



ZIR053C

Technical Data Sheet

5mm Infrared LED



Descriptions

The ZIR053C is a high intensity diode , molded in a water clean plastic package. The device is spectrally matched with phototransistor , photodiode and infrared receiver module.

Features

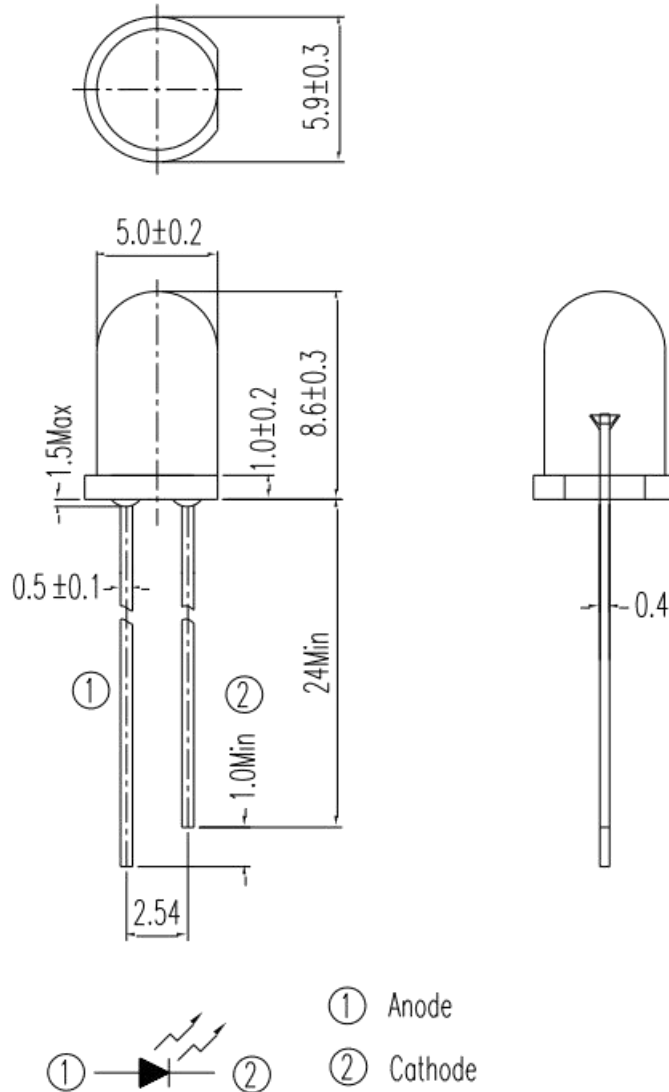
- High reliability
- High radiant intensity
- Peak wavelength $\lambda_p=940\text{nm}$
- Low forward voltage
- Pb.Free
- This product itself will remain within RoHS compliant version.

Applications

- Mouse
- Optoelectronic switch
- Copiers
- Scanners
- Amusement machines



Package Dimension



Notes:

1. All dimensions are in millimeters
2. Tolerances unless dimensions $\pm 0.3 \text{ mm}$
3. Lead spacing is measured where the lead emerge from the package



Absolute Maximum Ratings

Parameter (Ta=25°C)	Symbol	Ratings	Unit
Power Dissipation at(or below) 25 Free Air Temperature	Pd	150	mW
Reverse Voltage	V _R	5	V
Forward Current	I _F	100	mA
Peak Forward Current Pulse width ≤ 100μs,Duty cycle= 1%	I _{FP}	1	A
Operating Temperature	T _{opr}	-40~+85	°C
Storage Temperature	T _{stg}	-40~+100	°C
Lead Soldering Temperature (2mm form body for 5 seconds)	T _{sol}	260	°C

Electro-Optical Characteristics

Parameter (Ta=25°C)	Symbol	Condition	Min.	Typ.	Max.	Units
Radiant Intensity	E _e	I _F =20mA	--	30	--	mW/sr
Radiant Intensity	E _e	I _F =100mA PulseWidth ≤ 100μs ,Duty y ≤ 1%	--	38	--	mW/sr
Radiant Intensity	E _e	I _F =1A PulseWidth ≤ 100μs ,Duty y ≤ 1%.	--	450	--	mW/sr
Peak Wavelength	λ _p	I _F =20mA	--	940	--	nm
Spectral Bandwidth	Δλ	I _F =20mA	--	45	--	nm
Forward Voltage	V _F	I _F =20mA	--	1.2	1.5	V
Reverse Current	I _R	V _R =5V	--	--	10	μA
View Angle	2θ1/2	I _F =20mA	--	20	--	deg



Rank

Parameter	Symbol	Condition	Min.	Max.	Unit
Q	Ee	$I_F=20\text{mA}$	21.0	34.0	mW/sr
R	Ee	$I_F=20\text{mA}$	30.0	48.0	mW/sr

Note:

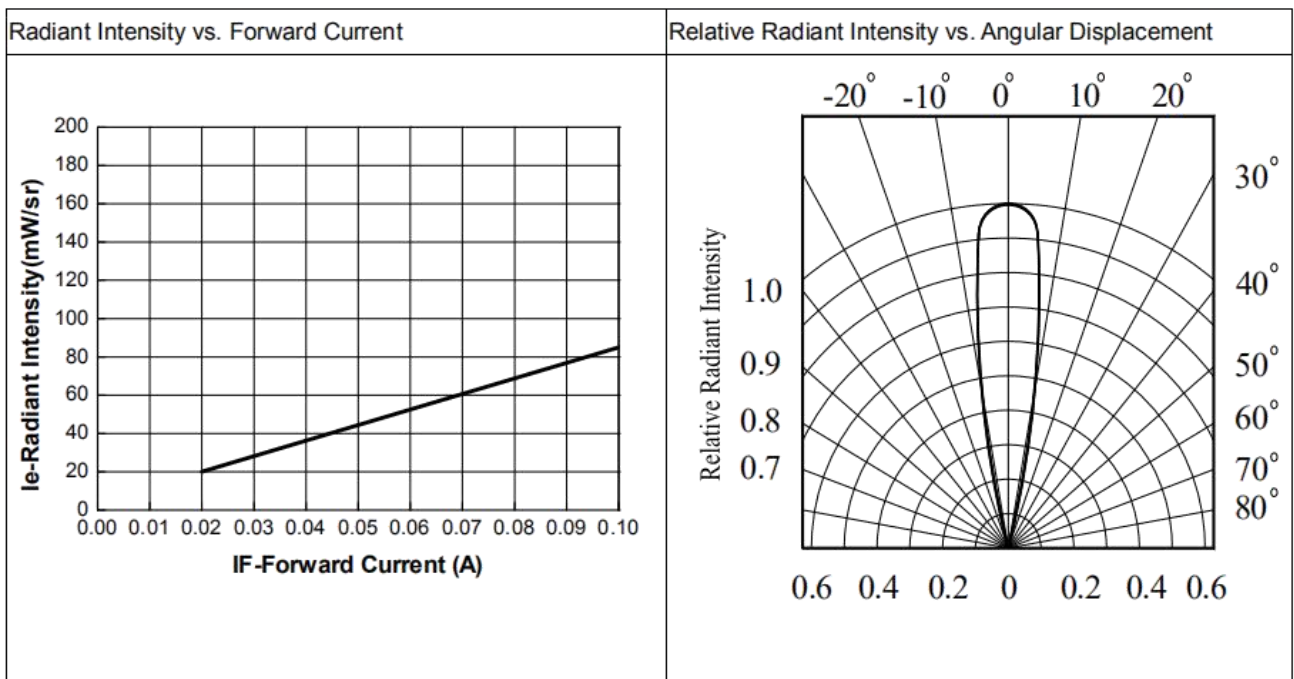
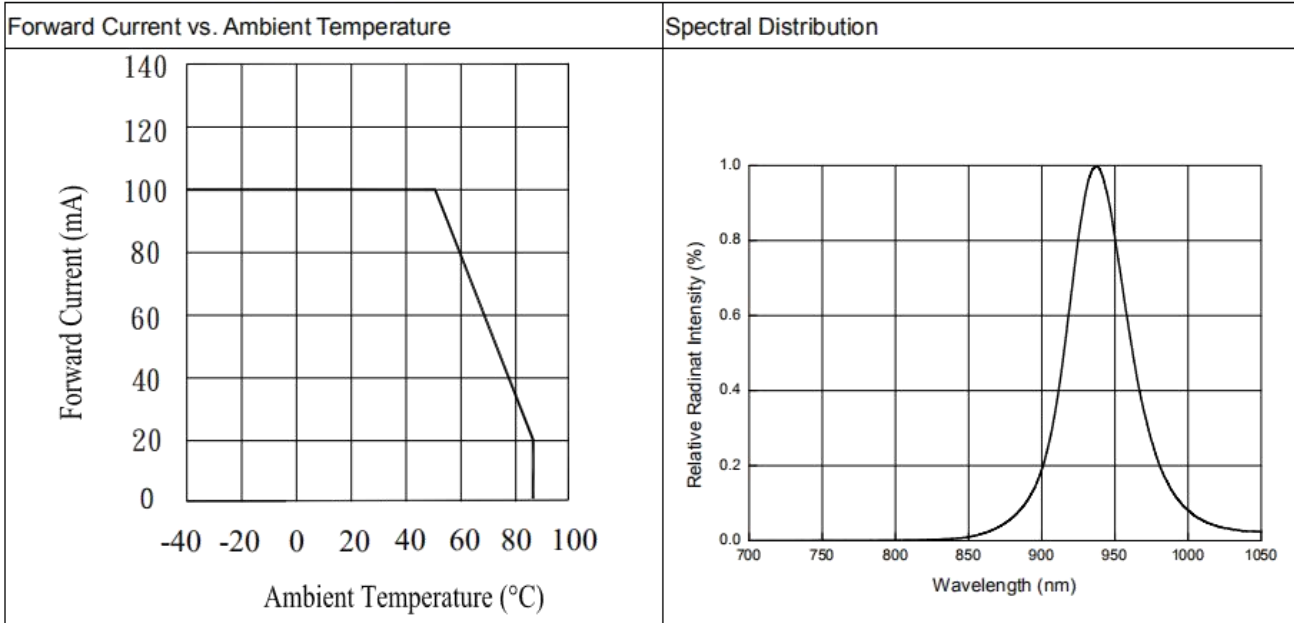
*Measurement Uncertainty of Forward Voltage: $\pm 0.1\text{V}$

*Measurement Uncertainty of Luminous Intensity: $\pm 10\%$

*Measurement Uncertainty of Dominant Wavelength $\pm 1.0\text{nm}$



Typical Electrical/Optical/Characteristics Curves





Packing Quantity Specification

1.500PCS/1Bag, 5Bags/1Box

2.10Boxes/1Carton

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