



Infrared LED

MODEL NO : IR928-6C/F1

■ Features :

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

■ Description :

- The IR928-6C/F1 is a GaAs(GaAlAs) infrared emitting diode. The miniature side-facing device is molded in a water clear plastic package.
The device is spectrally matched with phototransistor.

■ Applications :

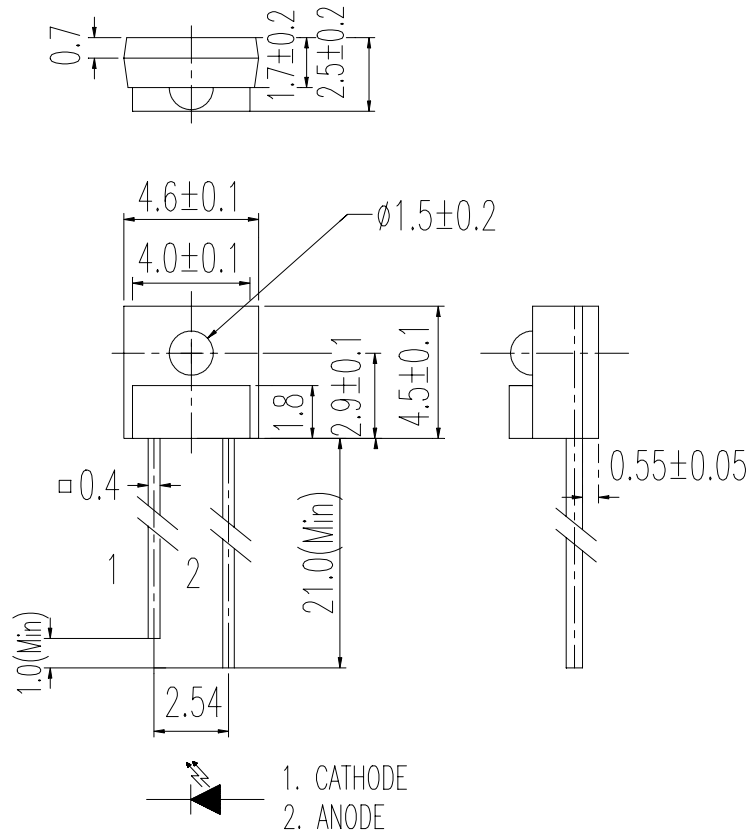
- Mouse
- Optoelectronic switch
- Floppy disk drive
- Photo interrupter

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

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■ Package Dimensions :



■ Notes :

1. All dimensions are in millimeter.
2. General tolerance: ± 0.1 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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■ 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)}	300	----	1900	μA	V _{CE} =3.5V, I _F =4mA
Peak Wavelength	λ _p	----	940	----	nm	I _F =20mA
Spectral Bandwidth	Δλ	----	80	----	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	2θ _{1/2}	----	40	----	deg	I _F =20mA



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■ Typical Electrical/Optical/Characteristics Curves

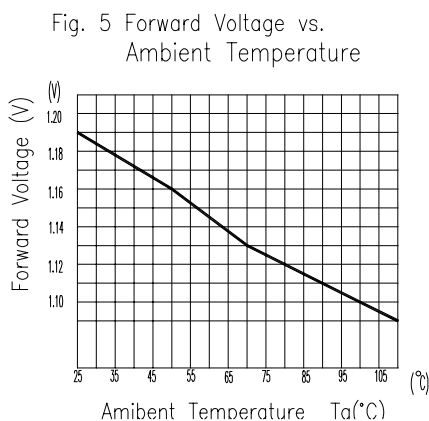
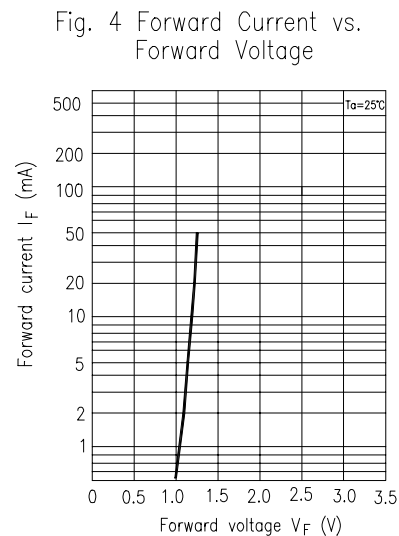
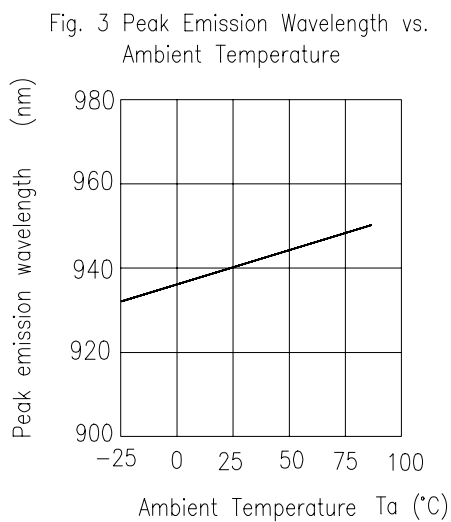
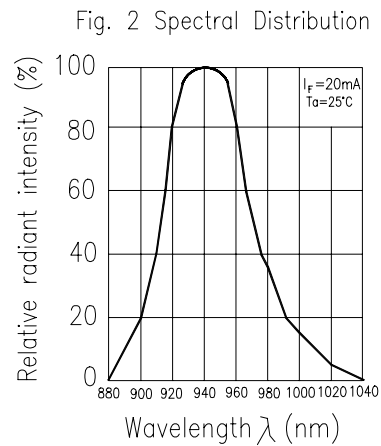
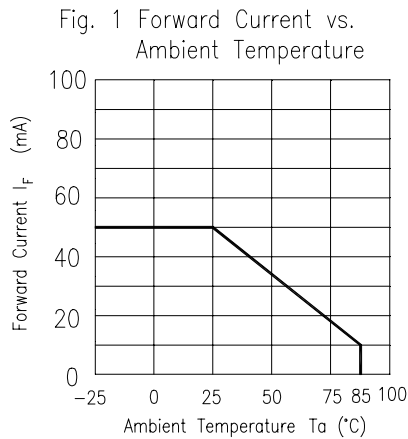
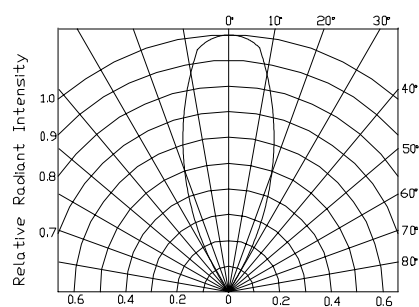


Fig. 6 Relative Radiant Intensity vs. Angular Displacement





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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		0/1
2	Temperature Cycle	H : +85°C 30 mins ↑ 5 mins ↓ L : -55°C 30 mins	50 cycles	22 pcs	$I_R \geq U \times 2$ $I_{C(ON)} \leq L \times 0.8$ $V_F \geq U \times 1.2$	0/1
3	Thermal Shock	H : +100°C 5 mins ↑ 10 secs ↓ L : -10°C 5 mins	50 cycles	22 pcs	U :Upper specification limit L :Lower specification limit	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	$I_F=20mA$	1000 hrs	22 pcs		0/1
7	High Temperature / High Humidity	85°C / 85% R.H.	1000 hrs	22 pcs		0/1

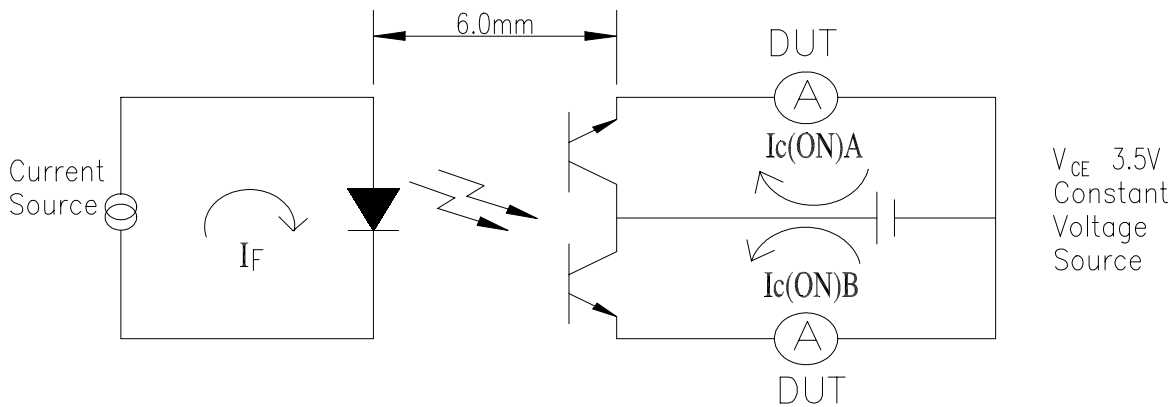
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■ Test Method For $I_{C(ON)}$:

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

The intensity testing method for infrared emitting diode



■ To Distinguish Intensity:

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

Ranks

Color Code	Ranks	Min	Max	Unit
Blue	7-2	300	450	μA
Yellow	7-1	340	560	μA
Silver	6-2	450	760	μA
Green	6-1	630	1300	μA
Purple	5-2	1020	1900	μA



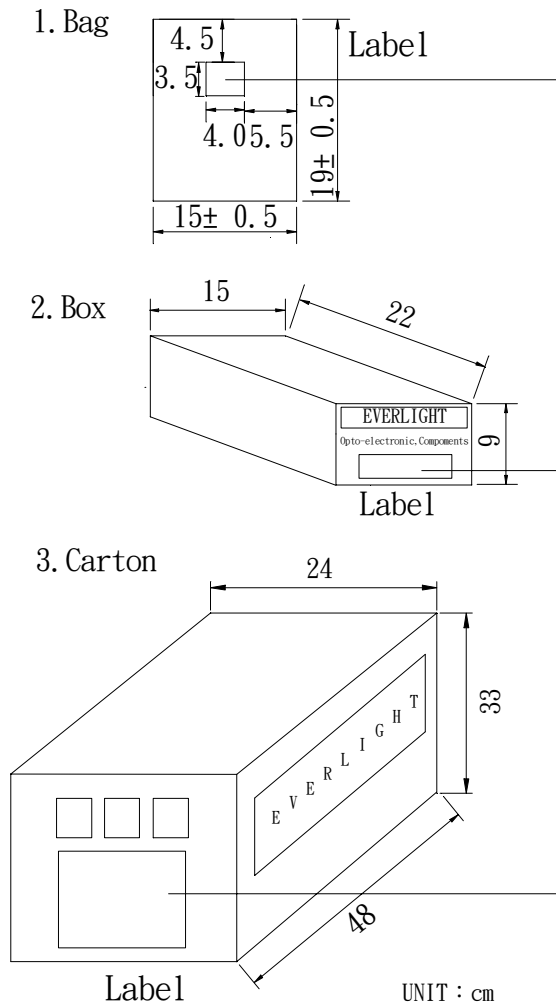
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■ Packing Specifications



CPN:

P/N:



IR928-6C/F1

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 , 5 Bags/1Box

2. 10 Boxes/1Carton