

ROI

No./

■ Features

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



■ Descriptions

The LG-ITR2C-502725 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	Water Clear

Absolute Maximum Ratings (Ta=25°C)

Parameter		Symbol	Rating	Unit
I	Peak Diode Current (Pulse) 25°C Average	I_D	75	W
	Reverse Voltage	V_R	5	V
	Average Current	I	50	A
	Peak Average Current (*1) Pulse width $\leq 100\mu s$, Duty cycle = 1%	I_P	1	A
O	Collector Diode Current	I_C	75	W
	Collector Current	I_C	20	A
	Collector-Forward Voltage	V_{CFO}	30	V
	Forward-Collector Voltage	V_{FCO}	5	V
Operating Temperature		T	-25 +85	
Storage Temperature		T_g	-40 +85	
Lead Soldering Temperature (*2) (1/16 inch lead)		T	260	

(*1) $I = 100\mu s$, $T = 10\mu s$. (*2) $t = 5\text{ Sec}$.

Electro-Optical Characteristics (Ta=25°C)

Parameter		Symbol	Wavelength	Wavelength	Wavelength	Unit	Condition
I	Average Voltage	V	---	1.2	1.6	V	$I = 20\text{ A}$
	Reverse Current	I_R	---	---	10	A	$V_R = 5\text{ V}$
	Peak Wavelength	λ_p	---	940	---		$I = 20\text{ A}$
O	Collector Dark Current	I_{CFO}	---	---	100	A	$V_{CF} = 10\text{ V}$, $I_E = 0\text{ W/C}^2$
	C-F Saturation Voltage	$V_{CF}(a)$	---	---	0.4	V	$I_C = 0.5\text{ A}$, $I_E = 10\text{ W/C}^2$
	Collector Current	$I_C(O)$	1.0	13.8	---	A	$V_{CF} = 5\text{ V}$, $I = 20\text{ A}$
T a f e Characteristic	Rise Time		---	15	---	ns	$V_{CF} = 5\text{ V}$
	Fall Time	t_f	---	15	---	ns	$I_C = 1\text{ A}$, $R = 1$

■ Typical Electrical/Optical/Characteristics Curves for PT

Fig.1 Spectral Sensitivity

Fig.2 Collector Current vs. Irradiance

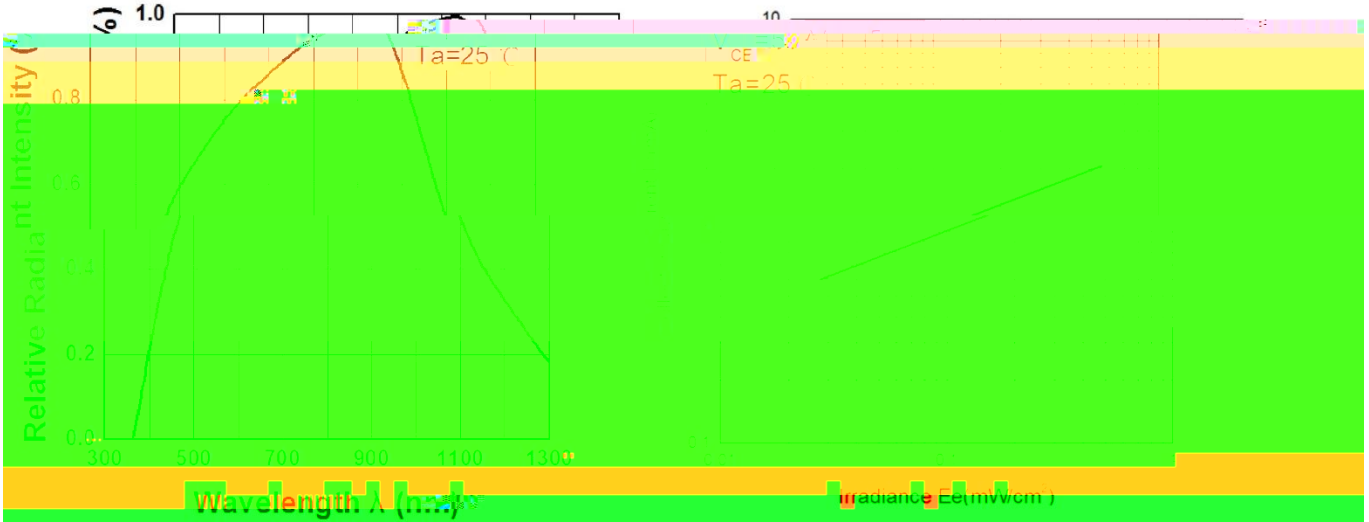


Fig.3 Collector Current vs. Collector-Emitter Voltage

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