



## ZIR-1608C-08-Z3

### 0.8mm Height Flat Top Infrared LED

#### Descriptions

ZIR-1608C-08-Z3 is an infrared emitting diode in miniature SMD package which is molded in a water clear plastic with flat top view lens. The device is spectrally matched with silicon photodiode and phototransistor.

#### Features

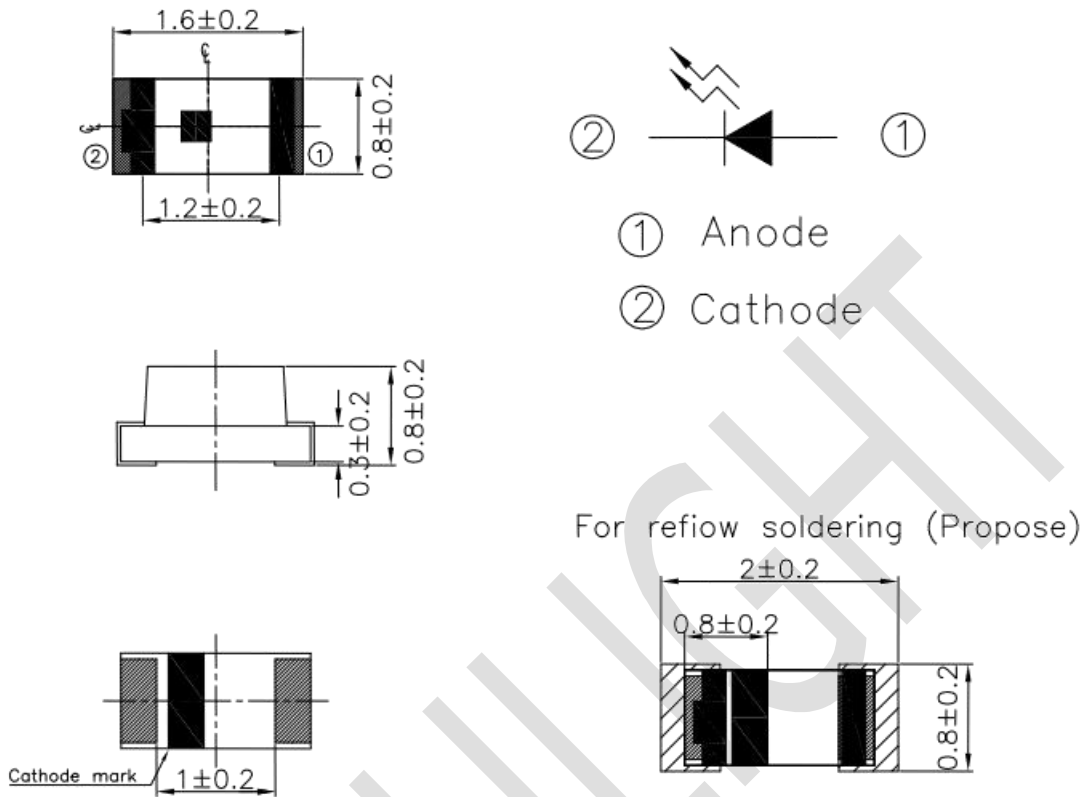
- Small double-end package
- Low forward voltage
- Good spectral matching to Si photo detector
- Package in 8mm tape on 7" diameter reel
- Pb free
- The product itself will remain within RoHS compliant version.
- Compliance with EU REACH

#### Applications

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



## Package Dimensions



- Notes:**
- All dimensions are in millimeters
  - Tolerances unless dimensions  $\pm 0.1$ mm
  - Suggested pad dimension is just for reference only  
Please modify the pad dimension based on individual need

## Rank

Parameter	Symbol	Condition	Min.	Max.	Unit
F	Ee	$I_F=20\text{mA}$	0.5	1.5	mW/sr
G	Ee	$I_F=20\text{mA}$	1.0	2.5	mW/sr



## Absolute Maximum Ratings (Ta=25°C)

Parameter	Symbol	Rating	Units
Continuous Forward Current	I <sub>F</sub>	65	mA
Reverse Voltage	V <sub>R</sub>	5	V
Operating Temperature	T <sub>opr</sub>	-25 ~ +85	°C
Storage Temperature	T <sub>stg</sub>	-40 ~ +85	°C
Soldering Temperature *1	T <sub>sol</sub>	260	°C
Power Dissipation at(or below) 25°C Free Air Temperature	P <sub>d</sub>	130	mW

Notes: \*1 Soldering time  $\leq$  5 seconds.

## Electro-Optical Characteristics (Ta=25°C)

Parameter	Symbol	Condition	Min.	Typ.	Max.	Units
Radiant Intensity	I <sub>e</sub>	I <sub>F</sub> =20mA	0.2	0.7		mW/sr
Peak Wavelength	$\lambda_p$	I <sub>F</sub> =20mA	--	940	--	nm
Spectral Bandwidth	$\Delta\lambda$	I <sub>F</sub> =20mA	--	50	--	nm
Forward Voltage	V <sub>F</sub>	I <sub>F</sub> =20mA	--	1.2	1.5	V
Reverse Current	I <sub>R</sub>	V <sub>R</sub> =5V	--	--	10	$\mu$ A
View Angle	2 $\theta$ 1/2	I <sub>F</sub> =20mA	--	150	--	deg



## Typical Electro-Optical Characteristics Curves

Fig.1 Forward Current vs. Ambient Temperature

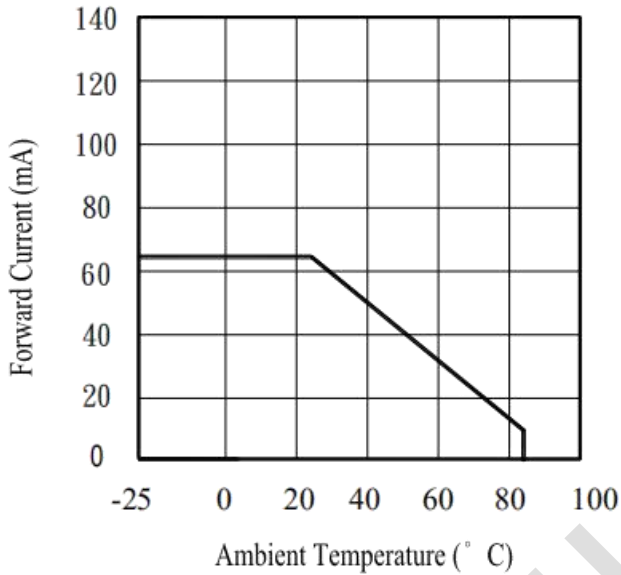


Fig.2 Spectral Distribution

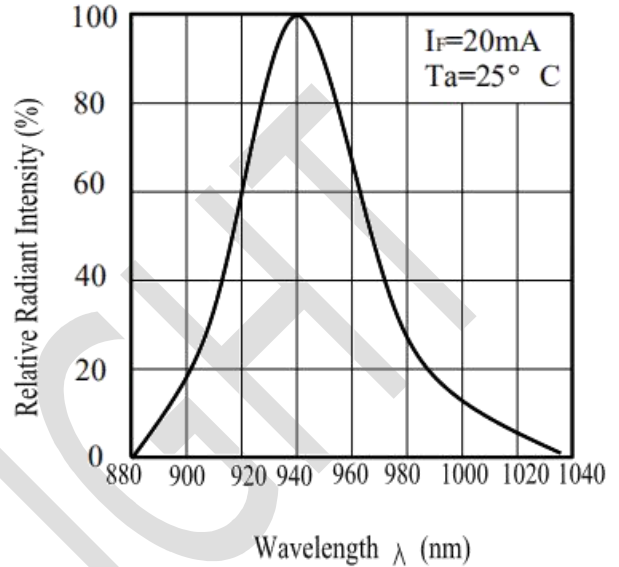


Fig.3 Forward Current vs. Forward Voltage

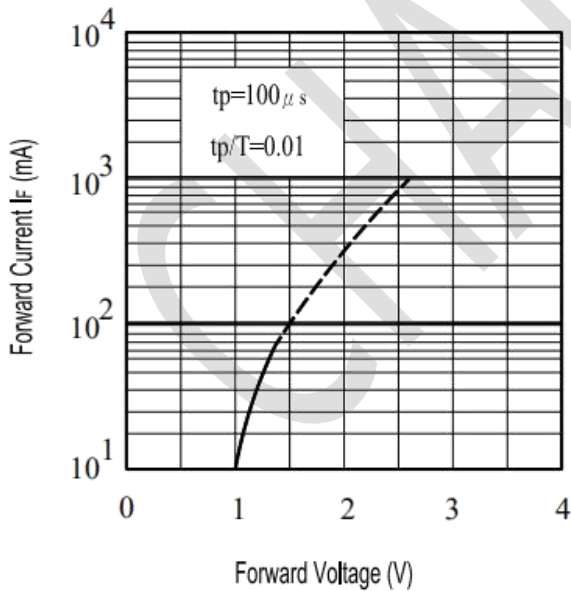
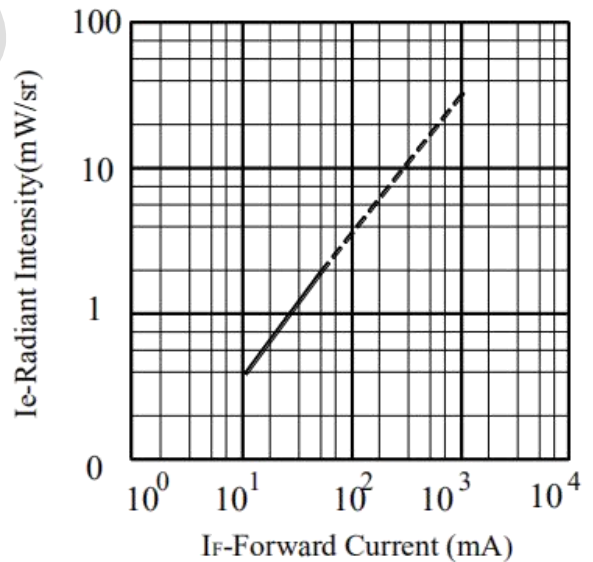


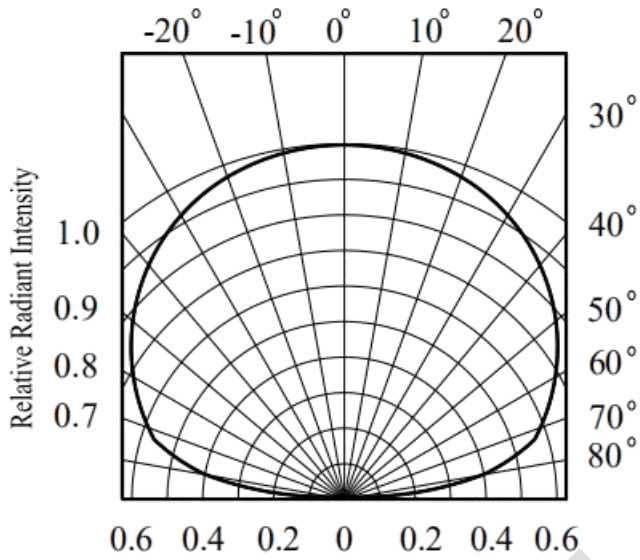
Fig.4 Relative Intensity vs. Forward Current





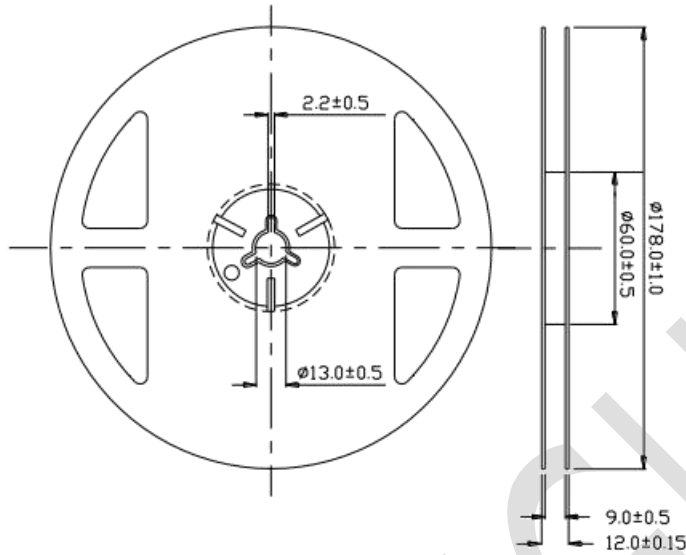
## Typical Electro-Optical Characteristics Curves

Fig.5 Relative Radiant Intensity vs. Angular Displacement



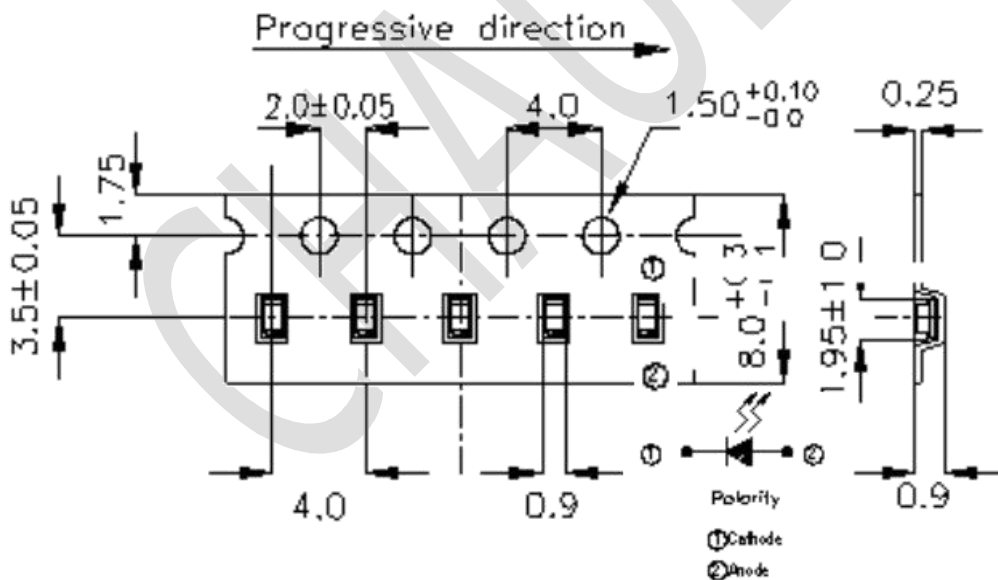


## Package Dimensions



**Note:** The tolerances unless mentioned are  $\pm 0.1$ mm, Unit: mm

Carrier Taping Dimensions: (Quantity: 3000PCS/Reel)



**Note:** The tolerances unless mentioned are  $\pm 0.1$ mm, Unit: mm