



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!



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High Sensitivity Chip Sensor, Side view type

RPM-012PB

The RPM-012PB is ultra small size and high sensitivity chip sensor. Original technology, original structure and original optical design enable to use Automatic mounting machine, Reflow, ultra small size, high sensitivity.

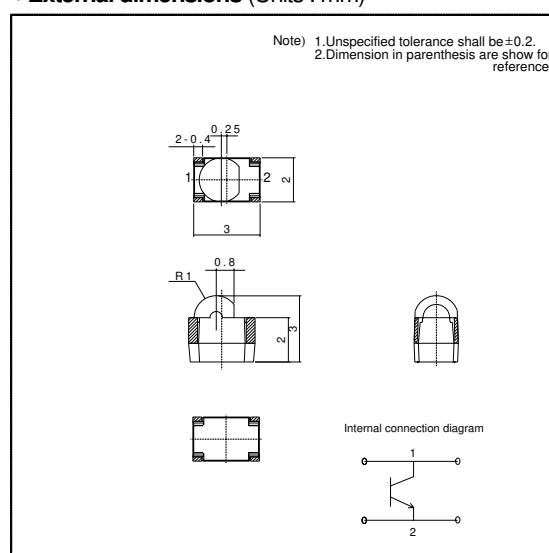
●Application

Optical control equipment
Receiver for sensors

●Features

- 1) High sensitivity by $\phi 2$ lenze.
- 2) Ultra-compact surface mount package.
(3mm x 3mm x 2mm)
- 3) It is possible to do Reflow.

●External dimensions (Units : mm)



●Absolute maximum ratings (Ta=25°C)

Parameter	Symbol	Limits	Unit
Collector-emitter voltage	V_{CE0}	32	V
Emitter-collector voltage	V_{EC0}	5	V
Collector current	I_C	20	mA
Collector power dissipation	P_C	75	mW
Operating temperature	T_{opr}	-30~+85	°C
Storage temperature	T_{stg}	-40~+100	°C

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

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Light current	I_C	0.56	1.6	2.8	mA	$V_{CE}=5V, E=500Lx$
Dark current	I_{CE0}	-	-	0.5	μA	$V_{CE}=10V$ (Black box)
Peak sensitivity wavelength	λ_P	-	800	-	nm	-
Collector-emitter saturation voltage	$V_{CE(sat)}$	-	-	0.4	V	$I_C=0.1mA, E=500Lx$
Half-angle	$\theta_{1/2}$	-	± 12	-	deg	-
Response time	$tr \cdot tf$	-	10	-	μs	$V_{CC}=5V, I_C=1mA, R_L=100\Omega$

Sensors

●Electrical and optical characteristic curves

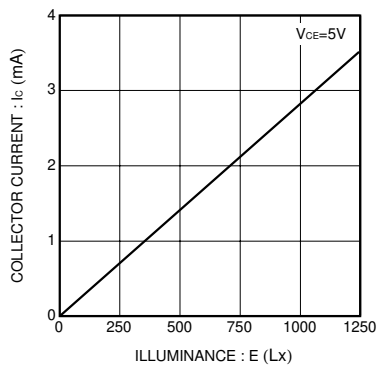


Fig.1 Collector current-Illuminance

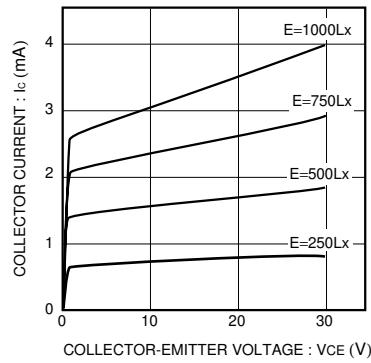


Fig.2 Output characteristics

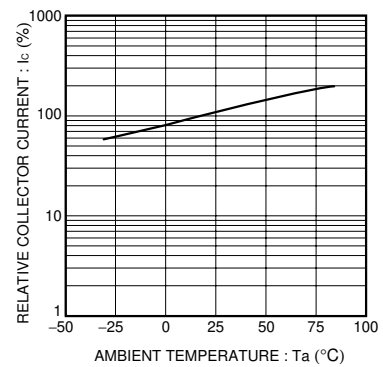


Fig.3 Relative output-Ambient temperature

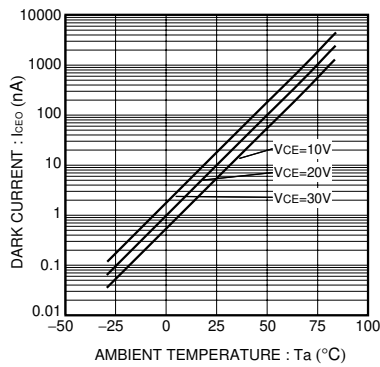


Fig.4 Dark current-Ambient temperature

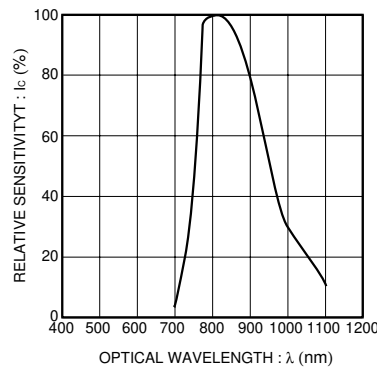


Fig.5 Spectral sensitivity characteristics

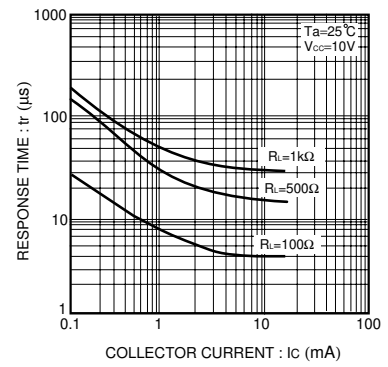


Fig.6 Response time-Collector current

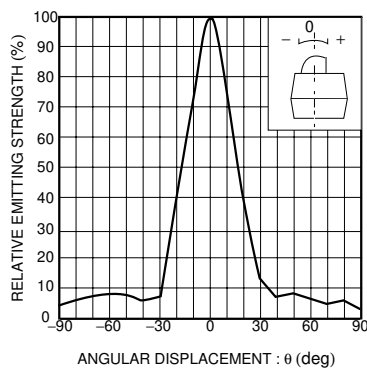


Fig.7 Directional pattern(1)

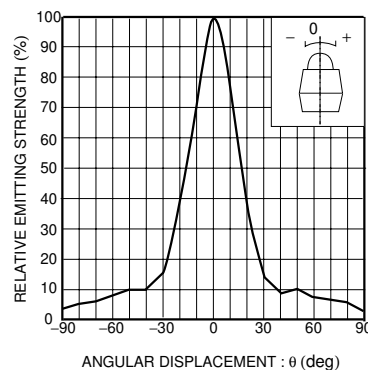


Fig.8 Directional pattern(2)