



Infrared LED

MODEL NO : IR908-7P/F2

■ Features :

- Low forward voltage
- Peak wavelength $\lambda_p=940\text{nm}$
- High reliability

■ Description :

- The IR908-7P/F2 is a GaAs(GaAlAs) infrared emitting diode. The miniature side-facing device is molded in a pink plastic package.
- The device is spectrally matched with phototransistor.

■ Applications :

- Mouse
- Optoelectronic switch
- Floppy disk drive
- Photo interrupter

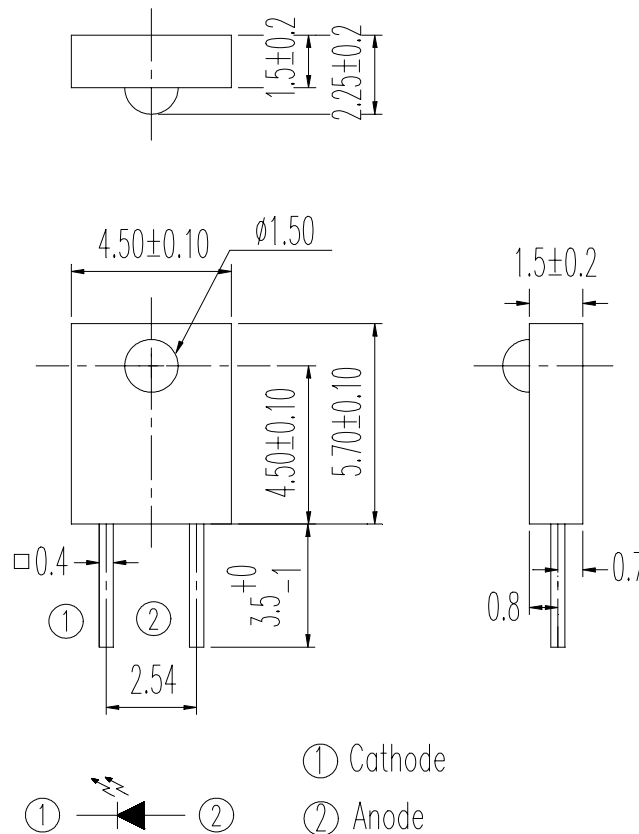
PART NO.	CHIP	LENS COLOR
	MATERIAL	
IR	GaAs(GaAlAs)	Pink



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■ Package Dimensions :



■ Notes :

1. All dimensions are in millimeter.
2. General tolerance: $\pm 0.1\text{mm}$
3. Lead spacing is measured where the lead emerge from the package.
4. Lens color : Water clear.
5. Above specification may be changed without notice. EVERLIGHT will reserve authority on material change for above specification.
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7. When using this product , please observe the absolute maximum ratings and the instructions for use outlined in these specification sheets. EVERIGHT 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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DEVICE NUMBER : DIR-090-175
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■ Absolute Maximum Ratings at T_A = 25°C

Parameter	Symbol	Rating	Unit	Notice
Continuous Forward Current	I _F	50	mA	-
Peak Forward Current Pulse width=100 μs, Duty cycle=1%	I _{FP}	1.0	A	-
Reverse Voltage	V _R	5	V	-
Operating Temperature	Topr	-25 ~ +85	°C	-
Storage Temperature	Tstg	-40 ~ +85	°C	-
Soldering Temperature	Tsol	260	°C	-
Power Dissipation at(or below) 25°C Free Air Temperature	Pd	75	mW	-

■ Electronic Optical Characteristics :

Parameter	Symbol	Min.	Typ.	Max.	Unit	Condition
Collector current	I _{C(ON)}	140	----	980	μA	V _{CE} =3.5V, I _F =4mA
Peak Wavelength	λ _P	----	940	----	nm	I _F =20mA
Spectral Bandwidth	Δλ	----	50	----	nm	I _F =20mA
Forward Voltage	V _F	----	1.2	1.6	V	I _F =20mA
Reverse Current	I _R	----	----	10	μA	V _R =5V
View Angle	2Θ1/2	----	60	----	deg	I _F =20mA



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Typical Electrical/Optical/Characteristics Curves

Fig. 1 Forward Current vs. Ambient Temperature

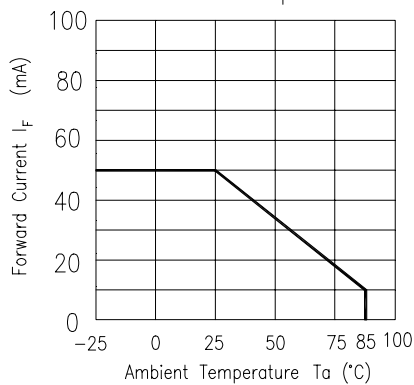


Fig. 2 Spectral Distribution

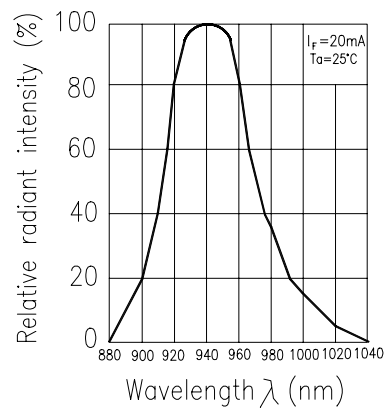


Fig. 3 Peak Emission Wavelength vs. Ambient Temperature

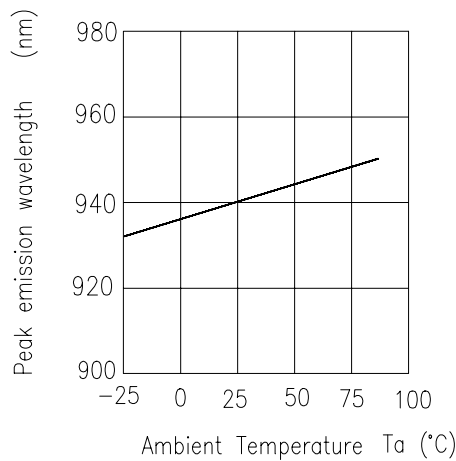


Fig. 4 Forward Current vs. Forward Voltage

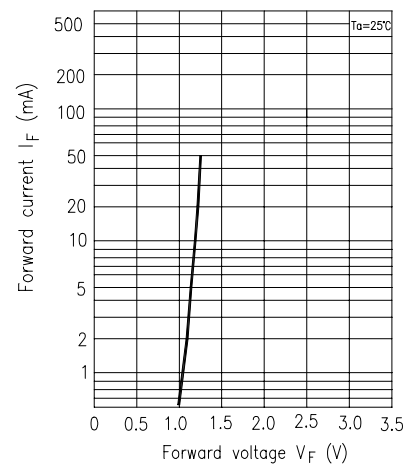


Fig. 5 Forward Voltage vs. Ambient Temperature

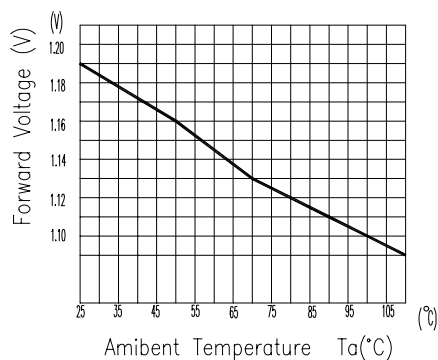
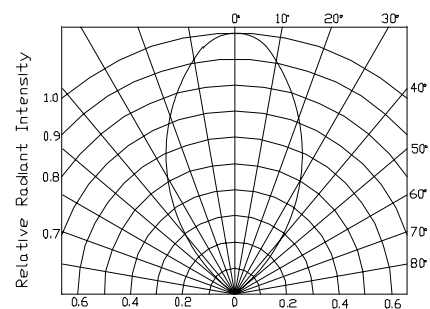


Fig. 6 Relative Radiant Intensity vs. Angular Displacement





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■ 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 Size	Failure Judgement Criteria	Ac/Re
1	Solder Heat	TEMP : 260°C ± 5 °C	5 secs	22 pcs	$I_R \geq U \times 2$ $I_{C(ON)} \leq L \times 0.8$ $V_F \geq U \times 1.2$ U :Upper specification limit L :Lower specification limit	0/1
2	Temperature Cycle	H : +85°C 30 mins ↑ 5 mins ↓ L : -55°C 30 mins	50 cycles	22 pcs		0/1
3	Thermal Shock	H : +100°C 5 mins ↑ 10 secs ↓ L : -10°C 5 mins	50 cycles	22 pcs		0/1
4	High Temperature Storage	TEMP. : +100°C	1000 hrs	22 pcs		0/1
5	Low Temperature Storage	TEMP. : -55°C	1000 hrs	22 pcs		0/1
6	DC Operating Life	$I_F = 20\text{mA}$	1000 hrs	22 pcs		0/1
7	High Temperature / High Humidity	85°C / 85% R.H.	1000 hrs	22 pcs		0/1



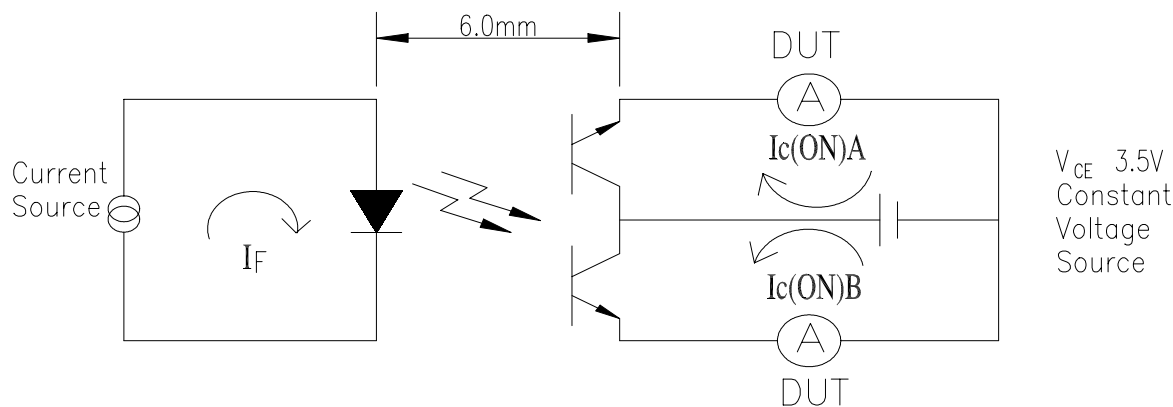
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■ Test Method For $I_{C(ON)}$:

Condition : $I_F=4\text{ mA}$

The intensity testing method for infrared emitting diode



■ To Distinguish Intensity:

Condition: $I_F=4mA, V_{CE}=3.5V$

E Ranks

Color Code	Ranks	Min	Max	Unit
Red	E1	140	260	μA
Blue	E2	210	350	μA
Yellow	E3	280	440	μA
Silver	E4	350	530	μA
Green	E5	420	620	μA
Purple	E6	490	710	μA
White	E7	560	800	μA
Brown	E8	630	890	μA
Orange	E9	700	980	μA



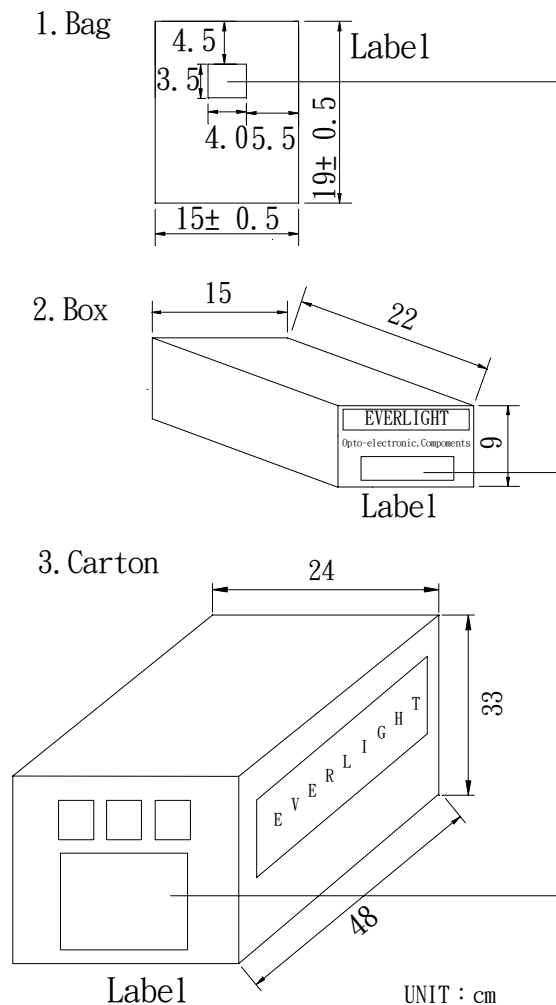
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■ Packing Specifications



EVERLIGHT

CPN:

P/N:

IR908-7P/F2

QTY:

LOT NO:

CAT:

HUE:

REF:

MADE IN TAIWAN

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

■ Packing Quantity Specification

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