

Technical Data Sheet

1.6mm Side Looking Infrared Emitting Diode

IR958-8C

■ Features

- Low forward voltage
- Peak wavelength $\lambda_p=940\text{nm}$
- High reliability
- This product itself will remain within RoHS compliant version.



■ Descriptions

The IR958-8C is a GaAs infrared emitting diode. The miniature side-facing device is a chip that emits radiation from the side of the clear package.

■ Applications

- VCR
- Floppy disk drive
- Automatic stroboscope
- Cassette type recorder
- Optoelectronic switch
- Photo interrupter

■ Device Selection Guide

Part No.	Chip	Lens Color
	Material	
IR958-8C	GaAs/GaAlAs	Water clear

Absolute Maximum Ratings (Ta=25°C)

Item	Symbol	Rating	Unit
Power Dissipation	P _D	75	mW
Reverse Voltage	V _R	5	V
Forward Current	I _F	50	mA
Peak Forward Current (*1)	I _{FP}	1	A
Operating Temperature	T _{opr}	-25~+85	°C
Storage Temperature	T _{stg}	-40~+85	°C
Soldering Temperature (1/16 inch from body for 5 seconds)	T _{sol}	260	°C

Notes: *1:I_{FP} Conditions--Pulse Width ≤ 100 μs and Duty ≤ 1%.

*2:Soldering time ≤ 5 seconds.

Electro-Optical Characteristics (Ta=25°C)

Parameter	Symbol	Min	Typ	Max	Unit	Condition
Collector Current	I _{c(on)}	306	-	1870	μA	I _F =4mA, V _{CE} =3.5V
Peak Wavelength	λ _p	-	950	-	nm	I _F =20mA
Spectral Bandwidth	Δλ	-	40	-	nm	I _F =20mA
View Angle	2θ 1/2	-	25	-	Deg	I _F =20mA
Forward Voltage	V _F	-	1.2	1.5	V	I _F =20mA
Reverse Current	I _R	-	-	10	μA	V _R =5V

Typical Electrical/Optical/Characteristics Curves

Fig.1 Forward Current vs. Ambient Temperature

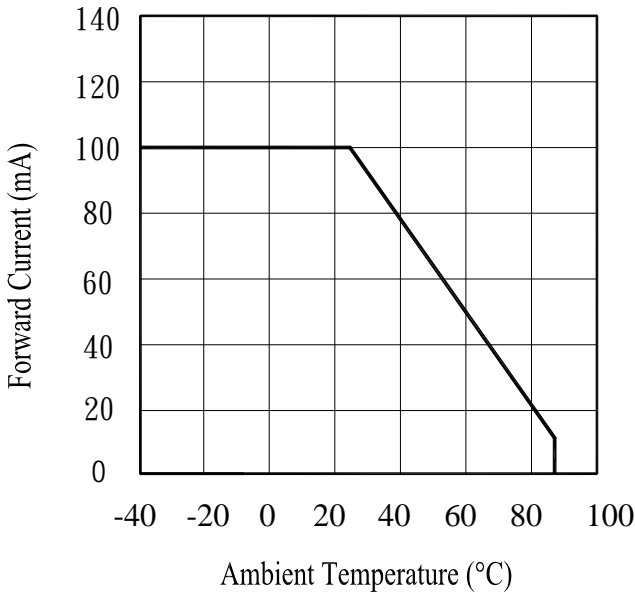


Fig.2 Spectral Distribution

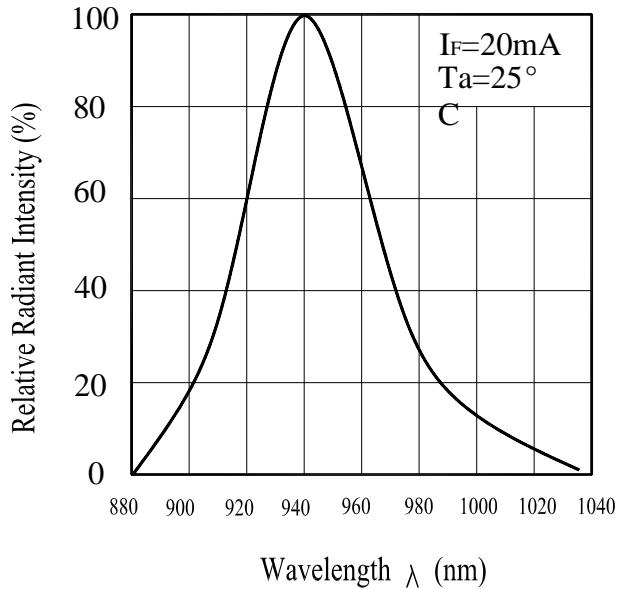


Fig.3 Peak Emission Wavelength vs. Ambient Temperature

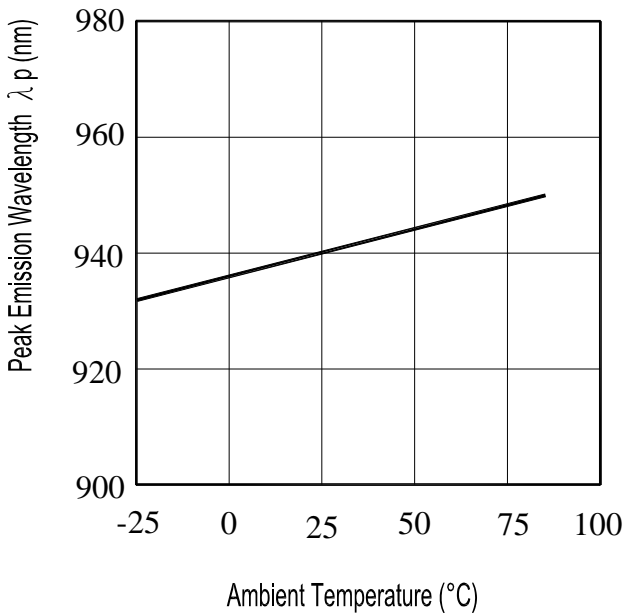
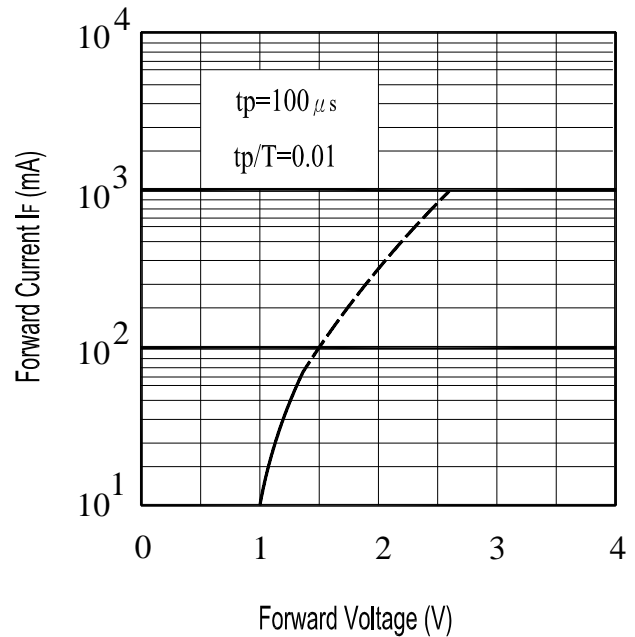


Fig.4 Forward Current vs. Forward Voltage



IR958-8C

Fig.5 Forward Voltage vs. Ambient Temperature(°C)

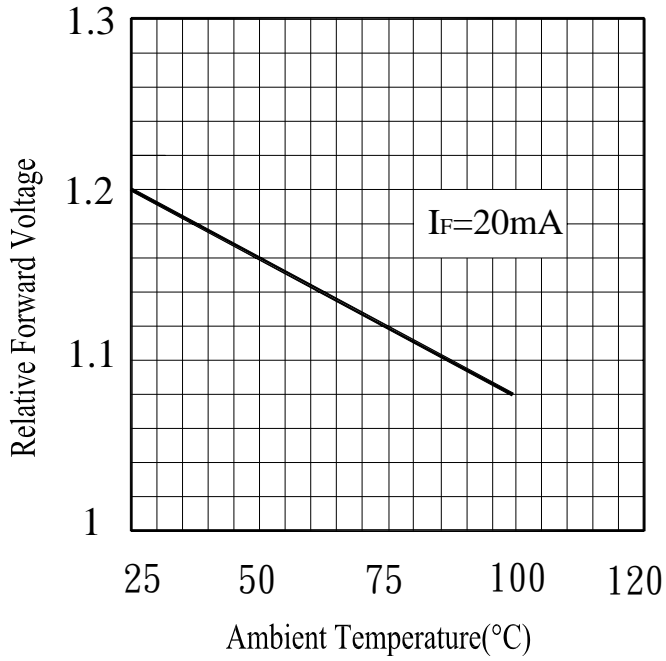
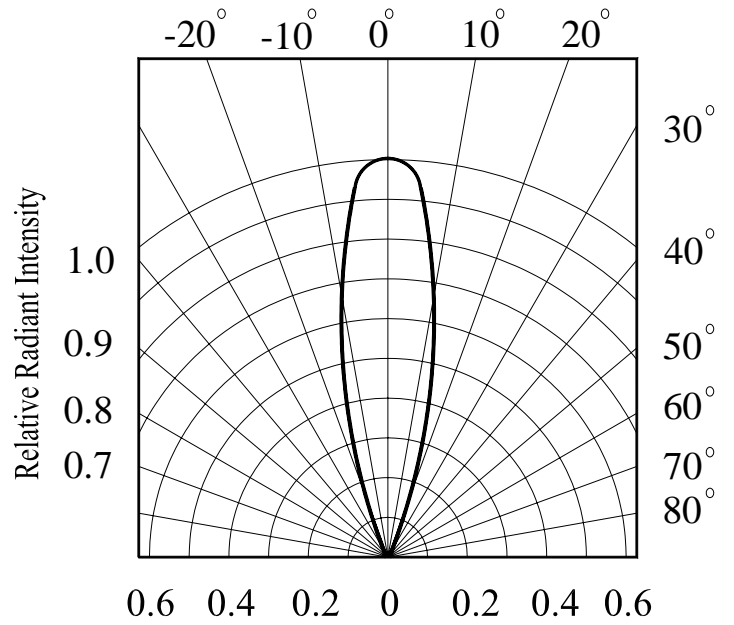
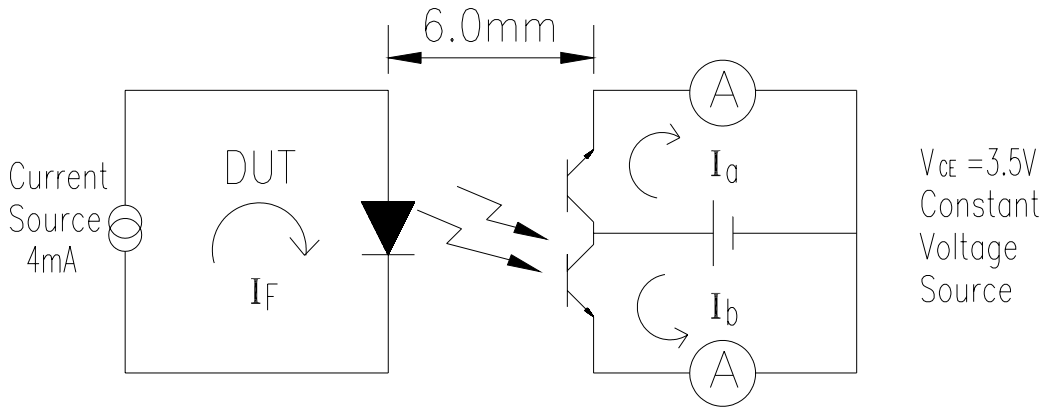


Fig.6 Relative Radiant Intensity vs. Angular Displacement



Test Method

The intensity testing method of Infrared emitting diode:



To Distinguish Intensity:

Ranks

Parameter	Symbol	Min	Max	Unit	Test Condition
5-2	I _{c(ON)}	1053	1870	μ A	I _F =4mA, V _{CE} =3.5V
6-1	I _{c(ON)}	650	1274	μ A	I _F =4mA, V _{CE} =3.5V
6-2	I _{c(ON)}	465	750	μ A	I _F =4mA, V _{CE} =3.5V
7-1	I _{c(ON)}	347	550	μ A	I _F =4mA, V _{CE} =3.5V
7-2	I _{c(ON)}	306	441	μ A	I _F =4mA, V _{CE} =3.5V

Reliability Test Item And Condition

The reliability of products shall be satisfied with items listed below.

Confidence level : 90%

LTPD : 10%

NO.	Item	Test Conditions	Test Hours/ Cycles	Sample Sizes	Failure Judgement Criteria	Ac/Re
1	Solder Heat	TEMP. : 260°C±5°C	10secs	22pcs		0/1
2	Temperature Cycle	H : +100°C 15mins ↕ 5mins L : -40°C 15mins	300Cycles	22pcs	$I_R \geq U \times 2$ $E_e \leq L \times 0.8$ $V_F \geq U \times 1.2$	0/1
3	Thermal Shock	H : +100°C 5mins ↕ 10secs L : -10°C 5mins	300Cycles	22pcs	U : Upper Specification	0/1
4	High Temperature Storage	TEMP. : +100°C	1000hrs	22pcs	Limit L : Lower	0/1
5	Low Temperature Storage	TEMP. : -40°C	1000hrs	22pcs	Specification Limit	0/1
6	DC Operating Life	$I_F = 20mA$	1000hrs	22pcs		0/1
7	High Temperature/ High Humidity	85°C / 85% R.H	1000hrs	22pcs		0/1



Packing Quantity Specification

- 1.1000PCS/1Bag , 8Bags/1Box
- 2.10Boxes/1Carton

Label Form Specification

EVERLIGHT

CPN:
P/N:

IR958-8C

QTY:  CAT:
HUE:
REF:

LOT NO: 

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

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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