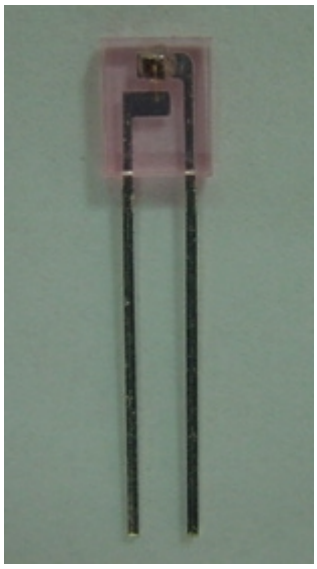
Technical Data Sheet
1.5mm Side Looking Infrared Emitting Diode

SIR908-7P-R

Features

- Low forward voltage
- Peak wavelength λp=875nm
- High reliability



Descriptions

The **SIR908-7P-R** is a GaAlAs infrared emitting diode. The miniature side-facing device has a chip that emits radiation from the side of the pink package.

Applications

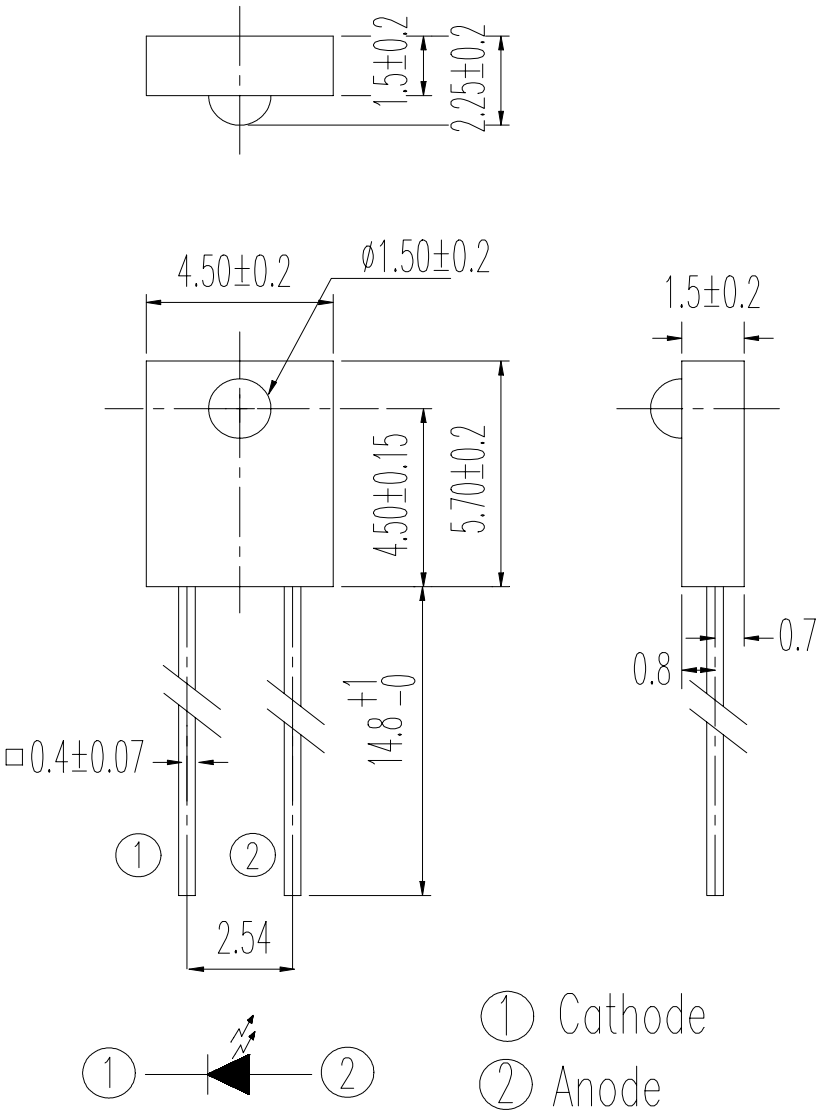
- Optoelectronic switch
- Photo interrupter

Device Selection Guide

LED Part No.	Chip Material	Lens Color
SIR	GaAlAs	PINK

Device No:DIS-090-078

Package Dimensions



Notes: 1.All dimensions are in millimeters
2.Tolerances unless dimensions ± 0.1mm

Device No:DIS-090-078

Absolute Maximum Ratings (Ta=25℃)

Parameter	Symbol	Rating	Units
Continuous Forward Current	I_F	60	mA
Peak Forward Current(*)	I_{FP}	1.0	A
Reverse Voltage	V_R	5	V
Operating Temperature	T_{opr}	-25 ~ +85	℃
Storage Temperature	T_{stg}	-40 ~ +85	℃
Soldering Temperature	T_{sol}	260	℃
Power Dissipation at(or below) 25℃ Free Air Temperature	P_d	150	mW

Notes: *1: tw=100 μSEC., Duty cycle=1%

Electro-Optical Characteristics (Ta=25℃)

Parameter	Symbol	Condition	Min.	Typ.	Max.	Units
Collector current	$I_{C(ON)}$	V_{CE}=3.5V,I_F=4mA	300	--	1300	μA
Peak Wavelength	λp	I_F=20mA	--	875	--	nm
Spectral Bandwidth	Δλ	I_F=20mA	--	50	--	nm
Forward Voltage	V_F	I_F =20mA	--	1.3	1.6	V
		I_F=100mA,tp=100μs, t_P/T=0.01	--	1.4	1.8	
		I_F=1A,tp=100μs, t_P/T=0.01	--	2.6	4.0	
Reverse Current	I_R	V_R=5V	--	--	10	μA
View Angle	2θ 1/2	I_F=20mA	--	50	--	deg

Device No:DIS-090-078

Typical Electro-Optical Characteristics Curves

Fig. 1 Forward Current vs. Ambient Temperature

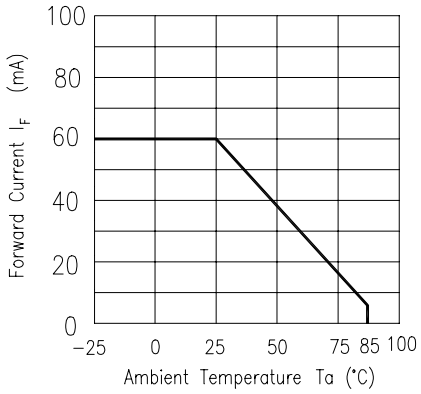


Fig. 2 Spectral Distribution

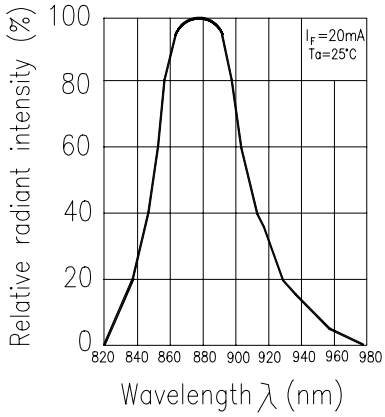


Fig. 3 Peak Emission Wavelength vs. Ambient Temperature

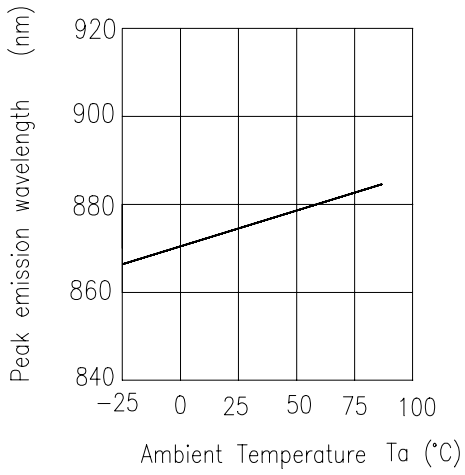


Fig. 4 Forward Current vs. Forward Voltage

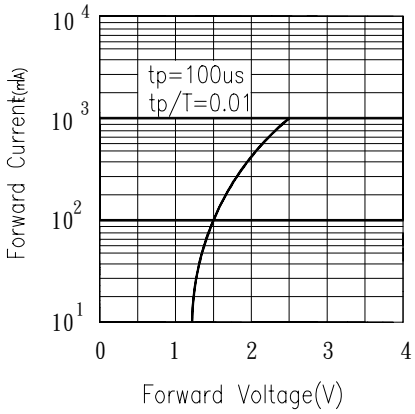


Fig. 5 Forward Current vs. Ambient Temperature

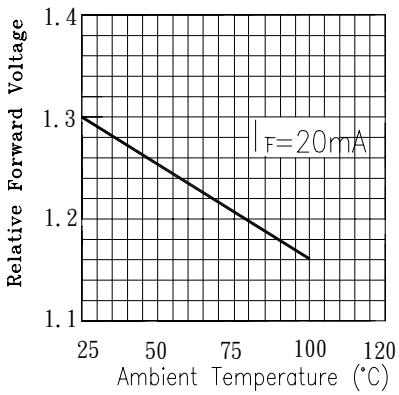
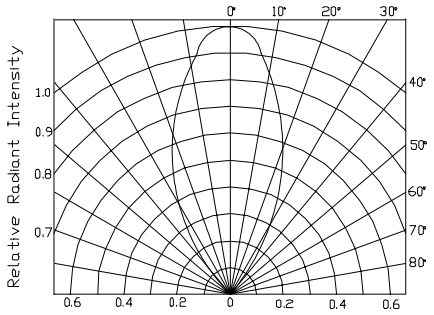


Fig. 6 Relative Radiant Intensity vs. Angular Displacement



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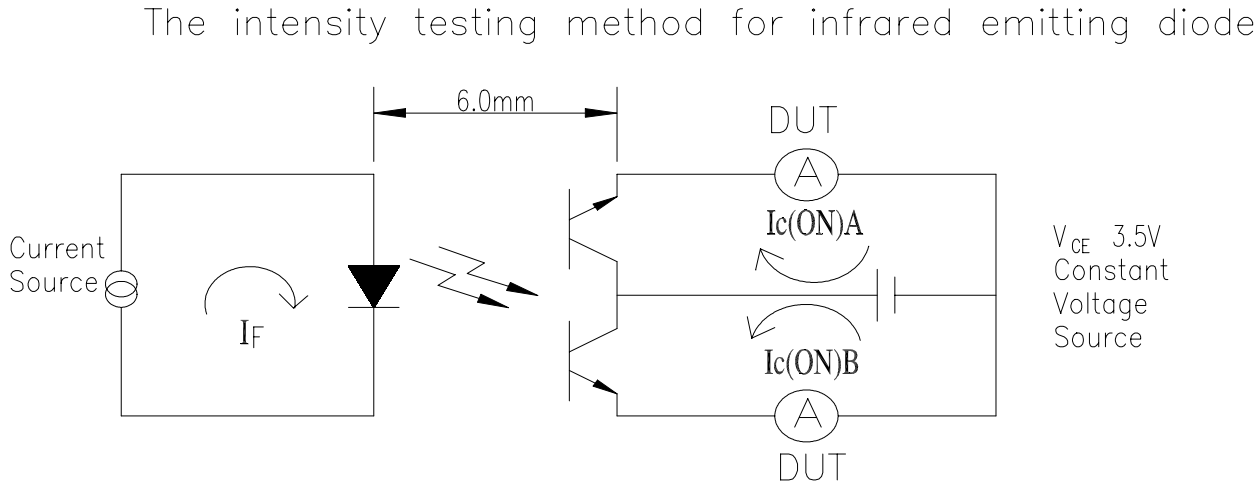
Test Method For $I_{C(ON)}$:

Condition: I_F=4mA



To Distinguish Intensity:

Condition: V_{CE}=3.5V, I_F=4mA

UNIT: μA

Bin Number	7-2	7-1	6-2	6-1
Min	300	340	450	630
Max	450	560	770	1300

Device No:DIS-090-078

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 Sizes	Failure Judgment Criteria	Ac/Re
1	Solder Heat	TEMP.：260℃± 5℃	5secs	22pcs	$I_R \geqq U \times 2$	0/1
2	Temperature Cycle	H : +85℃ 30mins ↕ 5mins L : -55℃ 30mins	50 Cycles	22pcs	$I_{C(ON)} \leqq L \times 0.8$ $V_F \geqq U \times 1.3$	0/1
3	Thermal Shock	H :+100℃ 5mins ↕ 10secs L :-10℃ 5mins	50 Cycles	22pcs	U：Upper Specification Limit L：Lower Specification Limit	0/1
4	High Temperature Storage	TEMP.：+100℃	1000 hrs	22pcs		0/1
5	Low Temperature Storage	TEMP.：-55℃	1000 hrs	22pcs		0/1
6	DC Operating Life	I_F=20mA	1000 hrs	22pcs		0/1
7	High Temperature/ High Humidity	85℃ / 85% R.H	1000 hrs	22pcs		0/1

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