Phototransistor, side view type

RPM-22PB Datasheet

The RPM-22PB is a silicon phototransistor in a side-facing package. High sensitivity with φ1.5 lens.

Applications

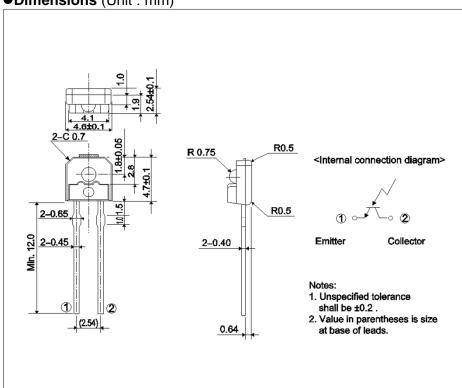
- · Optical control equipment
- · Receiver for sensors

Features

- 1) High sensitivity.
- Molded in plastic with a visible light filfer. (filters out light 750 nm or less)
- 3) Side-facing detector.



● Dimensions (Unit: mm)



●Absolute maximum ratings (T_a = 25°C)

Parameter	Symbol	Value	Unit	
Collector-emitter voltage	V _{CEO}	32	V	
Emitter-collector voltage	V _{ECO}	5	V	
Collector current	I _C	30	mA	
Collector power dissipation	P _C	100	mW	
Operating temperature	T_{opr}	-25 to +85	°C	
Storage temperature	T_{stg}	-30 to +100	°C	

•Electrical and optical characteristics $(T_a = 25^{\circ}C)$

Parameter	Symbol	Conditions	Values			Unit
			Min.	Тур.	Max.	Offic
Light current	I _C	V _{CE} =5V, E=500Lx	0.48	1	1.94	mA
Dark current	I _{CEO}	V _{CE} =10V (Black box)	1	1	0.5	μΑ
Peak sensitivity wavelength	λ_{p}	-	-	800	-	nm
Collector-emitter saturationvoltage	V _{CE(sat)}	I _C =0.1mA, E=500Lx	-	-	0.4	V
Half-angle	$\theta_{1/2}$	-	1	±32	-	deg
Response time	tr∙tf	V_{CE} =5V, I_{C} =1mA, R_{L} =100 Ω	ı	10	-	μS

●Classified table of rank

Item	Light current : I _C	Unit
L	0.48 to 0.78	mA
М	0.64 to 1.06	mA
N	0.86 to 1.43	mA
Р	1.17 to 1.94	mA

•Electrical and optical characteristics curves

Fig.1 Collector Current vs. Emitter Strength

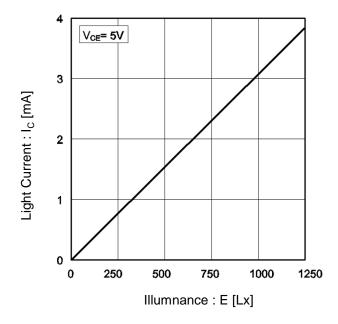
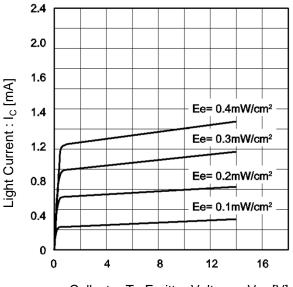


Fig.2 Output Characteristics



Collector To Emitter Voltage : $V_{CE}[V]$

Fig.3 Relative Output vs. Ambient Temperature

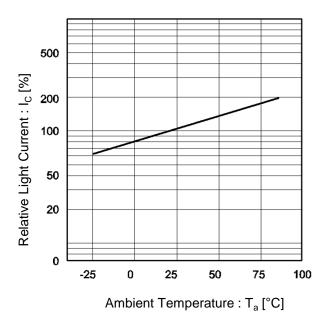
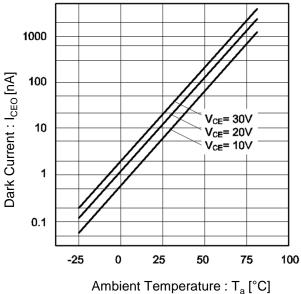


Fig.4 Dark Current vs. Ambient Temperature



•Electrical and optical characteristics curves

Fig.5 Spectral Sensitivity

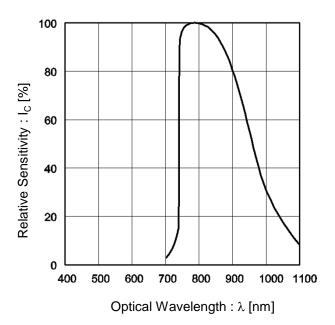
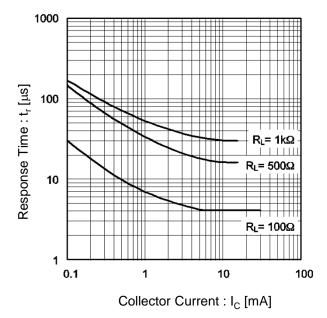


Fig.6 Collector Power Dissipation vs. Ambient Temperature

120
100
80
60
20
-25 0 25 50 75 100

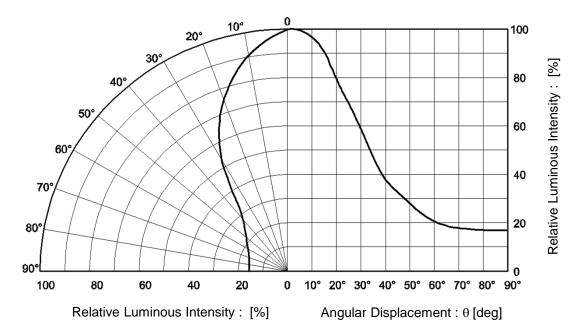
Ambient Temperature : T_a [°C]

Fig.7 Response time vs.Collector Current



•Electrical and optical characteristics curves

Fig.8 Directional Pattern



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