LG-ITR2C-262519

DATA SHEET

SPEC.NO.: SZ18080413
DATE: 2022/03/04
REV. A/1

Approved By: Checked By: Prepared By:

Features

- Fast response time
- High analytic
- Cut-off visible wavelength λp=940nm
- High sensitivity
- Pb free
- The product itself will remain within RoHS compliant version

Descriptions

The LG-ITR2C-262519 consist of an infrared emitting diode and an NPN silicon phototransistor, encased side-by-side on converging optical axis in a black Thermoplastic Housing The phototransistor receives radiation from the IRED only .This is the normal Situation. But when an object is in between , phototransistor could not receives the radiation.

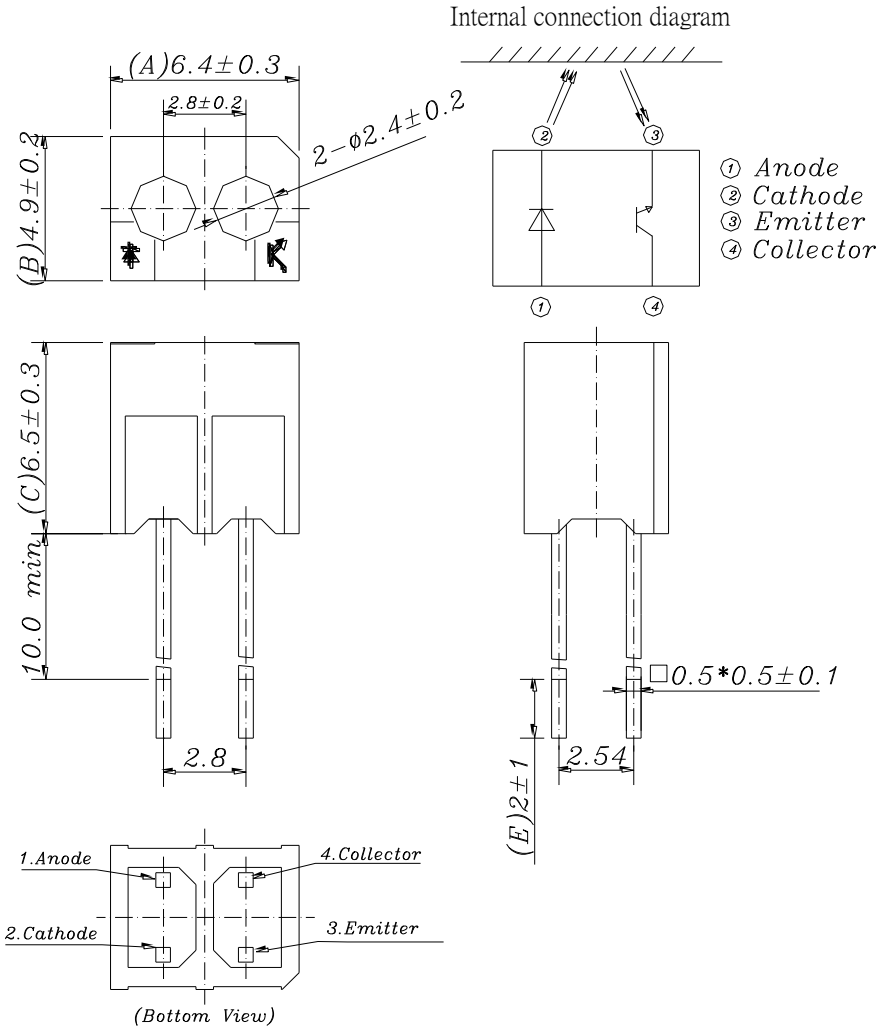
Applications

- Mouse Copier
- Switch Scanner
- Floppy disk driver
- Non-contact Switching
- For Direct Board

Device Selection Guide

Device No.	Chip Material	LENS COLOR
IR	GaAlAs	Water Clear
PT	Silicon	Black

Package Dimensions



Notes:

1.All dimensions are in millimeters.

2.Tolerances unless dimensions ±0.25mm.

3.Lead spacing is measured where the lead emerge from the package.

Recommended soldering conditions:

	Wave Soldering (Pb Free)	Soldering Iron
Pre-heat Temperature	100℃ Max.	---
Pre-heat Time	60sec. Max.	---
Peak Temperature	260℃ Max.	300℃ Max.
Dwell Time	5sec. Max. (one time only)	3sec. Max. (one time only)

Notes:

Excessive soldering temperature and/or time might result in deformation of the LED lens or catastrophic failure of the LED. IR reflow is not suitable process for the LED lamp product.

Absolute Maximum Ratings (Ta=25℃)

Parameter		Symbol	Ratings	Unit
Input	Power Dissipation at(or below) 25℃ Free Air Temperature	P_d	75	mW
	Reverse Voltage	V_R	5	V
	Forward Current	I_F	50	mA
	Peak Forward Current(*1) Pulse width ≦100μs, Duty cycle=1%	I_{FP}	1	A
Output	Collector Power Dissipation	P_C	75	mW
	Collector Current	I_C	20	mA
	Collector-Emitter Voltage	V_{CEO}	30	V
	Emitter-Collector Voltage	V_{ECO}	5	V
Operating Temperature		T_{opr}	-25~+85	℃
Storage Temperature		T_{stg}	-40~+85	℃
Lead Soldering Temperature (*2) (1/16 inch from body for 5 seconds)		T_{sol}	260	℃

(*1) tw =100 μsec., T =10 msec. (*2) t =5 Sec.

Electro-Optical Characteristics (Ta=25℃)

Parameter		Symbol	Min.	Typ.	Max.	Unit	Condition
Input	Forward Voltage	V_F	---	1.2	1.6	V	I_F=20mA
	Reverse Current	I_R	---	---	10	μA	V_R=5V
	Peak Wavelength	λ_P	--	940	---	nm	I_F=20mA
Output	Collector Dark Current	I_{CEO}	---	---	100	nA	V_{CE}=10V, E_e=0mW/cm^2
	C-E Saturation Voltage	V_{CE}(sat)	---	---	0.4	V	I_C=0.5mA E_e=10mW/cm^2
	Collector Current	I_C(ON)	0.2	0.5	---	mA	V_{CE}=5V I_F=20mA
Transfer Characteristic	Rise time	t_r	---	15	---	μsec	V_{CE}=5V I_C=1mA R_L=1KΩ
	Fall time	t_f	---	15	---	μsec	

■ Typical Electrical/Optical/Characteristics Curves for IR

Fig.1 Forward Current vs. Ambient Temperature

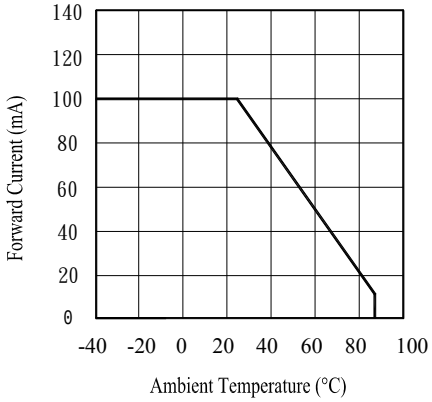


Fig.2 Spectral Distribution

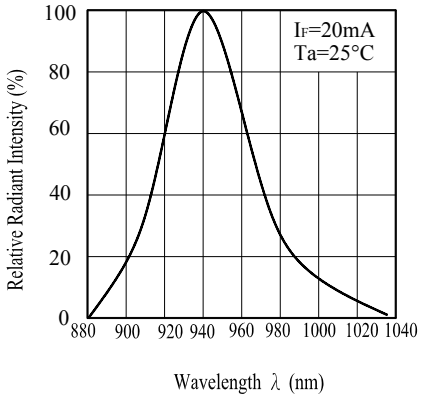


Fig.3 Relative Intensity vs. Forward Current

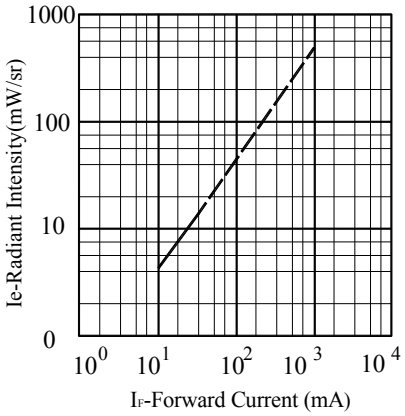


Fig.4 Relative Radiant Intensity vs. Angular Displacement

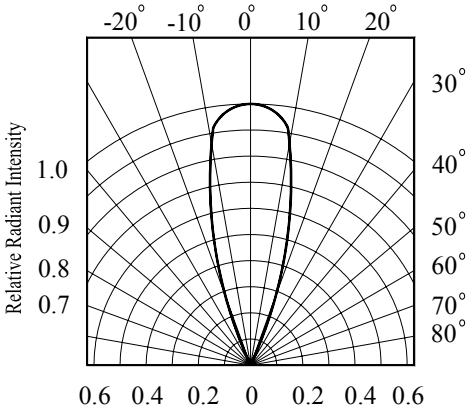


Fig.5 Relative Intensity vs. Ambient Temperature(°C)

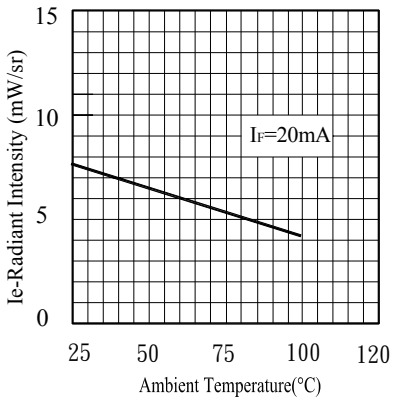
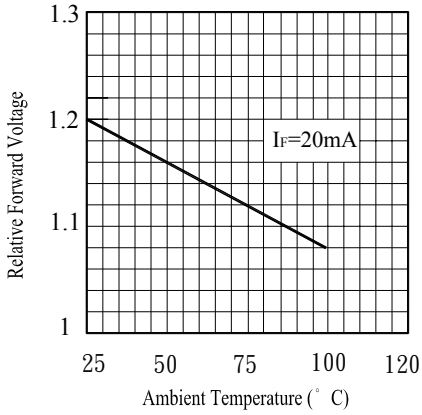


Fig.6 Forward Current vs. Ambient Temperature(°C)



■ Typical Electrical/Optical/Characteristics Curves for PT

Fig.1 Collector Power Dissipation vs. Ambient Temperature

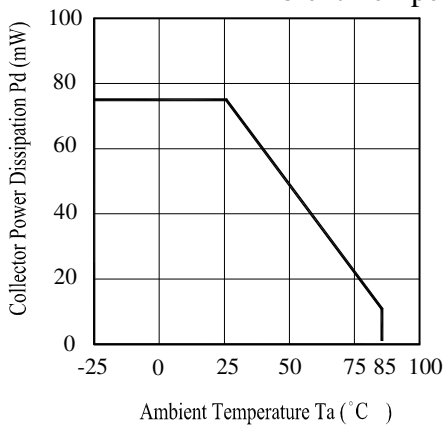


Fig.2 Spectral Sensitivity

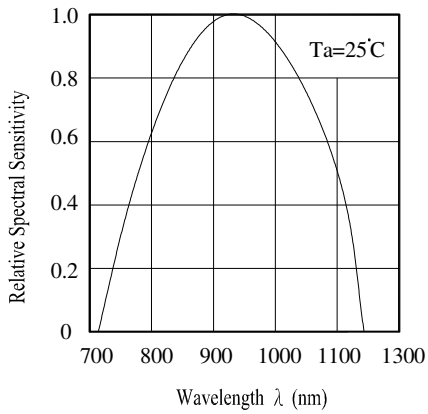


Fig.3 Relative Collector Current vs. Ambient Temperature

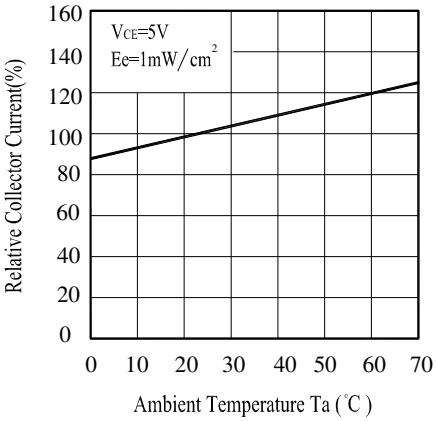


Fig.4 Collector Current vs. Irradiance

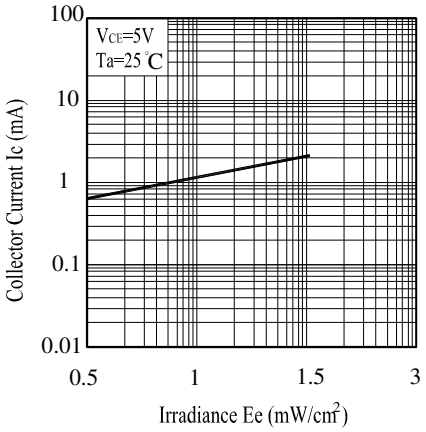


Fig.5 Collector Dark Current vs. Ambient Temperature

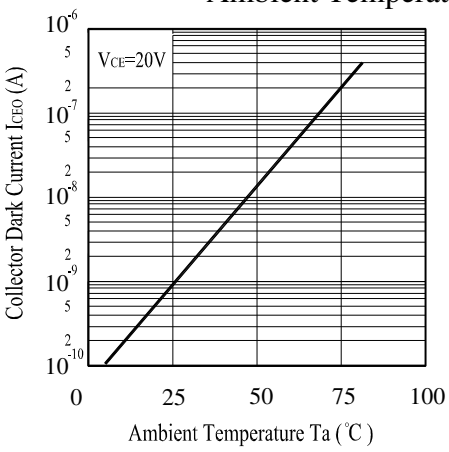


Fig.6 Collector Current vs. Collector-Emitter Voltage