Surface mount type photo diode (Topview)

RPMD-0100 Datasheet

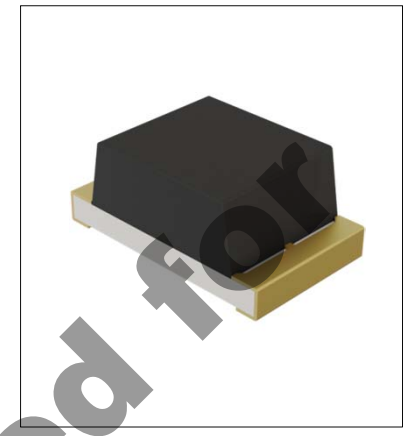
●Applications

• Household applications

• OAs, FAs

• Other general-purpose applications

●Outline



●Features

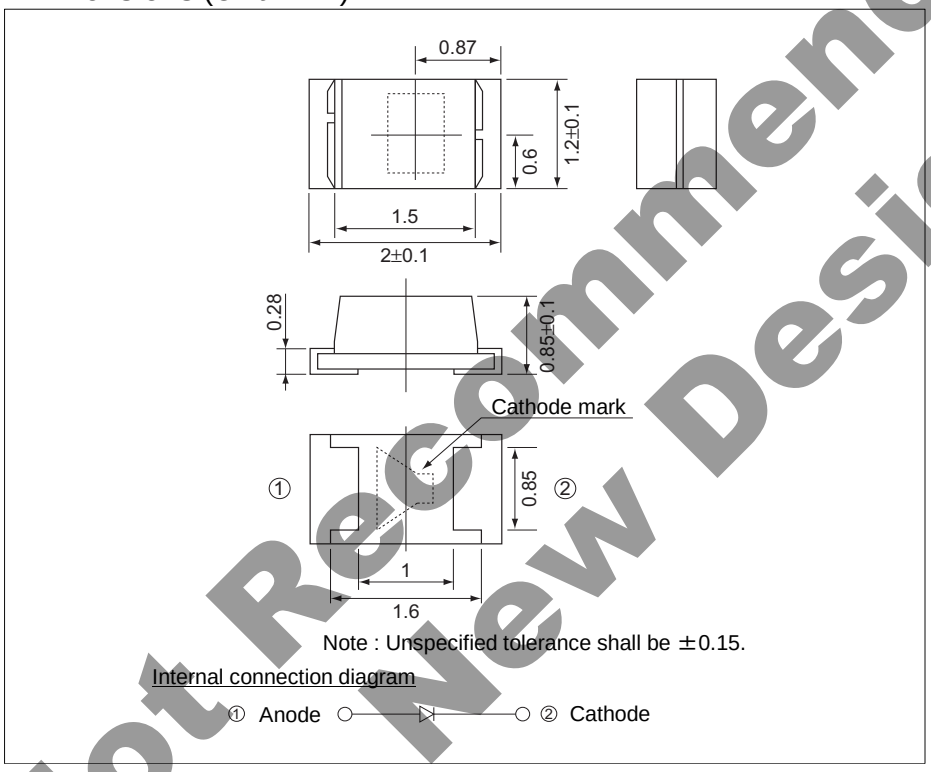
1) Dimensions 2.0×1.2×0.85mm (L×W×H)

2) Visible light-blocking resin (<750nm)

3) Supports lead-free solders

4) RoHS directive

●Dimensions (Unit : mm)



●Absolute maximum ratings (T_a = 25°C)

Parameter	Symbol	Value	Unit
Reverse voltage	V_R	60	V
Power dissipation	P_D	30	mW
Operating temperature	T_{opr}	−40 to +85	°C
Storage temperature	T_{stg}	−40 to +100	°C
Soldering temperature	T_{sd}	260	°C *1

*1 Reflow solder profile

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●Electrical specification (T_a = 25°C)

Parameter		Symbol	Conditions	Values			Unit
				Min.	Typ.	Max.	
Forward voltage		V_F	I_F =50mA	-	1.1	-	V
Reverse dark current		I_d	V_R =10V	-	0.5	6	nA
Reverse light current		I_{ra}	E_e =1mW/cm^2 V_R =5V, λ=940nm	6	-	10	μA
Reverse breakdown voltage		V_{BR}	E_e =0mW/cm^2 I_R =100μA	60	-	-	V
Capacitance		C_j	E_e =0mW/cm^2 V_R =5V, f=1MHz	-	1.5	-	pF
Peak emission wavelength		λ_p		-	940	-	nm
Spectrum half width		$\lambda_{0.5}$		800 to 1050			nm
Half angle		θ 1/2		-	±60	-	deg
Response time	Rise time	tr	V_R =10V, R_L =1kΩ λ=850nm	-	100	-	ns
	Fall time	tf		-	100	-	

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●Electrical and optical characteristics curves

Fig.1 Illuminance vs. Photocurrent

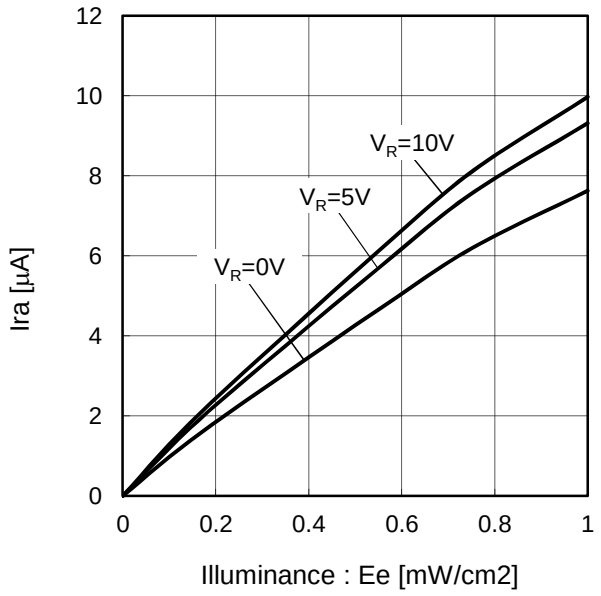


Fig.2 Reverse Voltage vs. Photocurrent

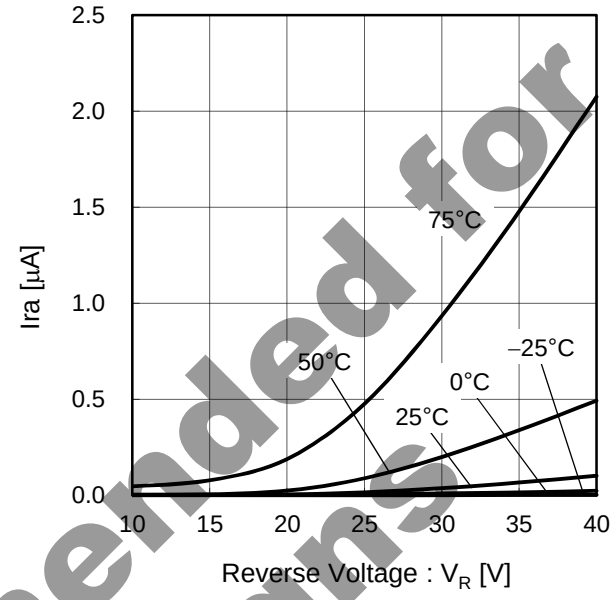


Fig.3 Forward Voltage vs. Forward Current

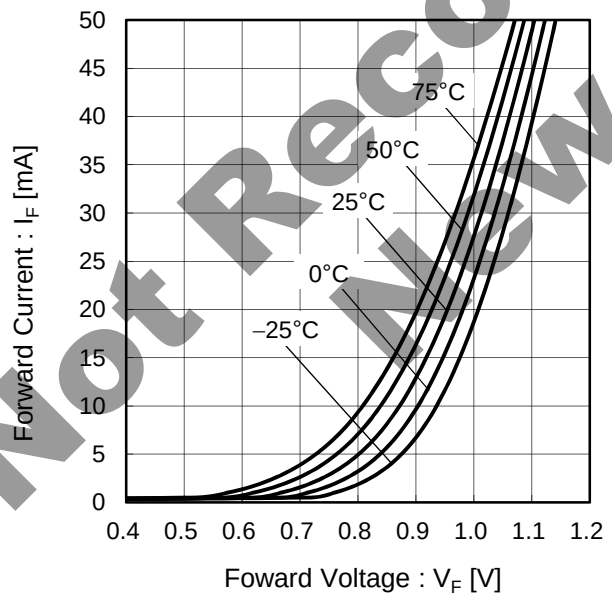
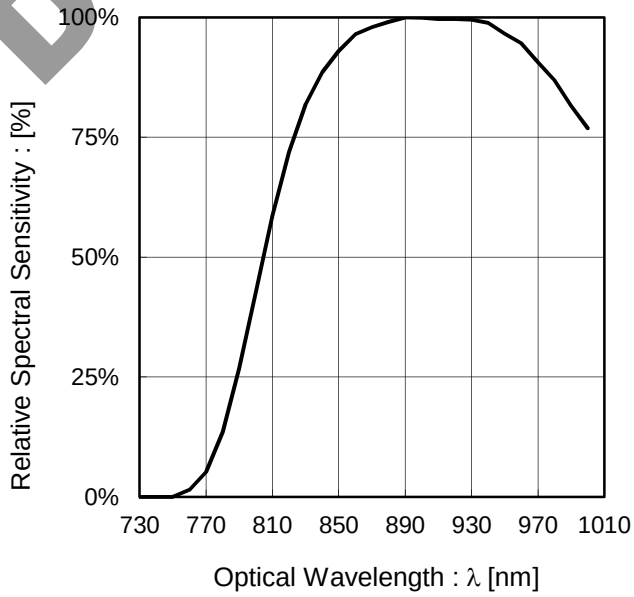


Fig.4 Spectral Sensitivity



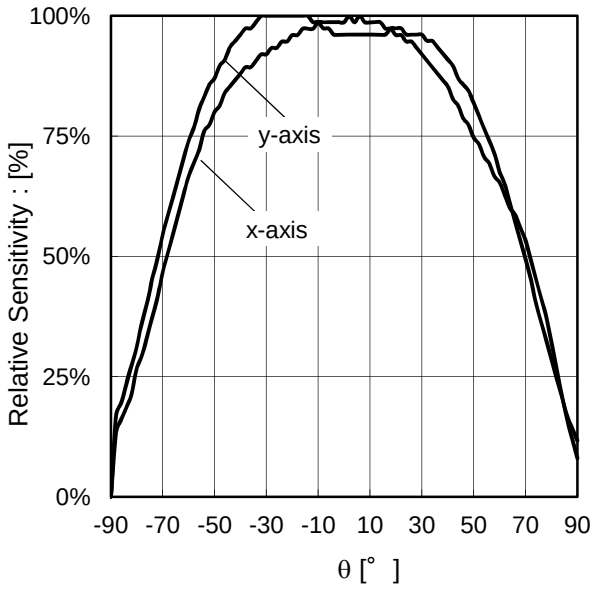
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●Electrical and optical characteristics curves

Fig.5 Radiant Intensity



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