



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



Contact us

Tel: +86-755-8981 8866 Fax: +86-755-8427 6832

Email & Skype: info@chipsmall.com Web: www.chipsmall.com

Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China



Photointerrupter, double-layer mold type

RPI-243

The RPI-243 is a compact, double-layer mold photointerrupter.

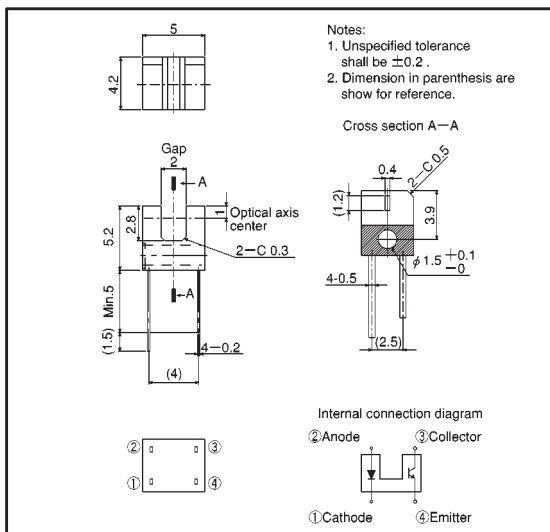
●Applications

Floppy disk drives
Printers
CD-ROM

●Features

- 1) Compact package based on the double-mold method.
- 2) High resolution (slit width = 0.4 mm).
- 3) Gap between emitter and detector is 2.0 mm.

●External dimensions (Units: mm)



●Absolute maximum ratings (Ta = 25°C)

Parameter		Symbol	Limits	Unit
Input(LED)	Forward current	I_F	50	mA
	Reverse voltage	V_R	5	V
	Power dissipation	P_D	80	mW
Output (photo-transistor)	Collector-emitter voltage	V_{CEO}	30	V
	Emitter-collector voltage	V_{ECO}	4.5	V
	Collector current	I_C	30	mA
	Collector power dissipation	P_C	80	mW
Operating temperature		T_{opr}	$-25 \sim +85$	°C
Storage temperature		T_{stg}	$-30 \sim +100$	°C

●Electrical and optical characteristics (Ta = 25°C)

	Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Input charac- teristics	Forward voltage	V_F	—	1.3	1.6	V	$I_F=50\text{mA}$
	Reverse current	I_R	—	—	10	μA	$V_R=5\text{V}$
Output charac- teristics	Dark current	I_{CEO}	—	—	0.5	μA	$V_{CE}=10\text{V}$
	Peak sensitivity wavelength	λ_P	—	800	—	nm	—
Transfer charac- teristics	Collector current	I_C	0.5	—	—	mA	$V_{CE}=5\text{V}, I_F=20\text{mA}$
	Collector-emitter saturation voltage	$V_{CE(\text{sat})}$	—	—	0.4	V	$I_F=20\text{mA}, I_C=0.3\text{mA}$
	Response time	$t_r \cdot t_f$	—	10	—	μs	$V_{CC}=5\text{V}, I_F=20\text{mA}, R_L=100\Omega$

●Electrical and optical characteristic curves

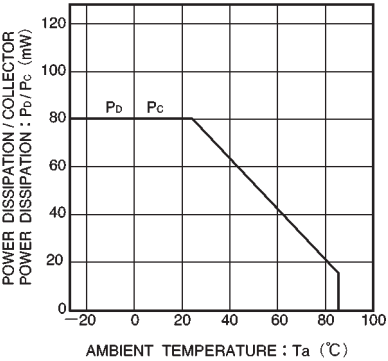


Fig.1 Power dissipation / collector power dissipation vs. ambient temperature

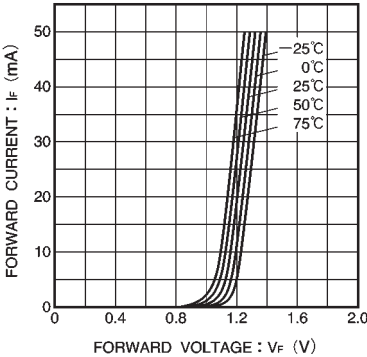


Fig.2 Forward current vs. forward voltage

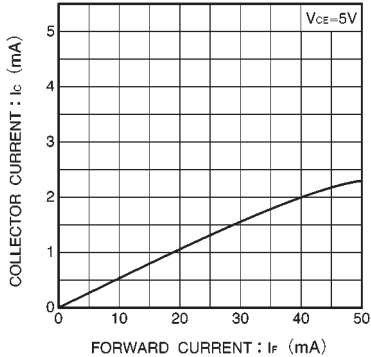


Fig.3 Collector current vs. forward current

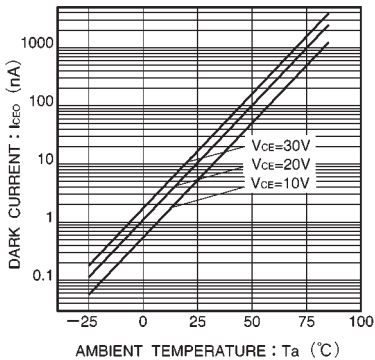


Fig.4 Dark current vs. ambient temperature

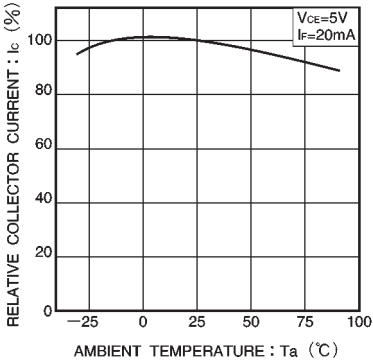


Fig.5 Relative output vs. ambient temperature

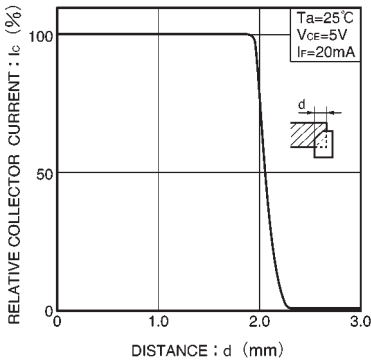


Fig.6 Relative output vs. distance

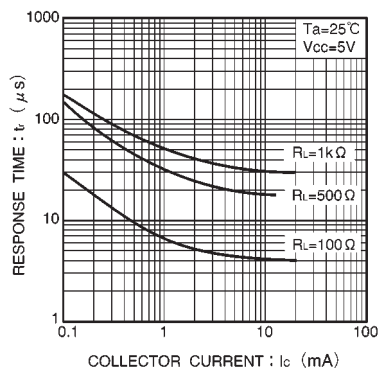


Fig.7 Response time vs.
collector current

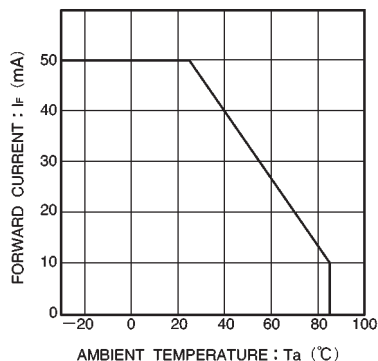


Fig.8 Forward current falloff

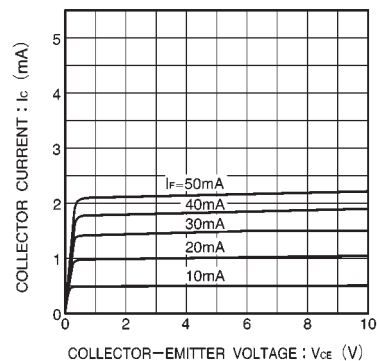
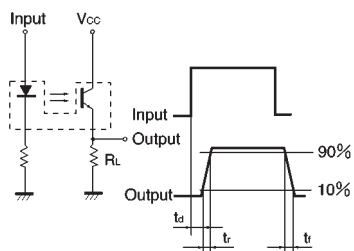


Fig.9 Output characteristics



t_d : Delay time

t_r : Rise time (time for output current to rise from 10% to 90% of peak current)

t_f : Fall time (time for output current to fall from 90% to 10% of peak current)

Fig.10 Response time measurement circuit