

# PD100Mx0MP Series

## ■ 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	Visible light cut-off resin		
<b>PD100MF0MP</b>	<b>PD100MF0MP</b>	Side view	2 000pcs./1reel
<b>PD100MF0MP1</b>	<b>PD100MF0MP1</b>	Top view	1 500pcs./1reel

## ■ Absolute Maximum Ratings (Ta=25°C)

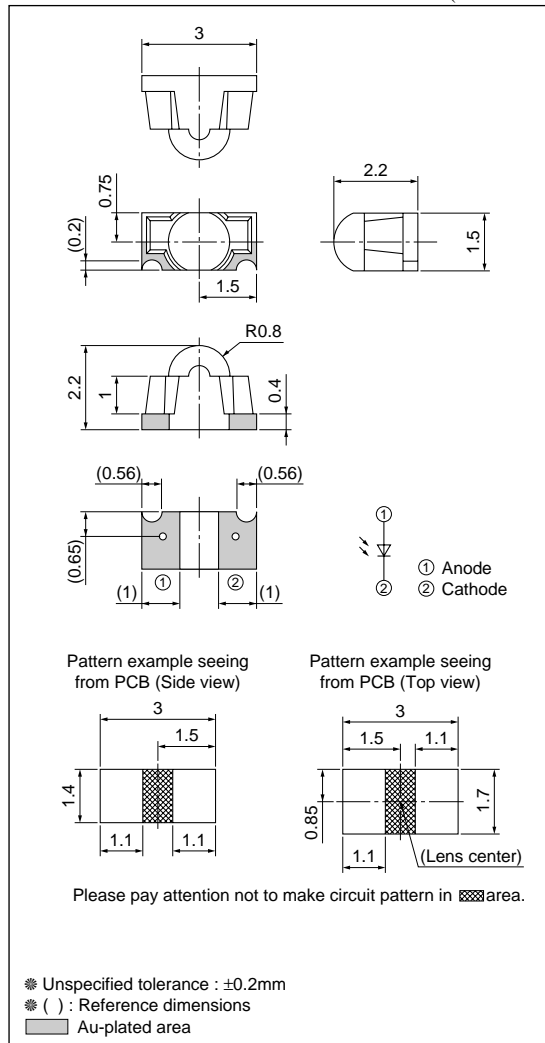
Parameter	Symbol	Rating	Unit
Reverse voltage	V <sub>R</sub>	20	V
Power dissipation	P	75	mW
Operating temperature	T <sub>opr</sub>	-30 to +85	°C
Storage temperature	T <sub>stg</sub>	-40 to +95	°C
*1 Soldering temperature	T <sub>sol</sub>	240	°C

\*1 MAX. for 10 s

## Compact, Surface Mount Type Photodiode

## ■ Outline Dimensions

(Unit : mm)



■ Electro-optical Characteristics

( $T_a=25^\circ\text{C}$ )

Parameter		Symbol	Conditions	MIN.	TYP.	MAX.	Unit
Short circuit current	PD100MC0MP/PD100MC0MP1	I <sub>SC</sub>	E <sub>v</sub> =100 lx	0.6	0.9	1.2	μA
	PD100MF0MP/PD100MF0MP1			0.4	0.6	0.8	
Dark current		I <sub>d</sub>	V <sub>R</sub> =10V, E <sub>v</sub> =0	—	—	10	nA
Terminal capacitance		C <sub>t</sub>	V <sub>R</sub> =15V, f=1MHz	—	—	10	pF
Peak sensitivity wavelength	PD100MC0MP/PD100MC0MP1	λ <sub>p</sub>	—	—	820	—	nm
	PD100MF0MP/PD100MF0MP1			—	850	—	
Response time		t <sub>r</sub> , t <sub>f</sub>	V <sub>R</sub> =15V, R <sub>L</sub> =180Ω	—	10	—	ns
Half intensity angle		Δθ	—	—	20	—	°

\*2 E<sub>v</sub>:Illuminance by CIE standard light source A (tungsten lamp)

Fig.1 Power Dissipation vs. Ambient Temperature

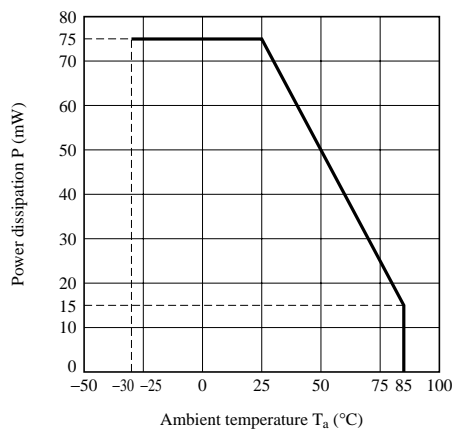


Fig.2 Spectral Sensitivity

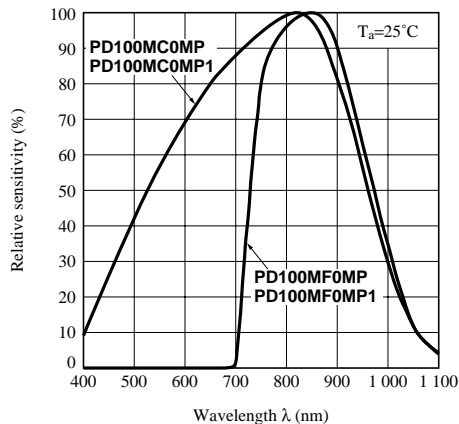


Fig.3 Dark Current vs. Ambient Temperature

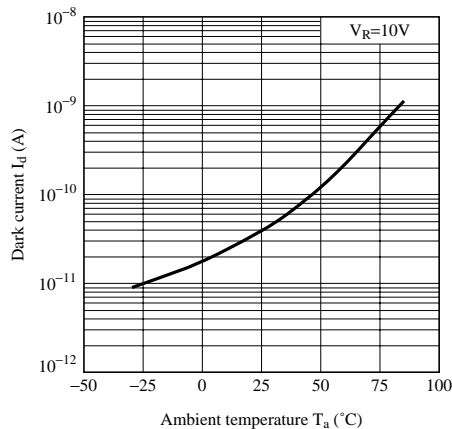
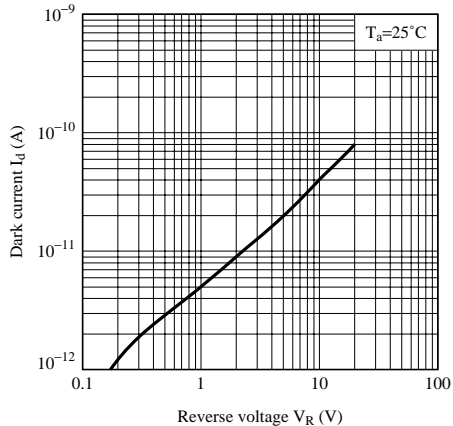
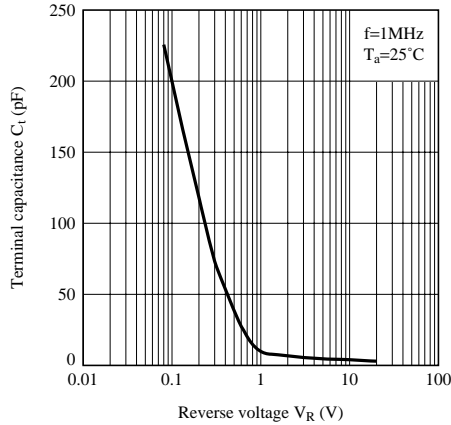


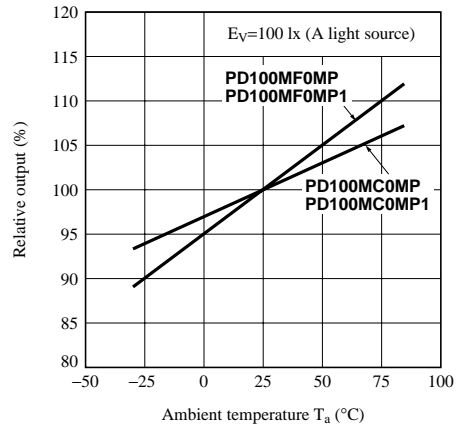
Fig.4 Dark Current vs. Reverse Voltage



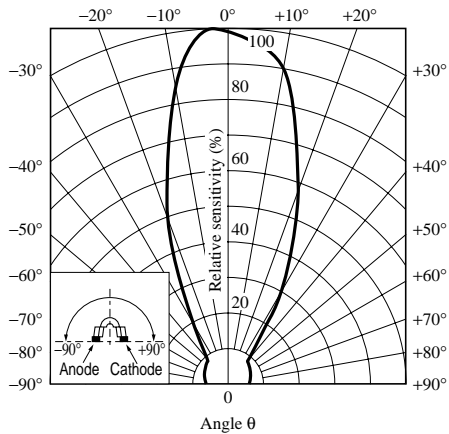
**Fig.5 Terminal Capacitance vs. Reverse Voltage**



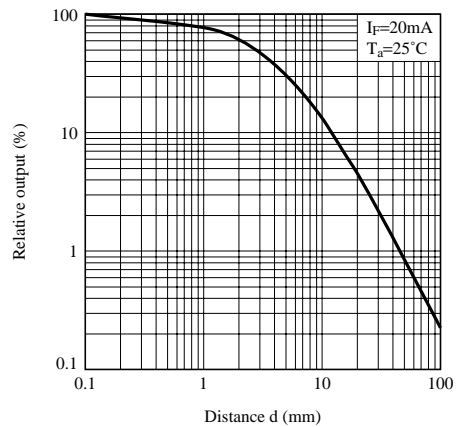
**Fig.6 Relative Output vs. Ambient Temperature**



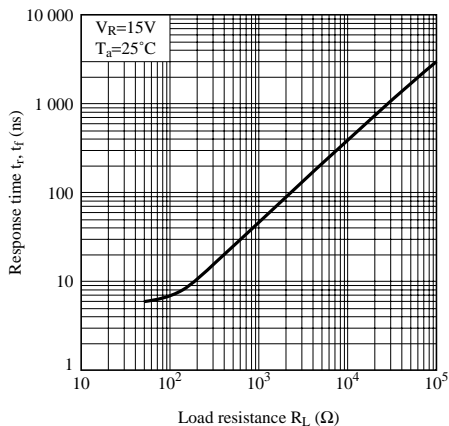
**Fig.7 Sensitivity Diagram**



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

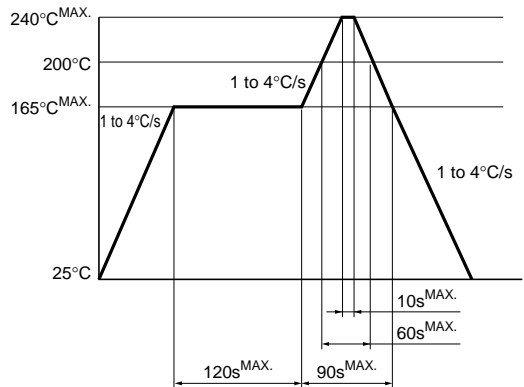


**Fig.9 Response Time vs. Load Resistance**



**Fig.10 Reflow Soldering**

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



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