



1206 Package Chip Infrared LED With Inner Lens

MODEL NO : IR11-21C/TR8

■ Features :

- Small double-end package
- Peak wavelength $\lambda_p=940\text{nm}$
- View angle 100°
- High reliability
- Low forward voltage

■ Description :

- IR11-21C/TR8 is an Infrared Emitting Diode in miniature top view flat SMD package and it is molded in a water clear plastic. The device is spectrally matched with silicon photodiode and phototransistor.

■ Applications :

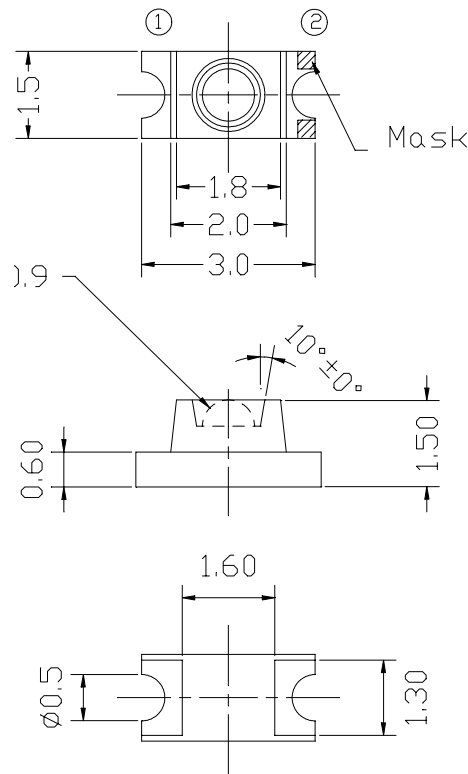
- PCB mounted infrared sensor
- Infrared emitting for miniature light barrier
- Floppy disk drive
- Smoke detector
- Optoelectronic switch

PART NO.	CHIP	LENS COLOR
	MATERIAL	
IR	GaAlAs	Water Clear

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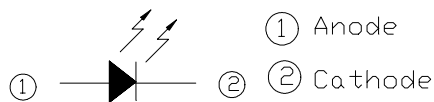
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■ Package Dimensions :



■ Notes :

- 1.All dimensions are in millimeter.
- 2.General Tolerance: $\pm 0.1\text{mm}$
- 3.Lens color : Water Clear.



- 4.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 Ta = 25°C

Parameter	Symbol	Rating	Unit	Notice
Continuous Forward Current	I_F	65	mA	
Peak Forward Current Pulse width=100 μ s, Duty cycle=1%	I_{FP}	1.0	A	
Reverse Voltage	V_R	5	V	
Operating Temperature	Topr	-40 ~ +85	°C	
Storage Temperature	Tstg	-40 ~ +85	°C	
Soldering Temperature	Tsol	260	°C	
Power Dissipation at(or below) 25°C Free Air Temperature	Pd	130	mW	

■ Electronic Optical Characteristics :

Parameter	Symbol	Min.	Typ.	Max.	Unit	Condition
Radiant Intensity	E_e	0.5	1.6	----	mW/sr	$I_F=20\text{mA}$
		----	9.0	----		$I_F=100\text{mA}, t_p=100\ \mu\text{s}, t_p/T=0.01$
		----	85	----		$I_F=1\text{A}, t_p=100\ \mu\text{s}, t_p/T=0.01$
Peak Wavelength	λ_p	----	940	----	nm	$I_F=20\text{mA}$
Spectral Bandwidth	$\Delta\lambda$	----	45	----	nm	$I_F=20\text{mA}$
Forward Voltage	V_F	----	1.2	1.5	V	$I_F=20\text{mA}$
		----	1.4	1.85		$I_F=100\text{mA}, t_p=100\ \mu\text{s}, t_p/T=0.01$
		----	2.6	4.0		$I_F=1\text{A}, t_p=100\ \mu\text{s}, t_p/T=0.01$
Reverse Current	I_R	----	----	10	μA	$V_R=5\text{V}$
View Angle	$2\theta_{1/2}$	----	100	----	deg	$I_F=20\text{mA}$



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■ Typical Electrical/Optical/Characteristics Curves

Fig. 1 Forward Current vs. Ambient Temperature

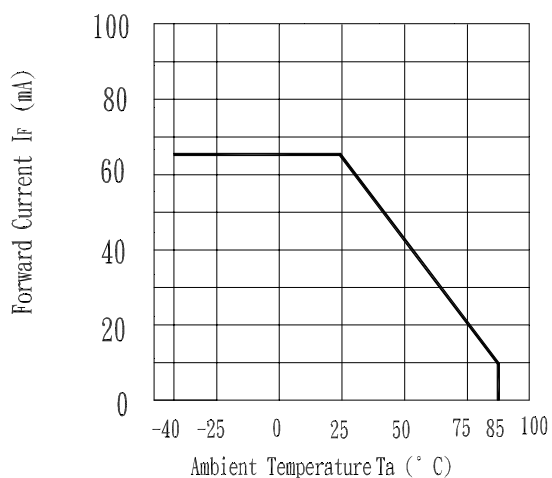


Fig. 2 Spectral Distribution

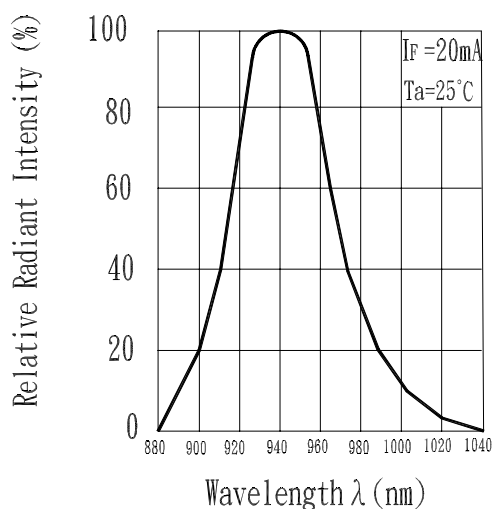


Fig. 3 Peak Emission Wavelength vs. Ambient Temperature

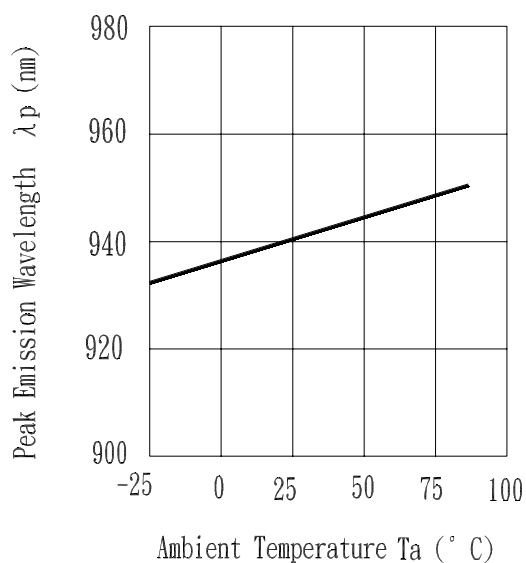
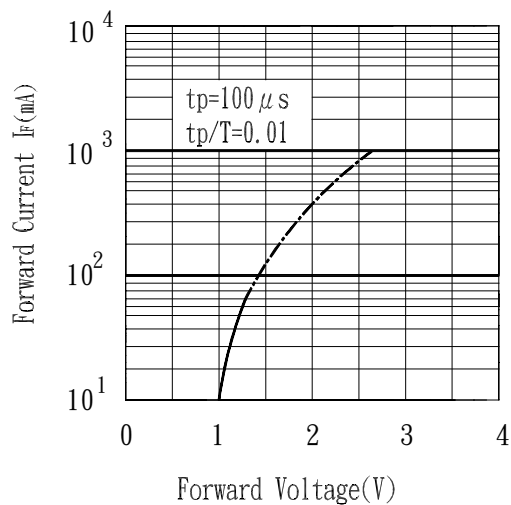


Fig. 4 Forward Current vs. Forward Voltage





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Fig. 5 Relative Intensity vs. Forward Current

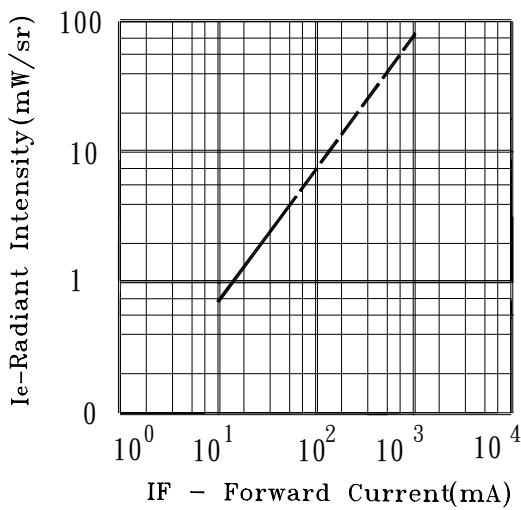


Fig. 6 Relative Radiant Intensity vs. Angular Displacement

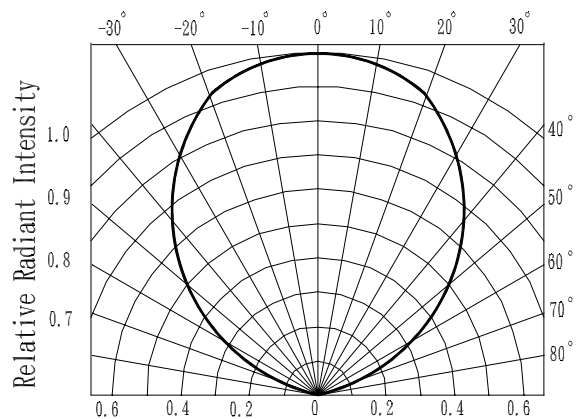


Fig. 7 Relative Intensity vs. Ambient Temperature (°C)

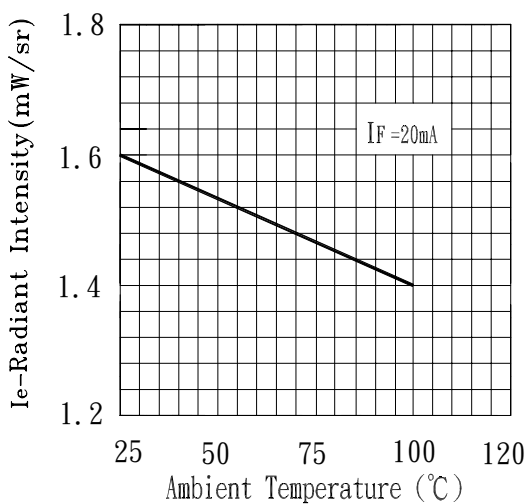
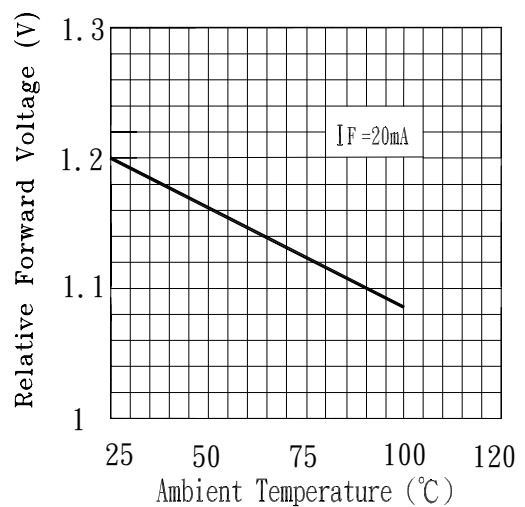


Fig. 8 Forward Current vs. Ambient Temperature (°C)





DEVICE NUMBER : DTR-011-030
ECN : _____

REV : 1.0
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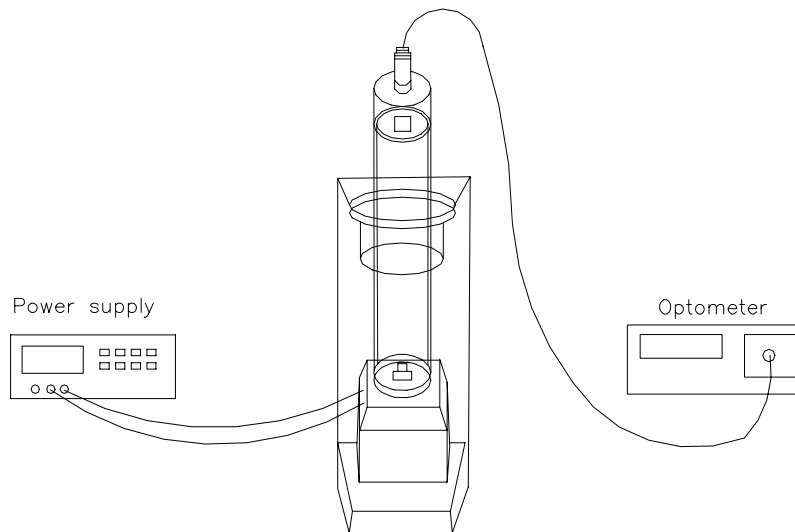
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Test Method For Power :

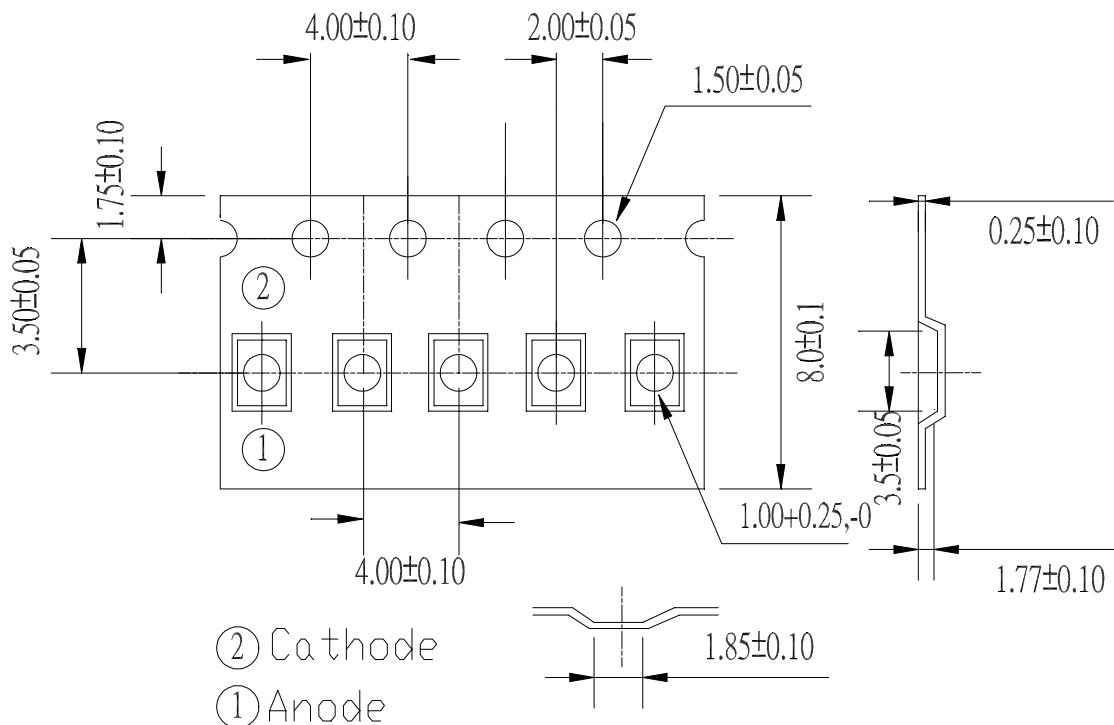
Condition : $I_f=20$ mA

Test Item : Radiant Intensity

Unit : mW/sr



Taping Dimensions:

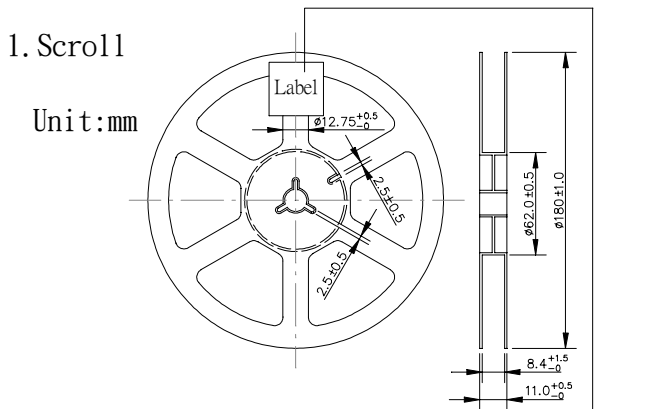




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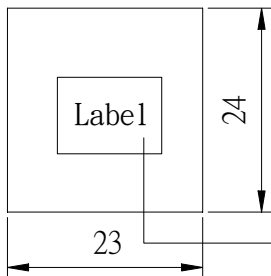
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■ Packing Specifications



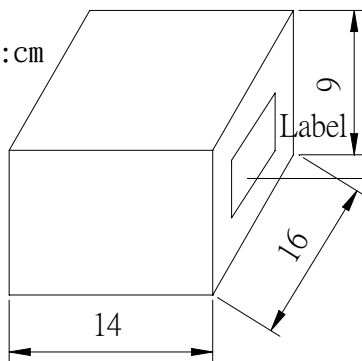
2. Bag

Unit:cm



3. Carton

Unit:cm



CPN:

P/N:



IR11-21C/TR8

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. 2000Pcs/1 Volume , 1 Volume/1Bag

2. 10Bags/1Carton