



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 :

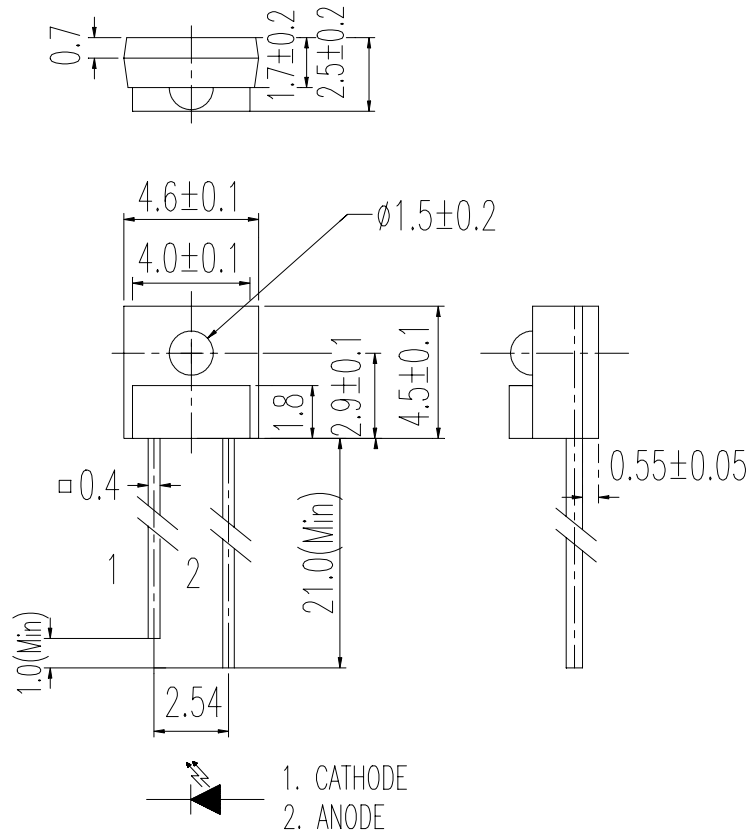
- Mouse
- Optoelectronic switch
- Floppy disk drive
- Photo interrupter

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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■ 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	2θ1/2	----	40	----	deg	I _F =20mA



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■ Typical Electrical/Optical/Characteristics Curves

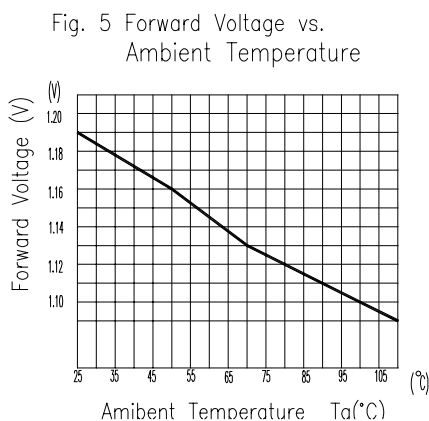
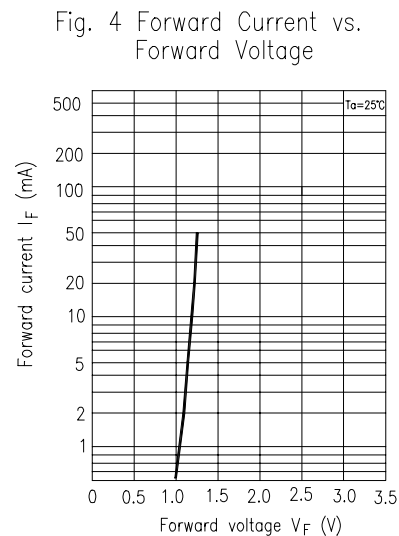
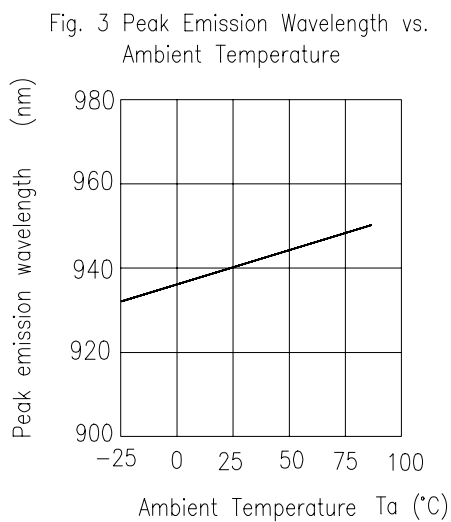
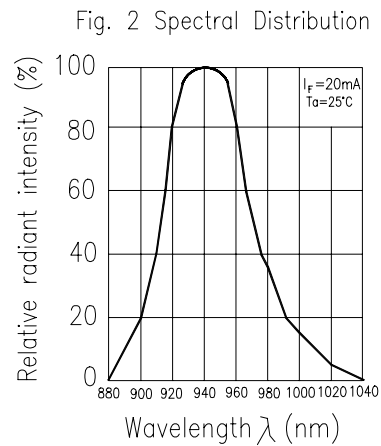
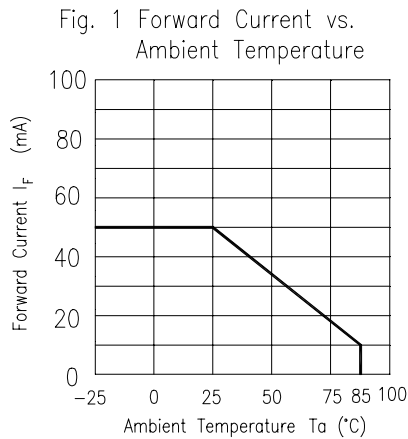
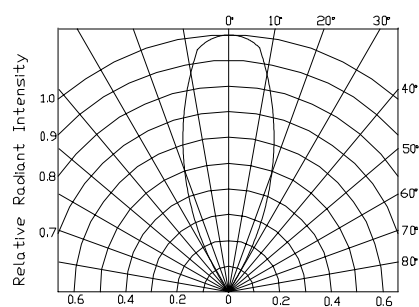


Fig. 6 Relative Radiant Intensity vs. Angular Displacement





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DEVICE NUMBER : DIR-092-192 REV : 1.0
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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 \updownarrow 5 mins \updownarrow 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 \updownarrow 10 secs \updownarrow 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

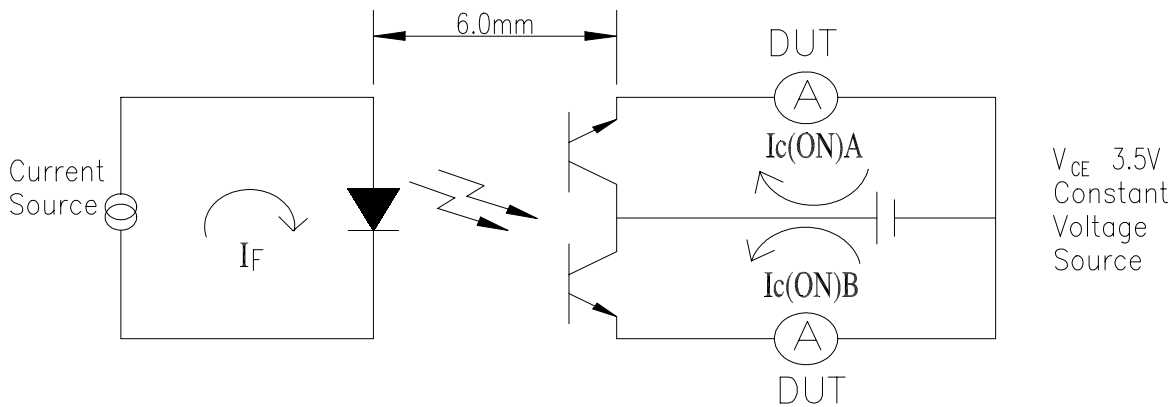
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■ Test Method For $I_{C(ON)}$:

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



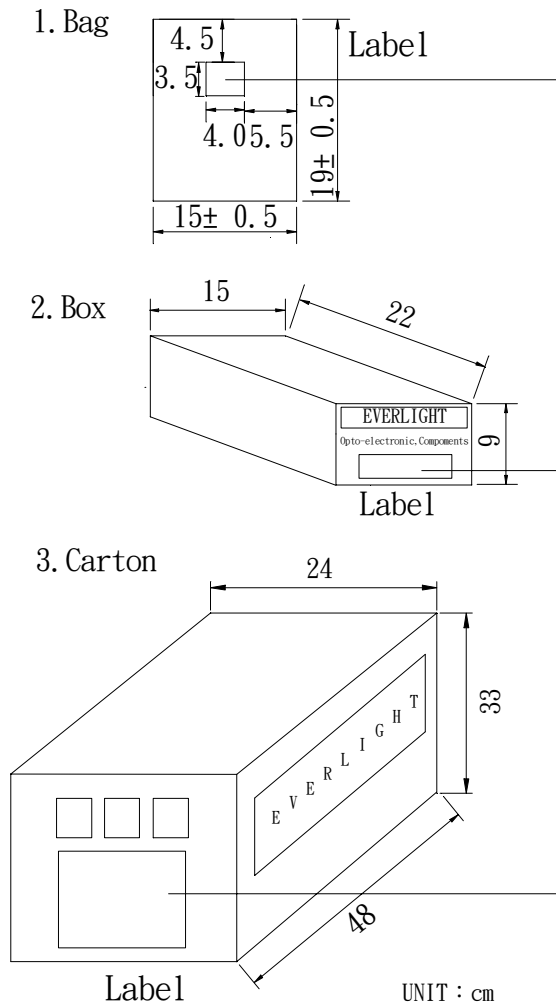
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ECN : _____ PAGE : 7/7

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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

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