

LG-ITR2C-504023

DATA SHEET

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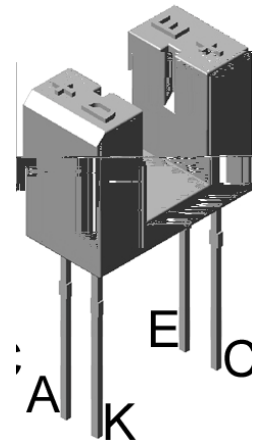
Prepared By:

■ 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-504023 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	Ratings	Unit
Input	Power Dissipation at(or below) 25°C Free Air Temperature	Pd	75	mW
	Reverse Voltage	V _R	5	V
	Forward Current	I _F	50	mA
	Peak Forward Current (*1) Pulse width ≤ 100 μs, Duty cycle=1%	I _{FP}	1	A
	Collector Power Dissipation	P _C	100	mW
Output	Collector Current	I _C	50	mA
	Collector-Emitter Voltage	B V _{CEO}	30	V
	Emitter-Collector Voltage	B V _{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) $t_w=100 \mu \text{sec.}$, $T=10 \text{msec.}$ (*2) $t=5 \text{Sec}$

Electro-Optical Characteristics (Ta=25°C)

Parameter		Symbol	Min.	Typ.	Max.	Unit	Conditions
Input	Forward Voltage	V _{F1}	---	1.2	1.6	V	I _F =20mA
		V _{F2}	---	1.4	1.85		I _F =100mA, tp=100 μs, tp/T=0.01
		V _{F3}	---	2.6	4.0		I _F =1A, tp=100 μs, tp/T=0.01
	Reverse Current	I _R	---	---	10	μA	V _R =5V
	Peak Wavelength	λ _p	---	940	---	nm	I _F =20mA
	View Angle	2θ1/2	---	60	---	Deg	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)}	0.7	---	---	mA	V _{CE} =5V, I _F =20mA
	Rise time	t _r	---	15	---	μsec	V _{CE} =5V
	Fall time	t _f	---	15	---	μsec	I _C =1mA, R _L =1KΩ

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