PD100Mx0MP Series

Compact, Surface Mount Type Photodiode

■ Features

1. Compact, thin type (3.0×1.5×2.2mm)
2. Surface mount type
3. 2-way mounting available:top view/side view
4. Reflow soldering
5. Transparent resin:**PD100MC0MP/PD100MC0MP1**
   Visible light cut-off resin:**PD100MF0MP/PD100MF0MP1**
6. Taped model

■ Applications

1. Cameras
2. Pagers
3. Potable game machine

■ Model Line-up

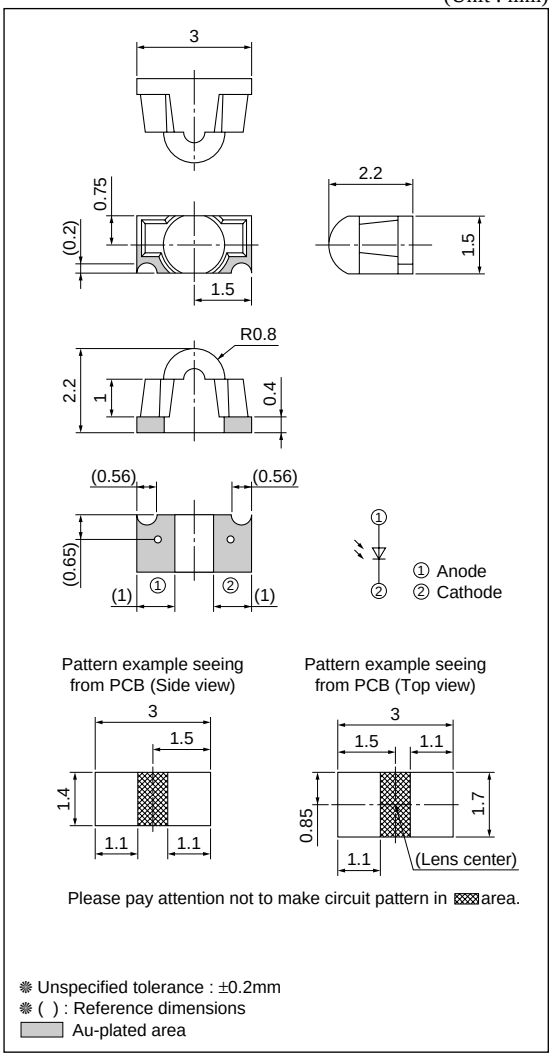
Resin		Mount type	Packing
Transparent resin	Visidle light cut-off resin		
PD100MF0MP	**PD100MF0MP**	Side view	2 000pcs./1reel
PD100MF0MP1	**PD100MF0MP1**	Top view	1 500pcs./1reel

■ Absolute Maximum Ratings (Ta=25°C)

Parameter	Symbol	Rating	Unit
Reverse voltage	V_R	20	V
Power dissipation	P	75	mW
Operating temperature	T_{opr}	−30 to +85	°C
Storage temperature	T_{stg}	−40 to +95	°C
*1 Soldering temperature	T_{sol}	240	°C

*1 MAX. for 10 s

■ Outline Dimensions (Unit : mm)



■ Electro-optical Characteristics

(Ta=25˚C)

Parameter		Symbol	Conditions	MIN.	TYP.	MAX.	Unit
*2 Short circuit current	PD100MC0MP/PD100MC0MP1	I_{SC}	E_V=100 lx	0.6	0.9	1.2	μA
	PD100MF0MP/PD100MF0MP1			0.4	0.6	0.8	
Dark current		I_d	V_R=10V, E_V=0	–	–	10	nA
Terminal capacitance		C_t	V_R=15V, f=1MHz	–	–	10	pF
Peak sensitivity wavelength	PD100MC0MP/PD100MC0MP1	λ_P	–	–	820	–	nm
	PD100MF0MP/PD100MF0MP1			–	850	–	
Response time		t_r, t_f	V_R=15V, R_L=180Ω	–	10	–	ns
Half intensity angle		Δθ	–	–	20	–	˚

*2 Ev:Illuminance by CIE standard light source A (tungsten lamp)

Fig.1 Power Dissipation vs. Ambient Temperature

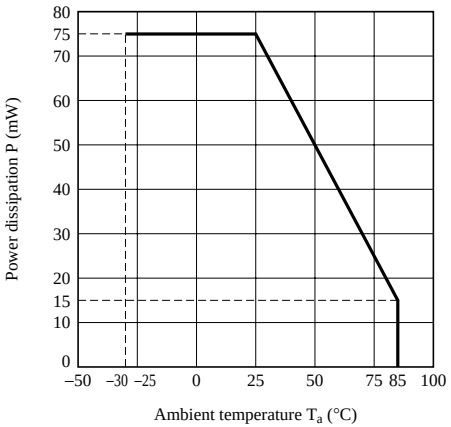


Fig.2 Spectral Sensitivity

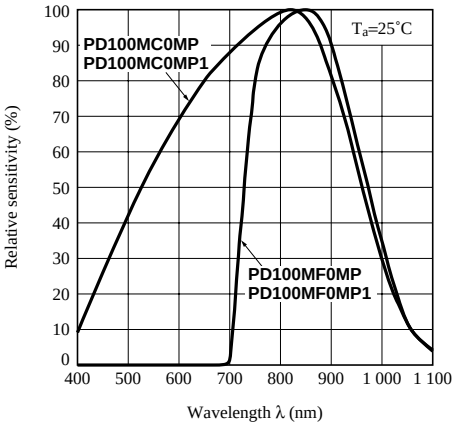


Fig.3 Dark Current vs. Ambient Temperature

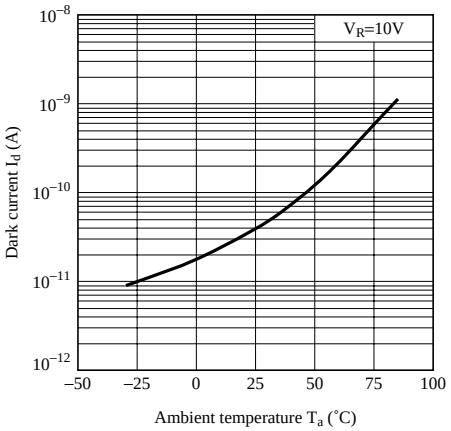


Fig.4 Dark Current vs. Reverse Voltage

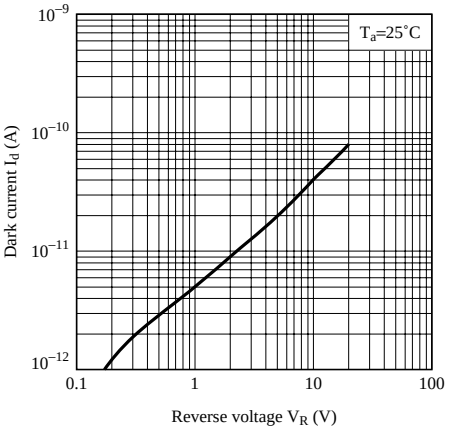


Fig.5 Terminal Capacitance vs. Reverse Voltage

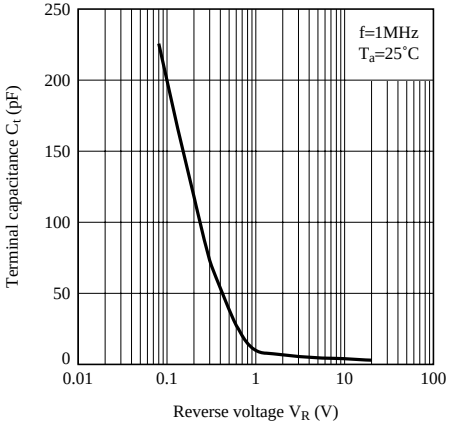


Fig.6 Relative Output vs. Ambient Temperature

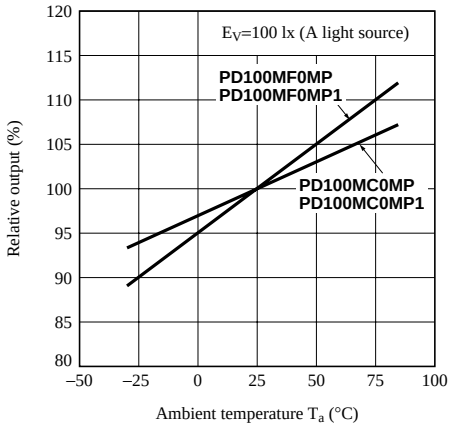


Fig.7 Sensitivity Diagram

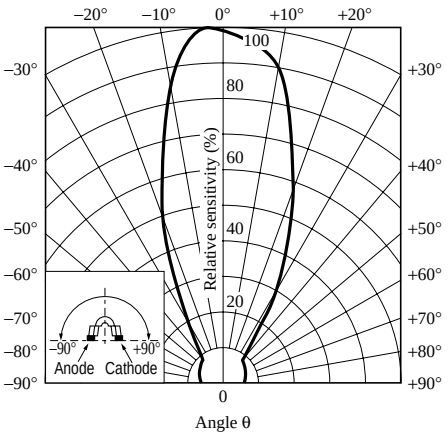


Fig.8 Relative Output vs. Distance (Emitter:GL100MNIMP)

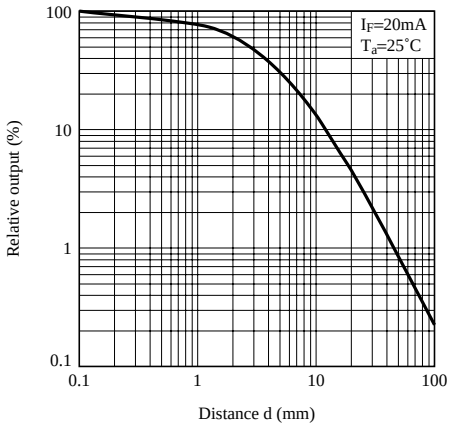


Fig.9 Responce Time vs. Load Resistance

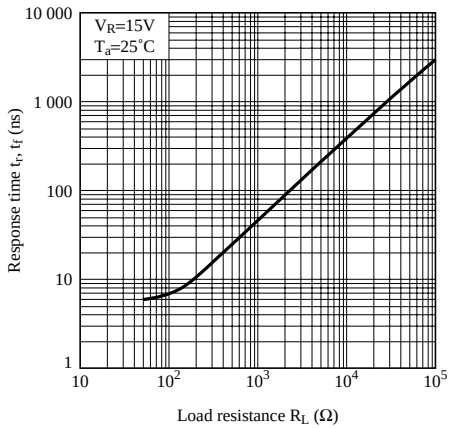
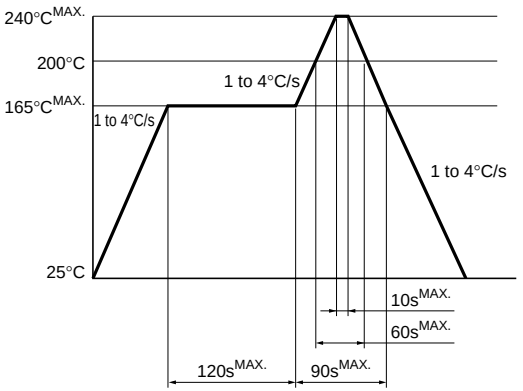


Fig.10 Reflow Soldering

Only one time soldering is recommended within the temperature profile shown below.



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— Alarm equipment
— Various safety devices, etc.

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