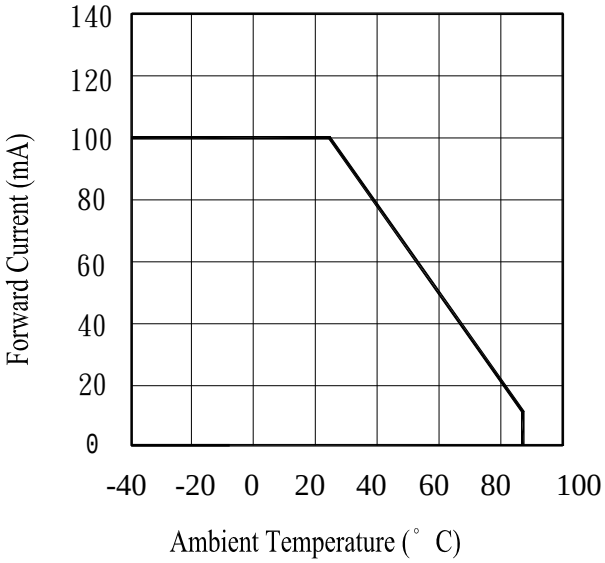


Fig.2 Spectral Distribution

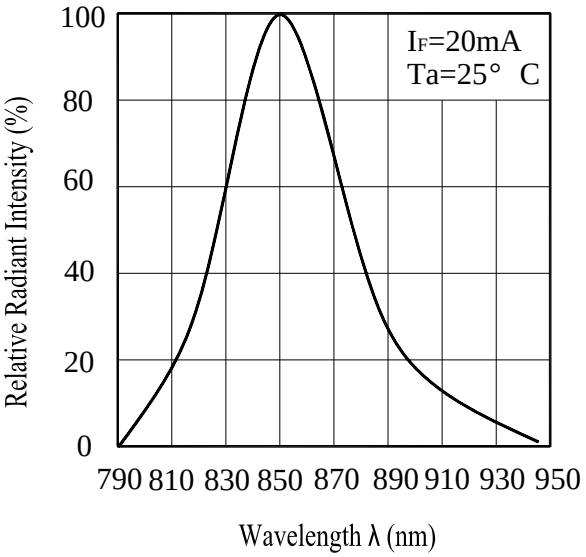


Fig.3 Peak Emission Wavelength Ambient Temperature

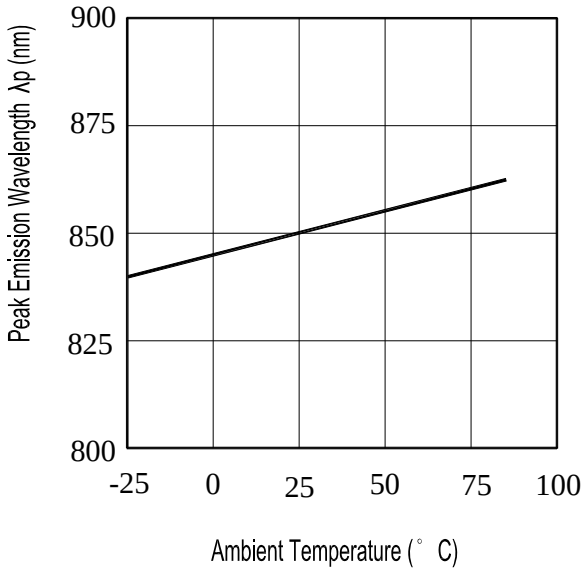
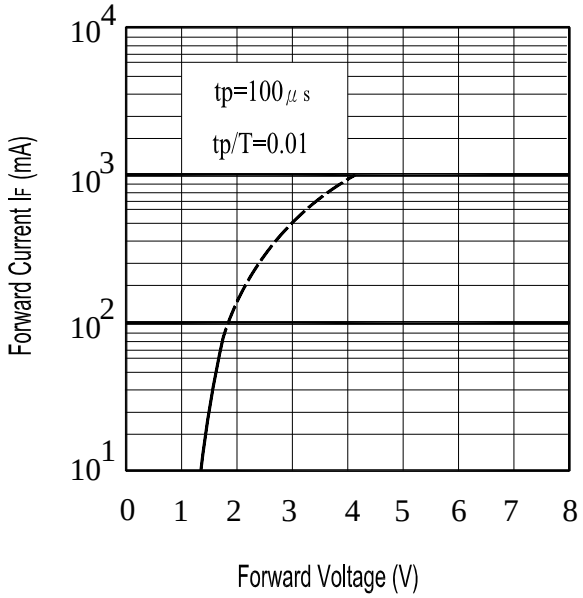


Fig.4 Forward Current vs. Forward Voltage



Typical Electro-Optical Characteristics Curves

Fig.5 Relative Intensity vs. Forward Current

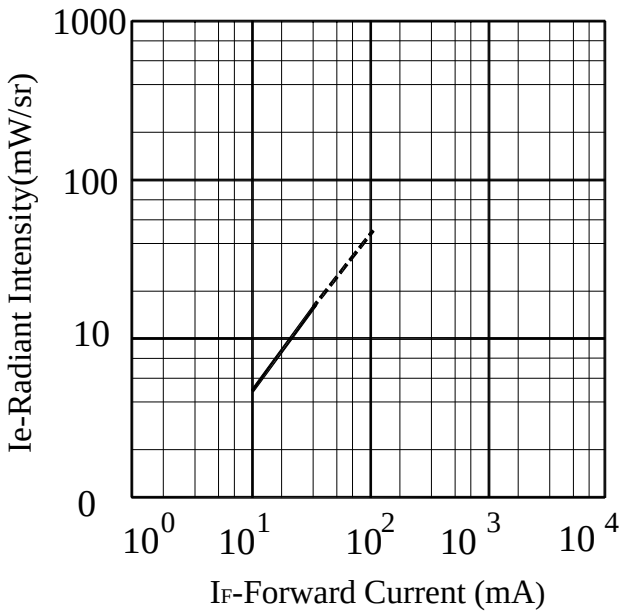


Fig.6 Relative Radiant Intensity vs. Angular Displacement

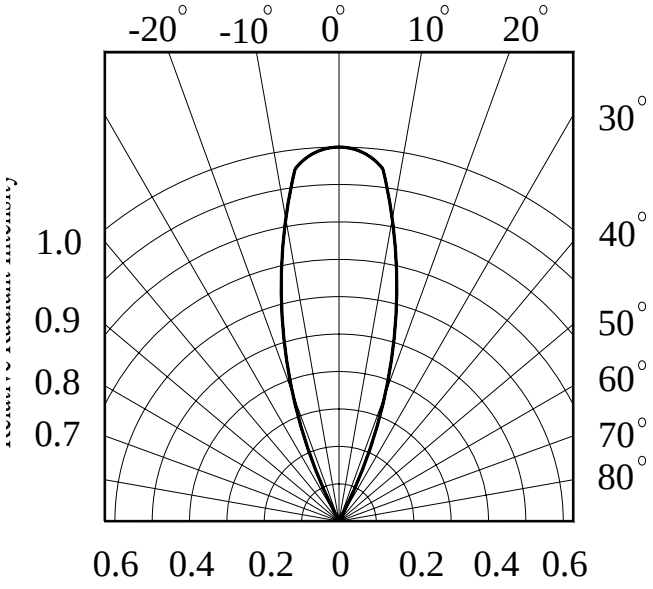


Fig.7 Relative Intensity vs. Ambient Temperature(°C)

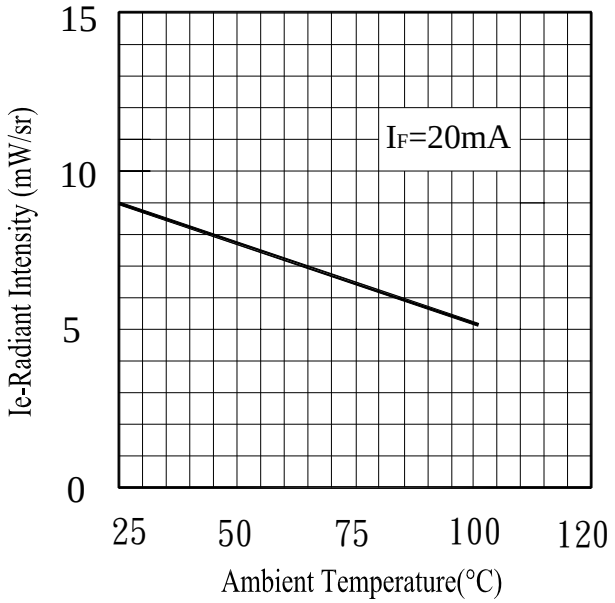
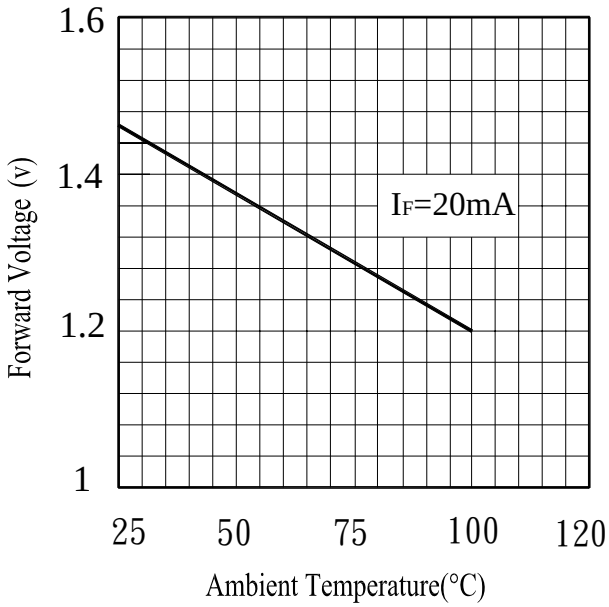


Fig.8 Forward Voltage vs. Ambient Temperature(°C)



Packing Quantity Specification

1.60PCS/1Tube，30Tubes/1Box or 105Tubles/1Box

Label Form Specification (For box)

CPN: Customer's Production Numb
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.
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EVERLIGHT ELECTRONICS CO., LTD.
Office: No 25, Lane 76, Sec 3, Chung Yang Rd,
Tucheng, Taipei 236, Taiwan, R.O.C
Tel: 886-2-2267-2000, 2267-9936
Fax: 886-2267-6244, 2267-6189, 2267-6306
http:\\www.everlight.com