

G8909-01

## Photodiode array for DWDM monitor

### Features

- 250  $\mu\text{m}$  pitch, 40 ch parallel readout
- Low crosstalk
- Precise chip position tolerance:  $\pm 0.05$  mm

### Applications

- DWDM monitor with AWG

### Structure

Parameter	Value	Unit
Photosensitive area	$\phi 0.08$	mm
Pixel pitch	250	$\mu\text{m}$
Number of elements	40	ch

### Absolute maximum ratings

Parameter	Symbol	Value	Unit
Reverse voltage	$V_R$ max	6	V
Incident light level	$P_{in}$	10	mW
Operating temperature	$T_{opr}$	-40 to +85*	$^{\circ}\text{C}$
Storage temperature	$T_{stg}$	-40 to +85*	$^{\circ}\text{C}$

\* In N<sub>2</sub> environment or in vacuum

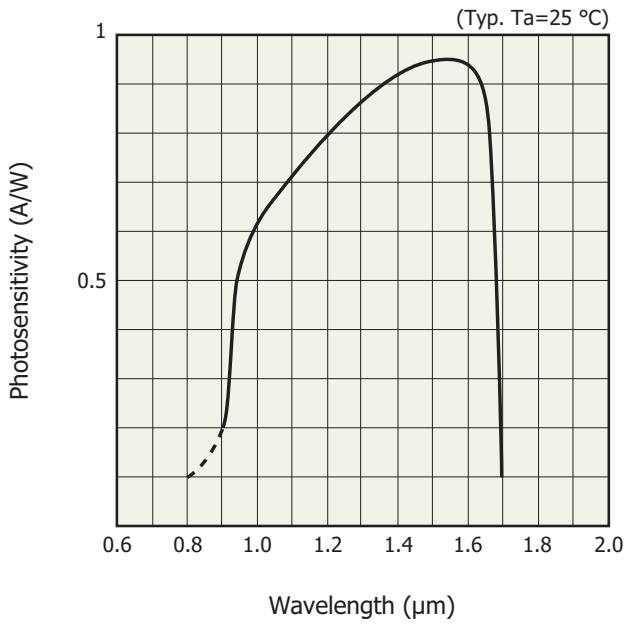
Note: Exceeding the absolute maximum ratings even momentarily may cause a drop in product quality. Always be sure to use the product within the absolute maximum ratings.

### Electrical and optical characteristics (Ta=25 $^{\circ}\text{C}$ , per 1 element)

Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Spectral response range	$\lambda$		-	0.9 to 1.7	-	$\mu\text{m}$
Photosensitivity	S	$\lambda = 1.31 \mu\text{m}$	0.8	0.9	-	A/W
		$\lambda = 1.55 \mu\text{m}$	0.85	0.95	-	
Photoresponse nonuniformity	PRNU		-	-	$\pm 5$	%
Dark current	$I_D$	$V_R = 5$ V	-	0.02	0.2	nA
Shunt resistance	Rsh	$V_R = 10$ mV	-	8	-	G $\Omega$
Terminal capacitance	Ct	$V_R = 5$ V, f=1 MHz	-	1.4	-	pF
Crosstalk	-	$V_R = 0.1$ V	-	-33	-	dB

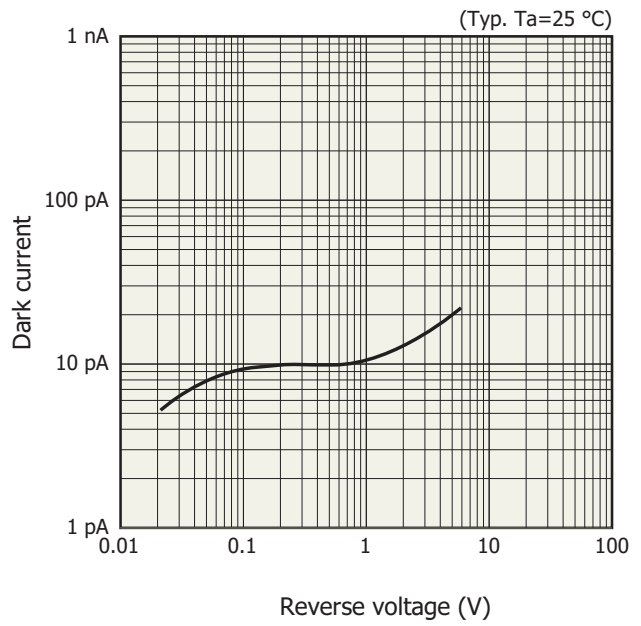
The G8909-01 may be damaged by Electro Static Discharge, etc. Be carefull when using the G8909-01.

**Spectral response**



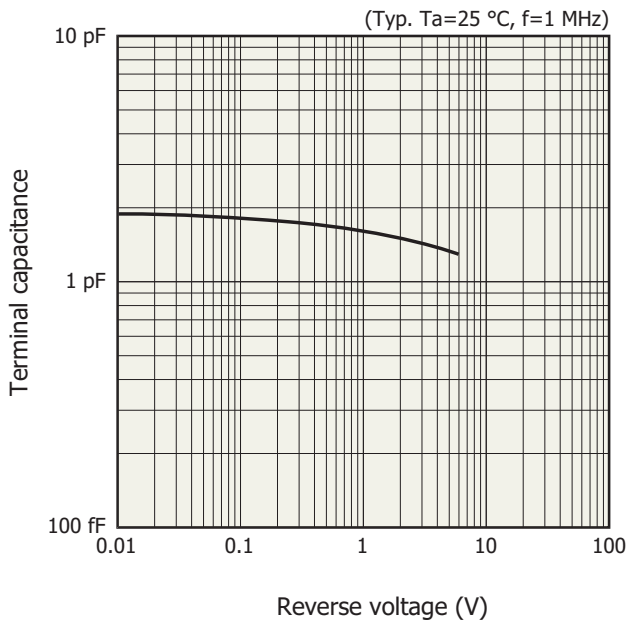
KIRDB0002EB

**Dark current vs. reverse voltage**



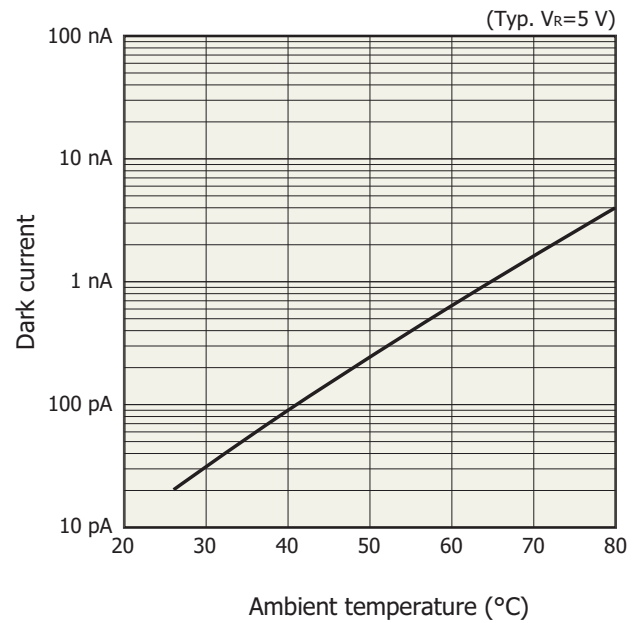
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**Terminal capacitance vs. reverse voltage**



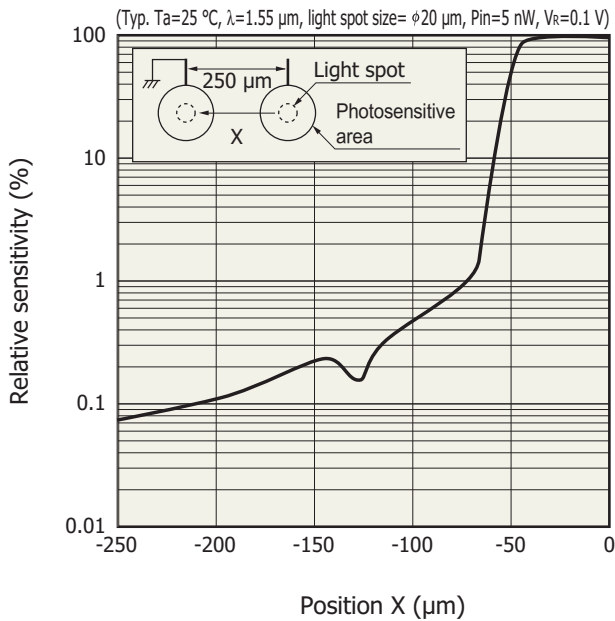
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**Dark current vs. ambient temperature**

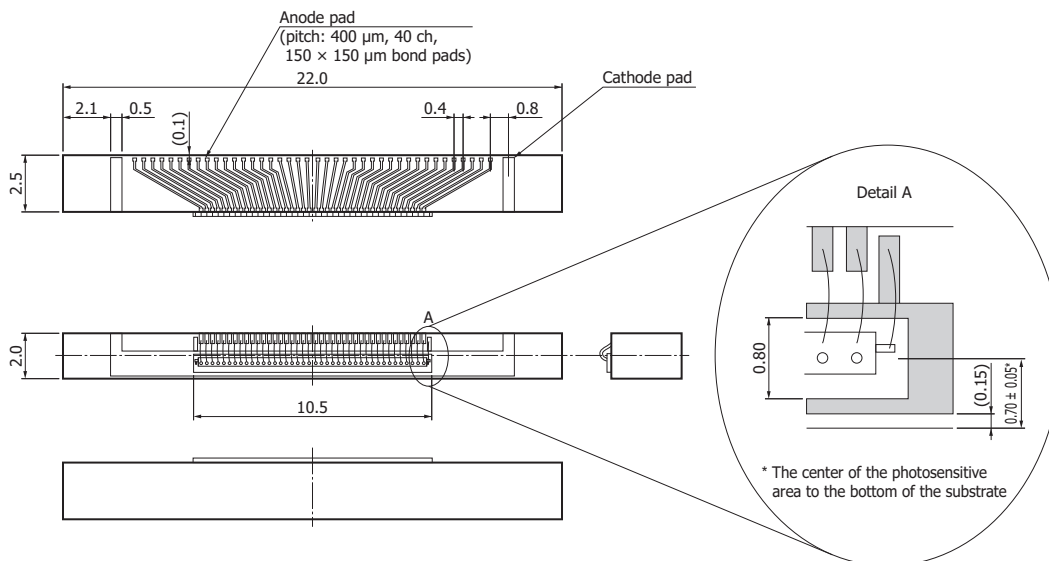


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**Crosstalk characteristic**



**Dimensional outline (unit: mm)**



Information described in this material is current as of February, 2012. Product specifications are subject to change without prior notice due to improvements or other reasons. Before assembly into final products, please contact us for the delivery specification sheet to check the latest information.

The product warranty is valid for one year after delivery and is limited to product repair or replacement for defects discovered and reported to us within that one year period. However, even if within the warranty period we accept absolutely no liability for any loss caused by natural disasters or improper product use.

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