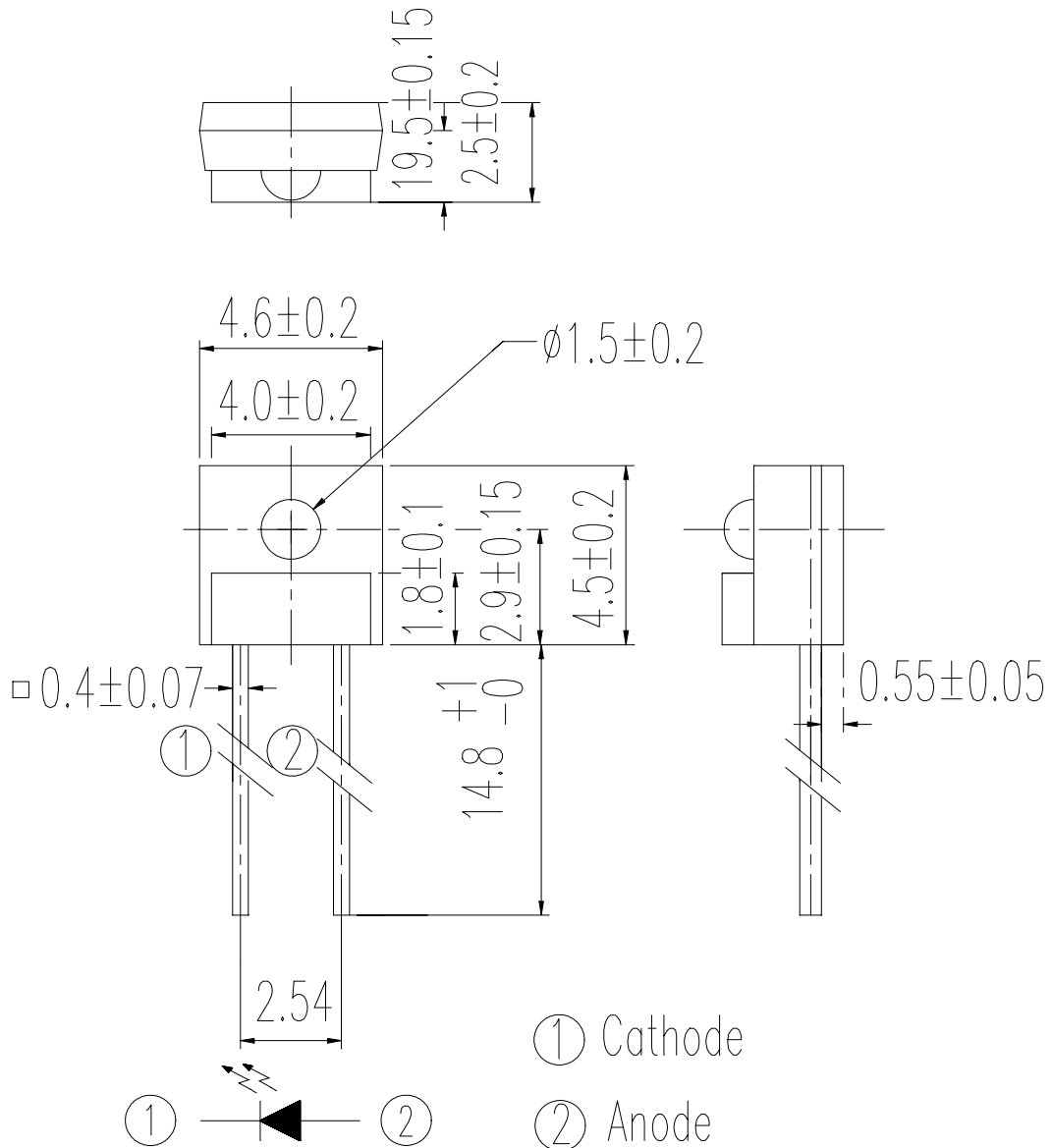


Device Number: DIR-092-107 REV: 1.1  
 MODEL NO: IR928-6C ECN: \_\_\_\_\_ Page: 1/7

**Package Dimensions:**

DESIGNER	CHECKER	APPROVED

Office: NO 25, Lane 76, Chung Yang Rd., Sec.3  
 Tucheng, Taipei 236, Taiwan, R.O.C.  
 TEL: 886-2-2267-2000, 267-9936(22Lines)  
 FAX: 886-2-2267-6189

**EVERLIGHT**

EVERLIGHT ELECTRONICS CO., LTD.

Device Number: DIR-092-107 REV: 1.1MODEL NO: IR928-6C ECN: \_\_\_\_\_ Page: 2/7**©Notes :**

- 1.All dimensions are in millimeter.
- 2.Lead spacing is measured where the lead emerge from the package .
- 3.Above specification may be changed without notice. EVERLIGHT will reserve authority on material change for above specification.
- 4.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.
- 5.When using this product , please observe the absolute maximum ratings and the instructions for use 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.

**Description**

The **IR928-6C** is a GaAs infrared emitting diode. The miniature side-facing device has a chip that emits radiation from the side of the clear package.

**Features**

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

**Applications**

- Mouse
- Optoelectronic Switch
- Photo Interrupter

**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	Topr	-25~+85	°C
Storage Temperature	Tstg	-40~+85	°C
Soldering Temperature (1/16 inch from body for 5 seconds)	Tsol	260	°C

(\*1)  $t_w=100 \mu \text{ SEC.}$ ,  $T=10 \text{ m SEC.}$ **Electro-Optical Characteristics**

(Ta=25°C)

Parameter	Symbol	Min	Typ	Max	Unit	Condition
Light Current	$I_L$	11		50	$\mu \text{ A}$	$I_F=5\text{mA}, V_{ON}=5\text{V}$
Peak Wavelength	$\lambda_p$		940		nm	$I_F=20\text{mA}$
Spectral Bandwidth	$\Delta \lambda$		80		nm	$I_F=20\text{mA}$
View Angle	$2\theta_{1/2}$		$\pm 20$		Deg	$I_F=20\text{mA}$
Forward Voltage	$V_F$		1.2	1.6	V	$I_F=20\text{mA}$
Reverse Current	$I_R$			10	$\mu \text{ A}$	$V_R=5\text{V}$

**Typical Characteristics**

Fig. 1 Forward Current vs. Ambient Temperature

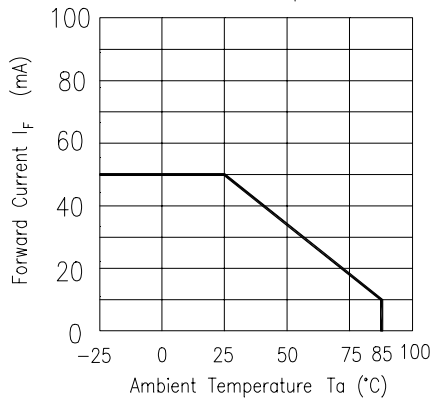


Fig. 2 Spectral Distribution

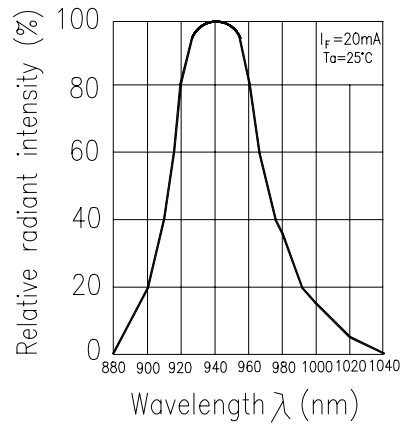


Fig. 3 Peak Emission Wavelength vs. Ambient Temperature

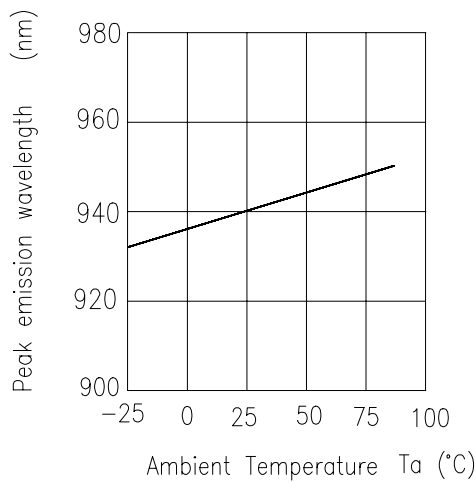


Fig. 4 Forward Current vs. Forward Voltage

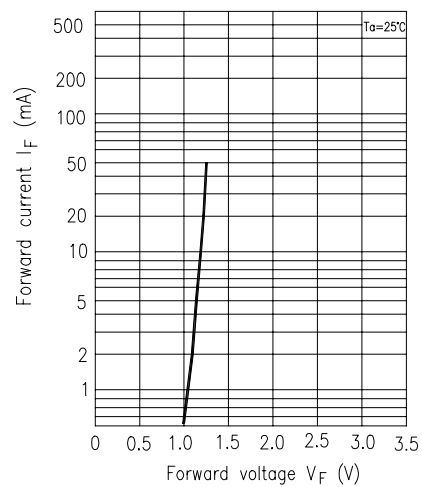


Fig. 5 Forward Voltage vs. Ambient Temperature

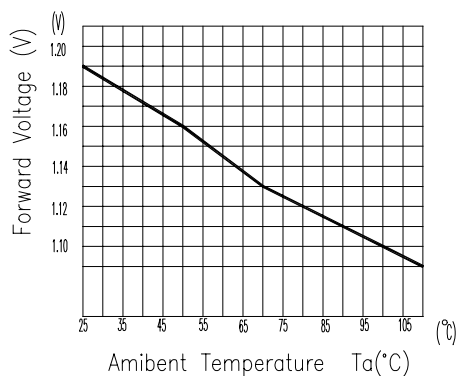
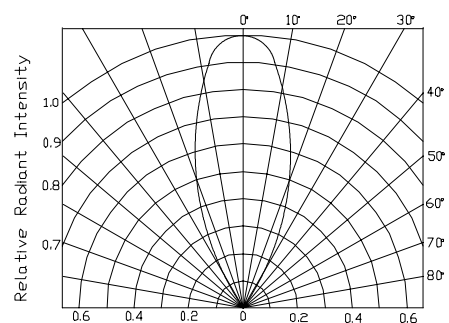
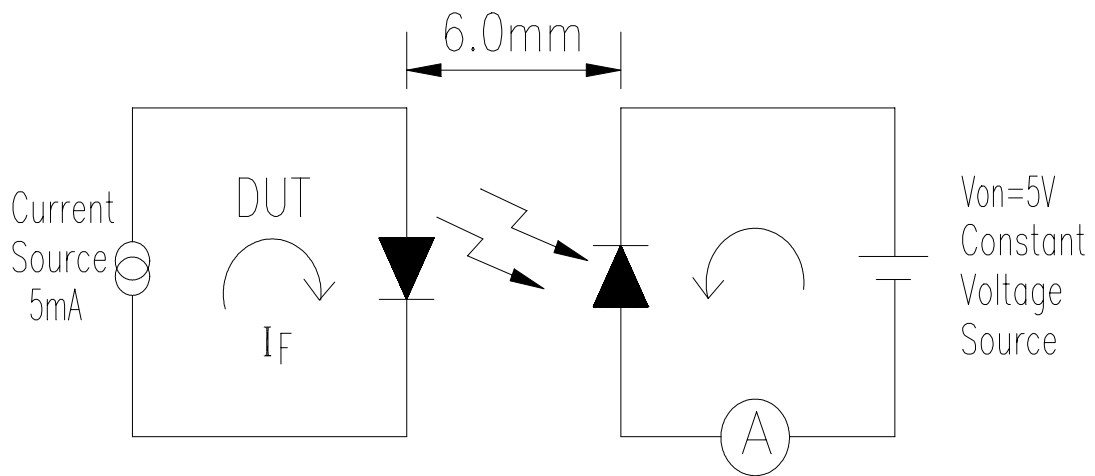


Fig. 6 Relative Radiant Intensity vs. Angular Displacement



**Test Method**

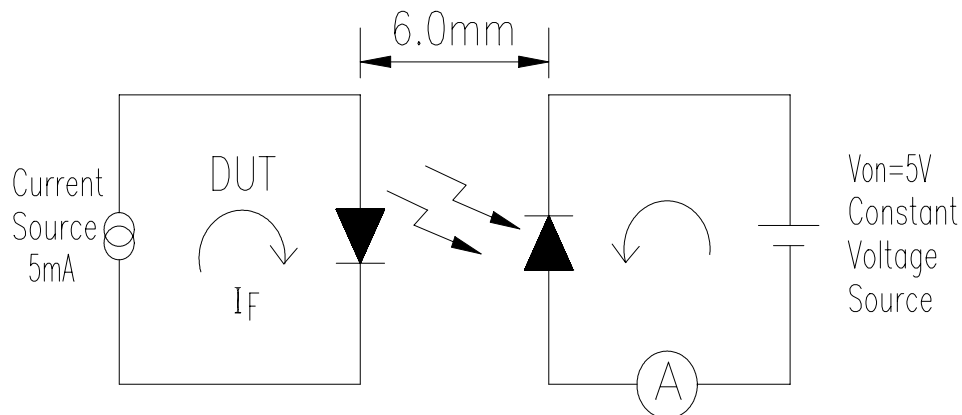
Infrared diode intensity test method for LED:

**Ranks**

Color Code	Parameter	Symbol	Min	Max	Unit	Test Condition
Red	6-1	$I_L$	30	45	$\mu A$	$I_F=5mA, V_{on}=5V$
Blue	6-2	$I_L$	24	35	$\mu A$	$I_F=5mA, V_{on}=5V$
Yellow	7-1	$I_L$	16	30	$\mu A$	$I_F=5mA, V_{on}=5V$
Silver	7-2	$I_L$	14	26	$\mu A$	$I_F=5mA, V_{on}=5V$
Green	7-3	$I_L$	11	20	$\mu A$	$I_F=5mA, V_{on}=5V$

**Test Method**

Infrared diode intensity test method for LED:

**Ranks**

Color Code	Parameter	Symbol	Min	Max	Unit	Test Condition
Red	E1	$I_L$	14	21	$\mu A$	$I_F=5mA, V_{on}=5V$
Blue	E2	$I_L$	17	24	$\mu A$	$I_F=5mA, V_{on}=5V$
Yellow	E3	$I_L$	20	27	$\mu A$	$I_F=5mA, V_{on}=5V$
Silver	E4	$I_L$	23	30	$\mu A$	$I_F=5mA, V_{on}=5V$
Green	E5	$I_L$	26	33	$\mu A$	$I_F=5mA, V_{on}=5V$
Purple	E6	$I_L$	29	36	$\mu A$	$I_F=5mA, V_{on}=5V$
White	E7	$I_L$	32	39	$\mu A$	$I_F=5mA, V_{on}=5V$
Brown	E8	$I_L$	35	44	$\mu A$	$I_F=5mA, V_{on}=5V$
Orange	E9	$I_L$	40	50	$\mu A$	$I_F=5mA, V_{on}=5V$

**Supplement**

## 1.Parts (1) Chip

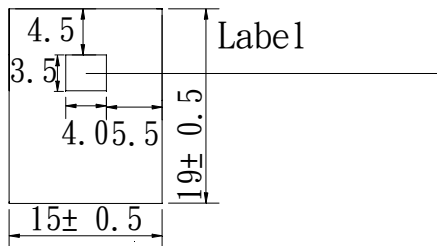
Type	Material	Peak Wavelength
IR	GaAs	940

## (2) Material

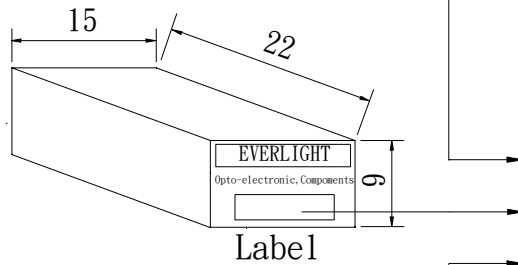
Type	Lead frame	Wire	Package
Material	SPCC	Gold	Epoxy

**Packing Specifications**

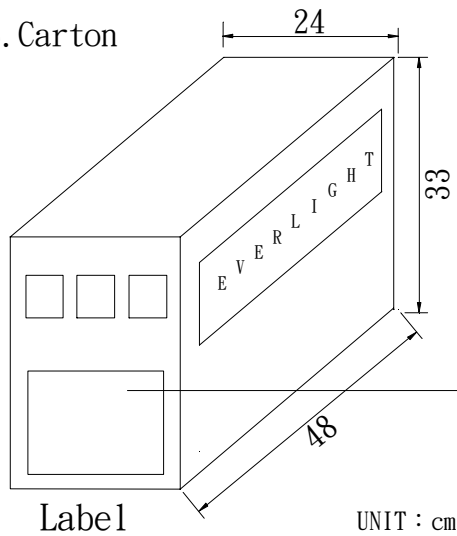
1. Bag



2. Box



3. Carton

**CPN: Customer's product number****P/N: Product number****QTY: Packing quantity****CAT: Ranks****HUE: Peak wavelength****REF: Reference****LOT NO: Lot number****MADE IN TAIWAN: Production place****Packing Quantity Specification**

1.1000Pcs/1bag , 6bags/1box

2.10boxes/1Carton