

LG-ITR2C-502725-3.1

DATA SHEET

SPEC. NO. : SZ18080411
DATE : 2025/07/07
REV. : B/3

Approved By:

Checked By:

Prepared By:

■ Features

- Fast response time
- High analytic
- Cut-off visible wavelength
- $\lambda_p=940\text{nm}$
- High sensitivity
- Pb free
- The product itself will remain within RoHS compliant version

■ Description

- LG-ITR2C-502725-3.1 consist of an infrared emitting diode and a silicon phototransistor, encased side-by-side on converging optical axis in a black thermoplastic housing.
- The phototransistor receives radiation from the IR LED only. This is the normal situation.
- But when an object is in between, phototransistor could not receives the radiation.

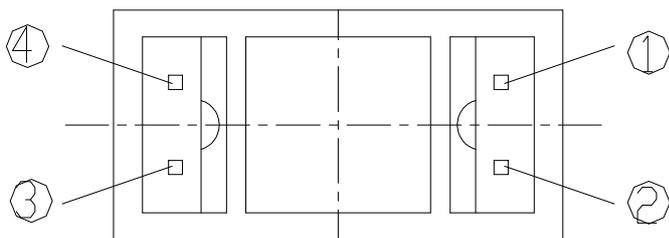
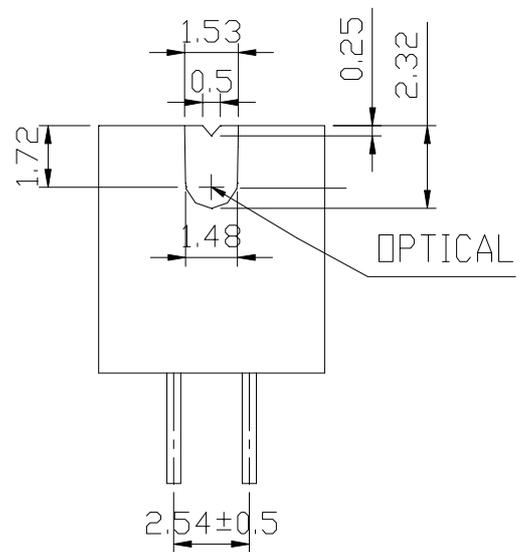
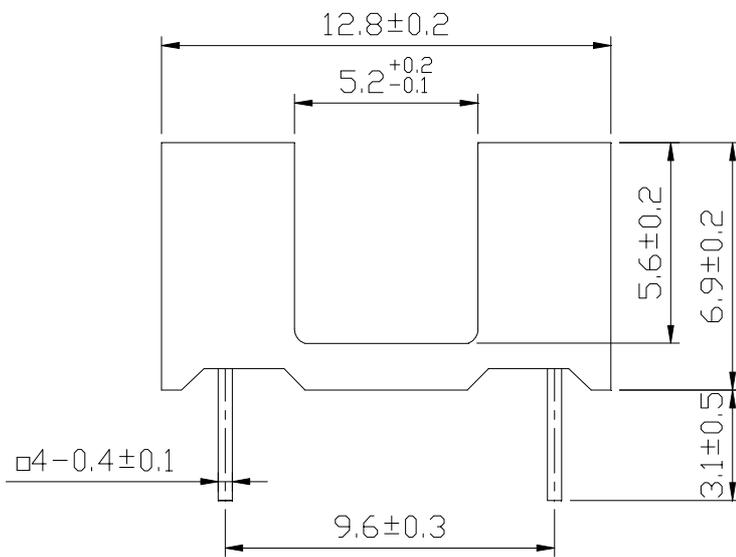
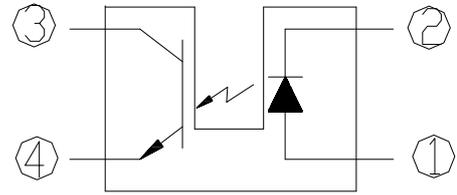
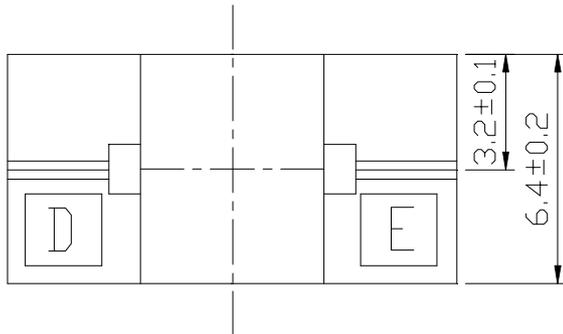
■ Applications

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

■ Device Selection Guide

Device No.	Chip Material	Lens Color
IR	GaAs	Water Clear
PT	Silicon	Water Clear

Package Dimensions



- ① Anode
- ② Cathode
- ③ Collector
- ④ Emitter

Notes:

1. All dimensions are in millimeters.
2. Tolerance is $\pm 0.20\text{mm}$ unless otherwise noted.
3. Lead spacing is measured where the leads emerge from the package.

■ Absolute Maximum Ratings (Ta=25°C)

Parameter		Symbol	Ratings	Unit
Input	Power Dissipation	Pd	75	mW
	Reverse Voltage	V _R	5	V
	Forward Current	I _F	50	mA
	Peak Forward Current (*1)	I _{FP}	500	mA
Output	Collector Power Dissipation	P _C	75	mW
	Collector Current	I _C	20	mA
	Collector-Emitter Breakdown Voltage	BV _{CEO}	30	V
	Emitter-Collector Breakdown Voltage	BV _{ECO}	5	V
Operating Temperature		Topr	-20 ~ 65	°C
Storage Temperature		Tstg	-30 ~ 70	°C
Lead Soldering Temperature (*2) (1/16 inch form body for 5 seconds)		Tsol	260	°C

(*1) Pulse width ≤ 100μs, Duty cycle ≤ 1%

(*2) Wave soldering, t = 5sec.

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

Parameter		Symbol	Min.	Typ.	Max.	Unit	Conditions
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	Dark Current	I _{CEO}	---	---	100	nA	V _{CE} =20V Ee=0mW/cm ²
	C-E Saturation Voltage	V _{CE(sat)}	---	---	0.4	V	I _C =2mA Ee=1mW/cm ²
Transfer Characteristics	Collect Current	I _{C(ON)}	2.5	8.5	---	mA	V _{CE} =5V I _F =20mA
	Rise time	t _r	---	15	---	μs	V _{CE} =5V I _C =1mA R _L =1KΩ
	Fall time	t _f	---	15	---	μs	

■ Typical Electrical/Optical/Characteristics Curves for IR

Fig.1 Forward Current vs. Ambient Temperature

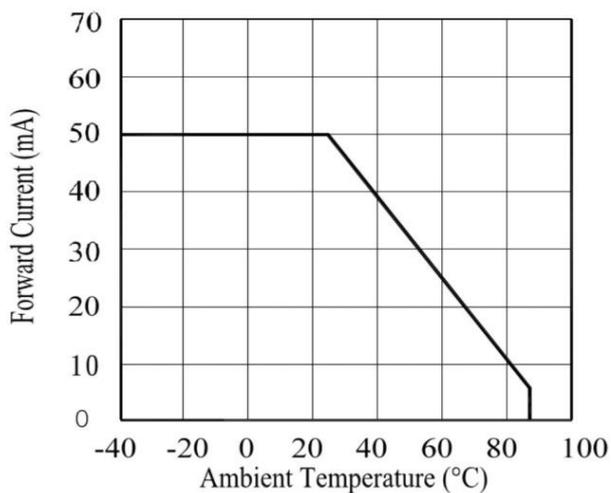


Fig.2 Spectral Distribution

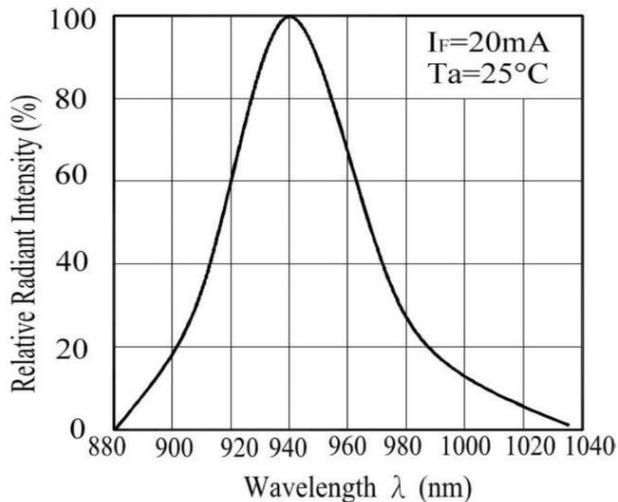


Fig.3 Forward Current vs. Forward Voltage

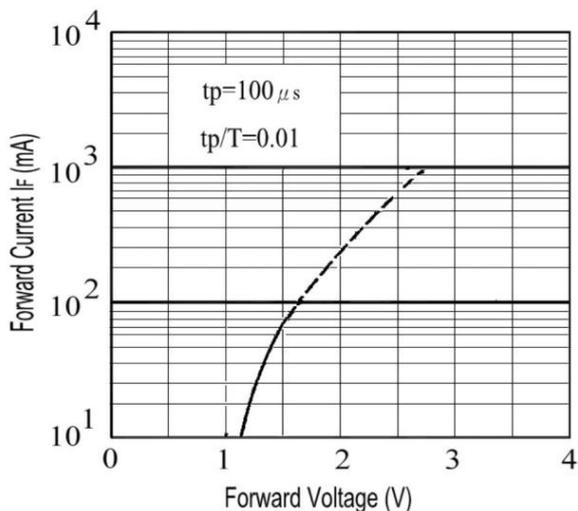
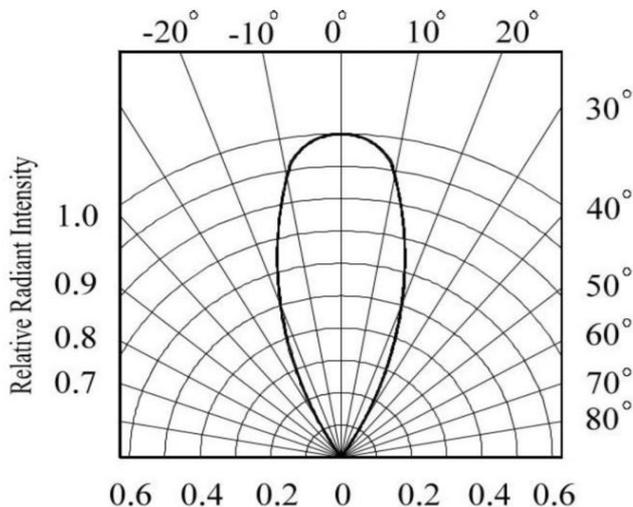


Fig. 4 Relative Radiant Intensity vs. Angular Displacement



Typical Electrical/Optical/Characteristics Curves for PT

Fig.1 Spectral Sensitivity

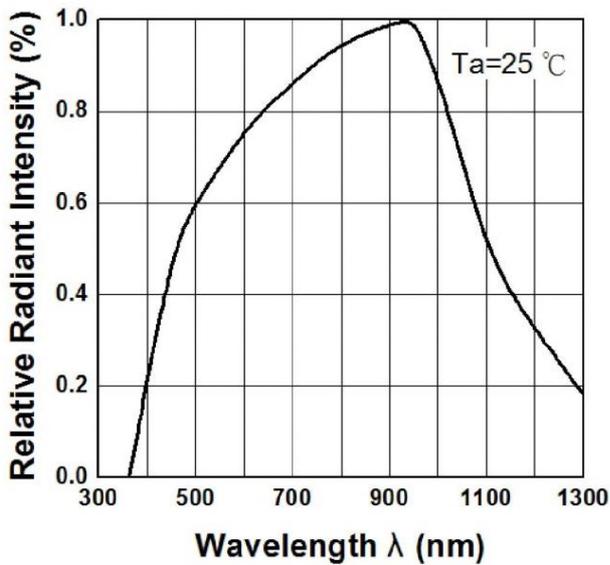


Fig.2 Collector Current vs. Irradiance

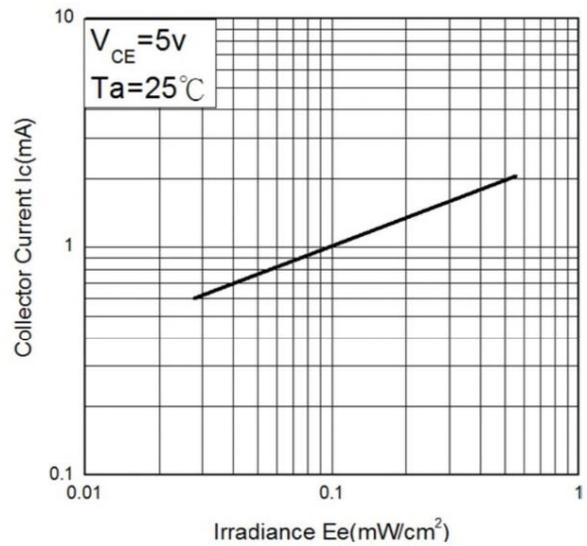
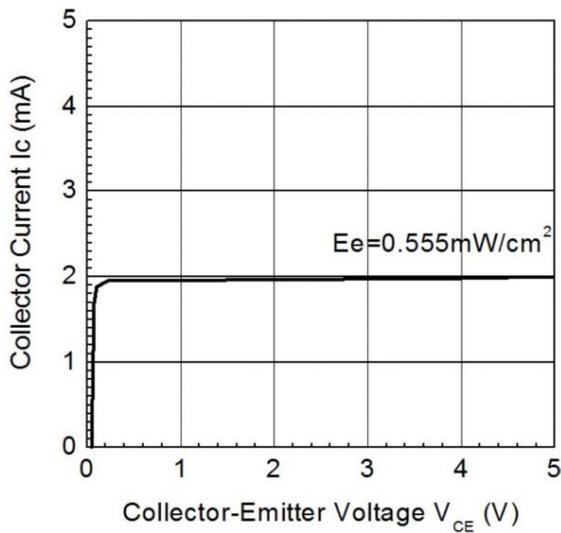
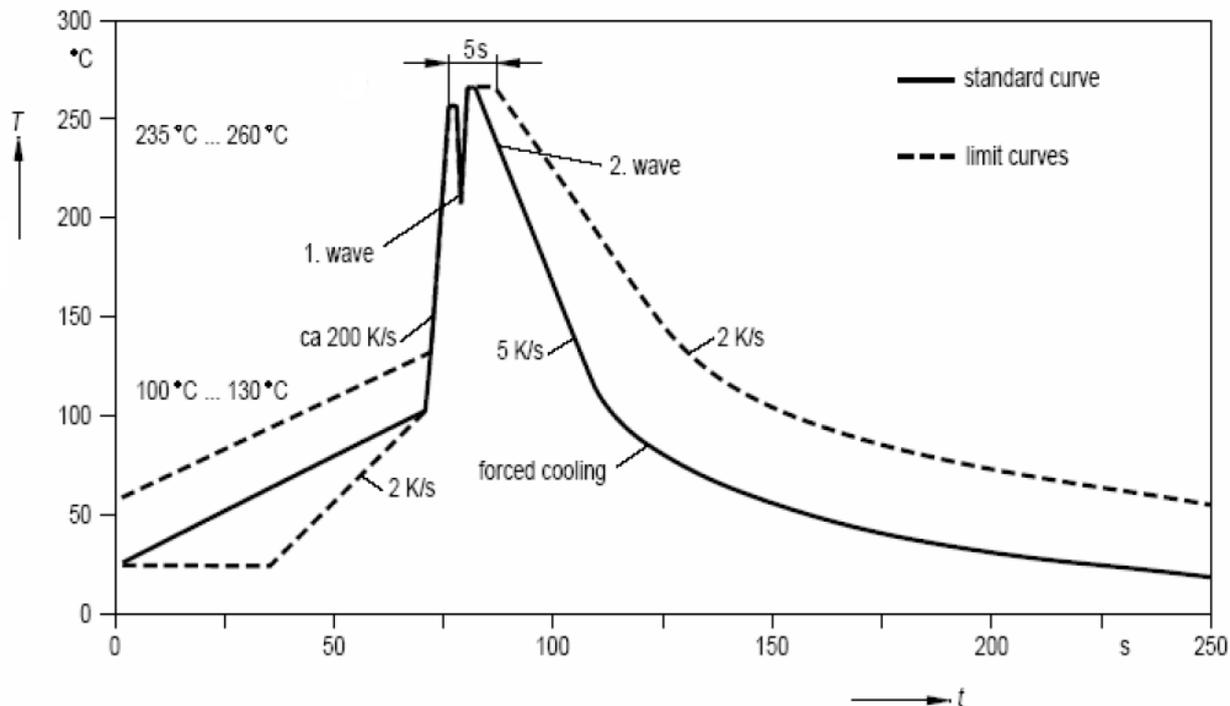


Fig.3 Collector Current vs. Collector-Emitter Voltage

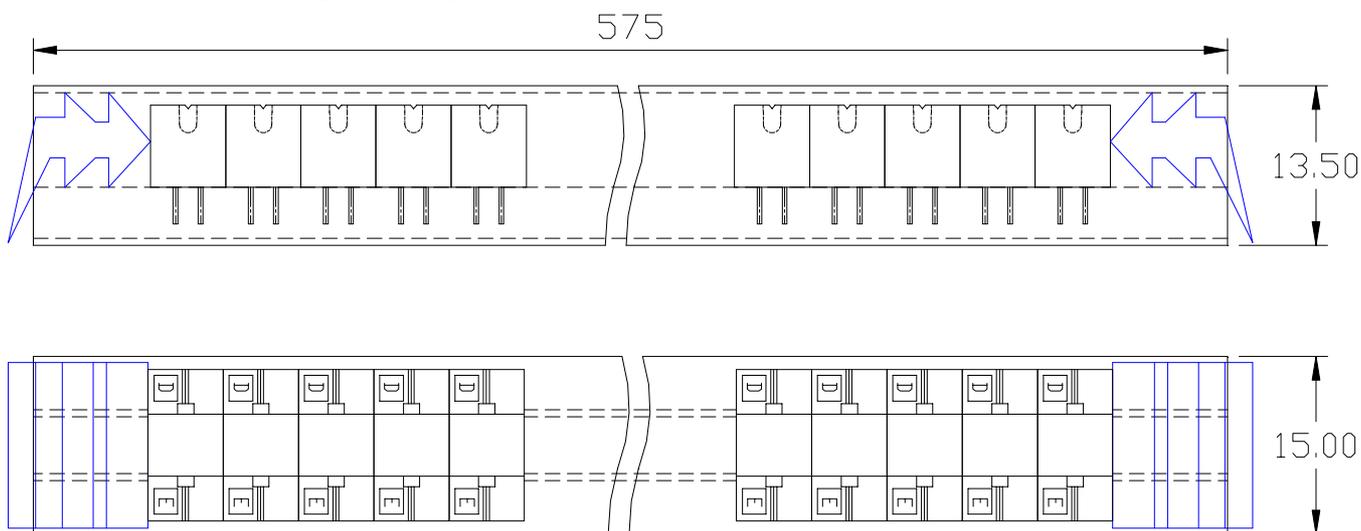


Recommended Wave Soldering Profile



Packing Specification

1、 Tube Packing (85PCS/per tube, Unit=mm)



2、 Box Packing

Inner box volume (Tube / Box)	Out carton volume (Box / Carton)
110	4