



EVERLIGHT ELECTRONICS CO., LTD.

DATA SHEET

PART NO. : IR234

DATE : 2004/7/1

DEPARTMENT : CHR/D

REVISION : 1

RECEIVED			
<input checked="" type="checkbox"/> MASS PRODUCTION			
<input type="checkbox"/> PRELIMINARY			
<input type="checkbox"/> CUSTOMER DESIGN			
DEVICE NUMBER : CDIR-023-001			
PAGE : 7			
CUSTOMER	DESIGNER	CHECKER	APPROVER
	周宏		

REV.	DESCRIPTION	RELEASE DATE

OFFICE : NO. 25, Lane 76, Sec. 3, Chung Yang Rd., Tucheng 236, Taipei, Taiwan, R.O.C.

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<http://www.everlight.com>

Technical Data Sheet

3mm Infrared LED , T-1

IR234

Features

- High reliability
- High radiant intensity
- Peak wavelength $\lambda_p=940\text{nm}$
- 2.54mm Lead spacing
- Low forward voltage
- Pb Free

Descriptions

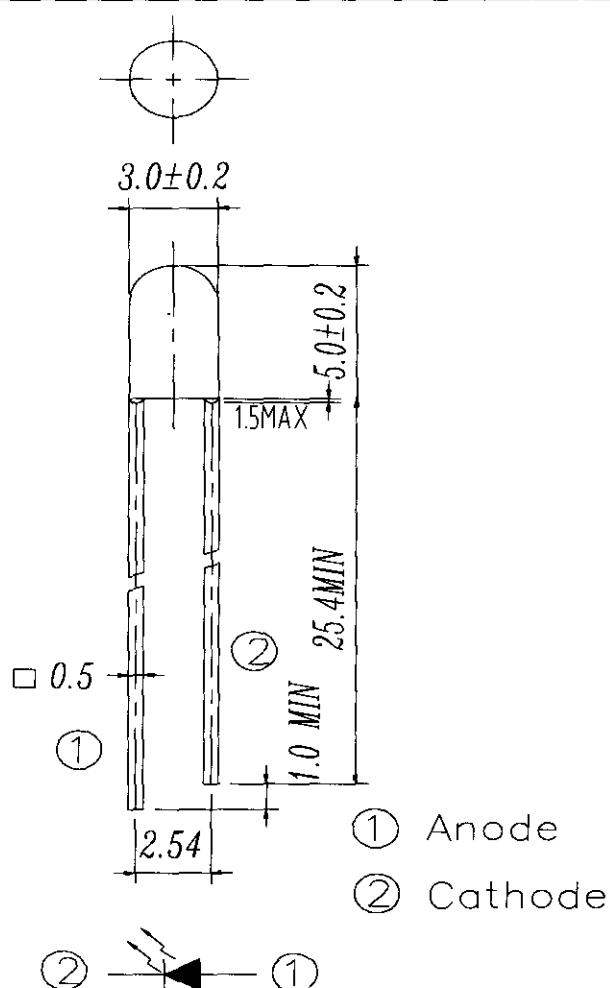
- EVERLIGHT's Infrared Emitting Diode (IR234) is a high intensity diode , molded in a blue plastic package.
- The device is spectrally matched with phototransistor , photodiode and infrared receiver module.

Applications

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

Device Selection Guide

LED Part No.	Chip	Lens Color
	Material	
IR	GaAlAs	Blue

Package Dimensions


Notes: 1. All dimensions are in millimeters

2. Tolerances unless dimensions ± 0.25 mm

Absolute Maximum Ratings ($T_a = 25^\circ\text{C}$)

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

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

*2: Soldering time ≤ 5 seconds.

Electro-Optical Characteristics (Ta=25°C)

Parameter	Symbol	Condition	Min.	Typ.	Max.	Units
Radiant Intensity	Ee	I _F =20mA	2.8	6.4	--	mW/sr
		I _F =100mA Pulse Width ≤ 100 μs, Duty ≤ 1%	--	45	--	
		I _F =1A Pulse Width ≤ 100 μs, Duty ≤ 1%	--	450	--	
Peak Wavelength	λ _p	I _F =20mA	--	940	--	nm
Spectral Bandwidth	Δλ	I _F =20mA	--	45	--	nm
Forward Voltage	V _F	I _F =20mA		1.2	1.5	V
		I _F =100mA Pulse Width ≤ 100 μs, Duty ≤ 1%	--	1.4	1.8	
		I _F =1A Pulse Width ≤ 100 μs, Duty ≤ 1%	--	2.6	4.0	
Reverse Current	I _R	V _R =5V	--	--	10	μA
View Angle	2θ 1/2	I _F =20mA	--	35	--	deg

Rank

Condition : I_F=20mA

Unit : mW/sr

Bin Number	J	K	L	M
Min	2.80	4.00	5.60	7.80
Max	4.50	6.40	8.90	12.50

业务技术咨询 : TEL/微信: 13422876592

Typical Electro-Optical Characteristics Curves

Fig.1 Forward Current vs.
Ambient Temperature

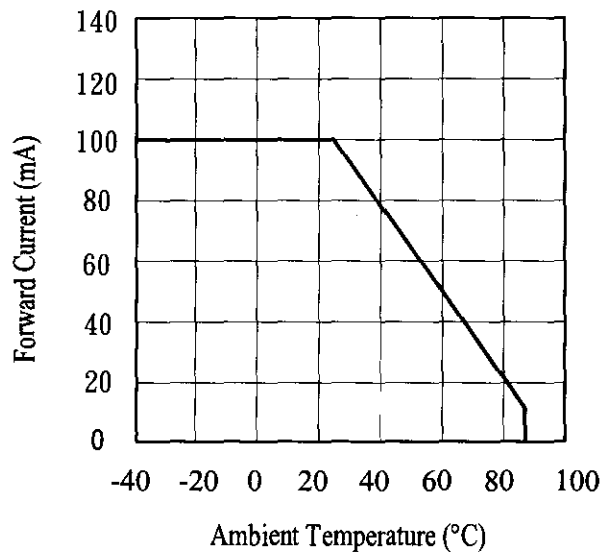


Fig.2 Spectral Distribution

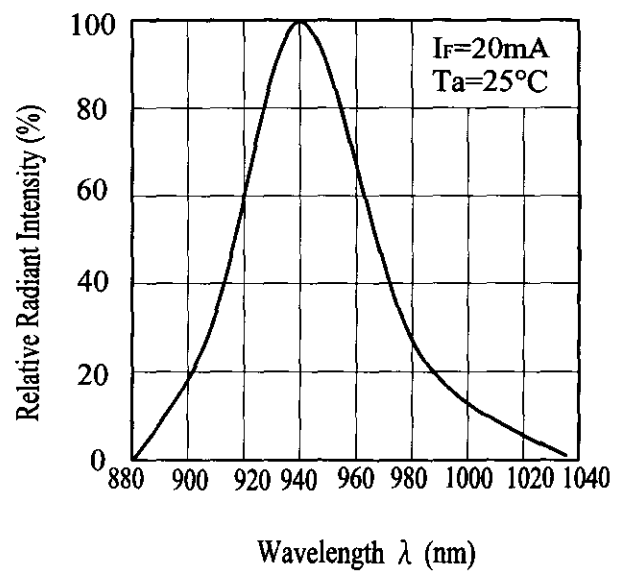


Fig.3 Peak Emission Wavelength
Ambient Temperature

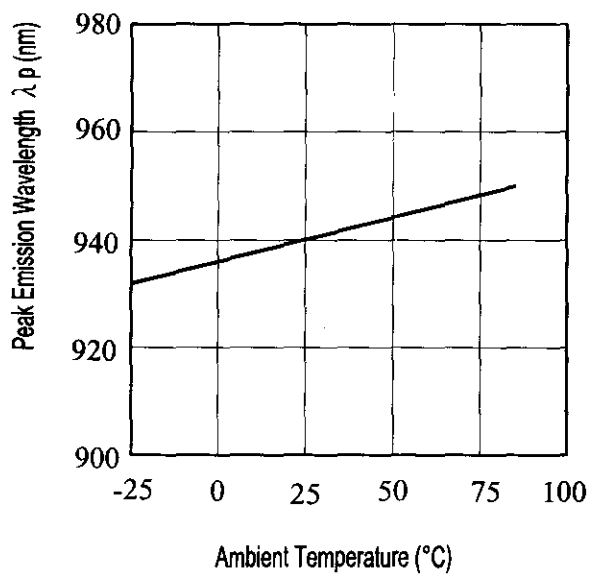
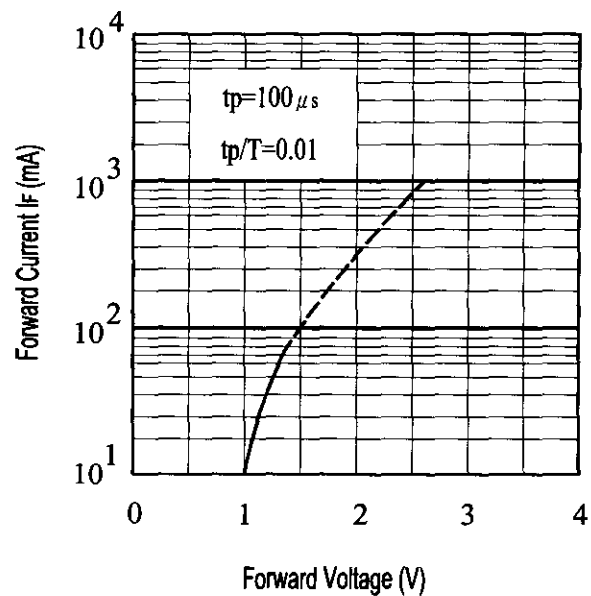


Fig.4 Forward Current
vs. Forward Voltage



Typical Electro-Optical Characteristics Curves

Fig.5 Relative Intensity vs.

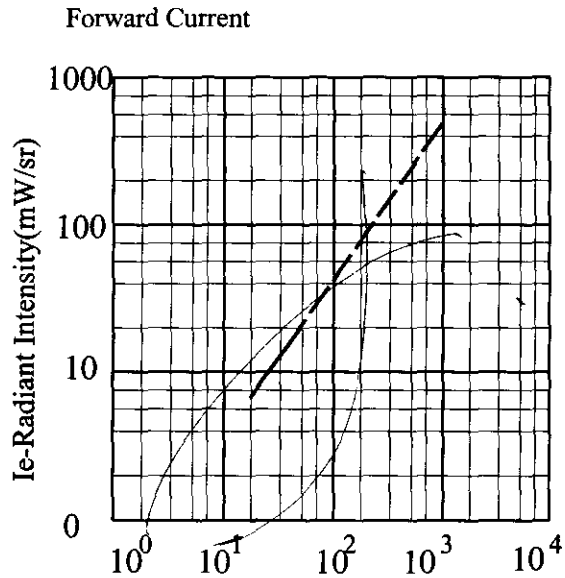


Fig.6 Relative Radiant Intensity vs.

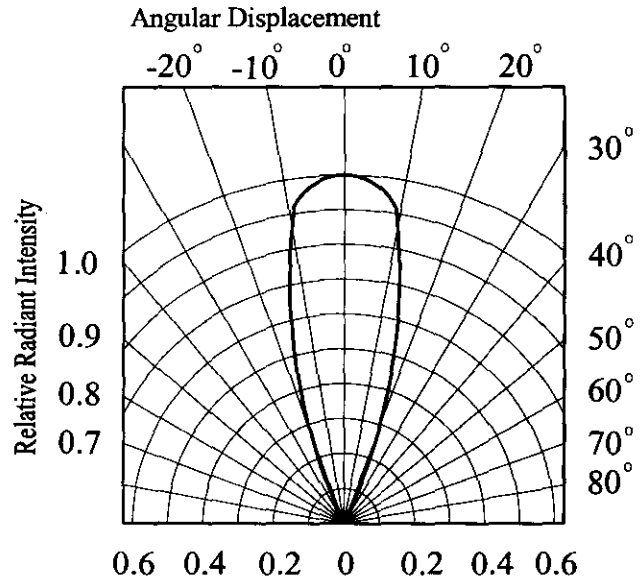


Fig.7 Relative Intensity vs.

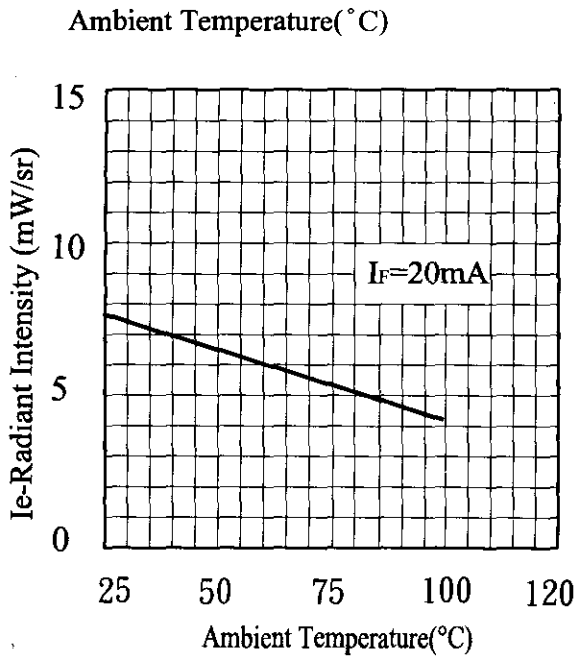
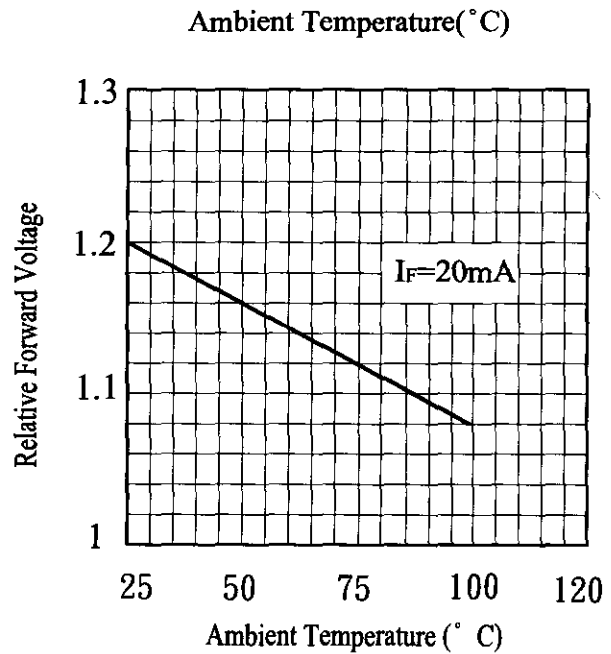





Fig.8 Forward Current vs.



Packing Quantity Specification

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

Label Form Specification

EVERLIGHT		CPN: Customer's Production Number
CPN:		P/N : Production Number
P/N:		QTY: Packing Quantity
	IR234	CAT: Ranks
QTY:		HUE: Peak Wavelength
	CAT:	REF: Reference
	HUE:	LOT No: Lot Number
	REF:	
LOT NO:		

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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