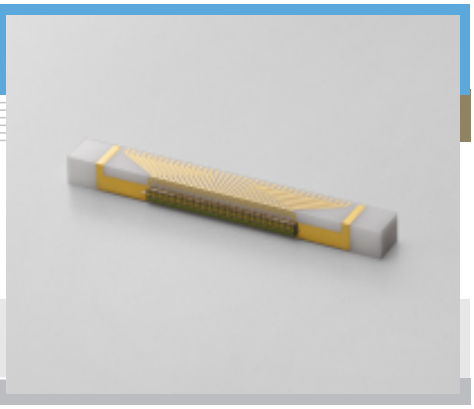
NEW

PHOTODIODE

InGaAs PIN photodiode array

G8909-01

Photodiode array for DWDM monitor



Features

- 250 µm pitch, 40 ch parallel readout
- Low cross-talk
- Precise chip position tolerance: ±0.05 mm

Applications

- DWDM monitor with AWG

■ General ratings

Parameter	Value	Unit
Active area	φ0.08	mm
Pixel pitch	250	µm
Number of elements	40	ch

■ Absolute maximum ratings

Parameter	Symbol	Remark	Value	Unit
Reverse voltage	V_R Max.		6	V
Allowable input power	P_{in} Max.		10	mV
Operating temperature	Topr	*	-40 to +85	°C
Storage temperature	Tstg		-40 to +85	°C

* In N_2 environment or in vacuum

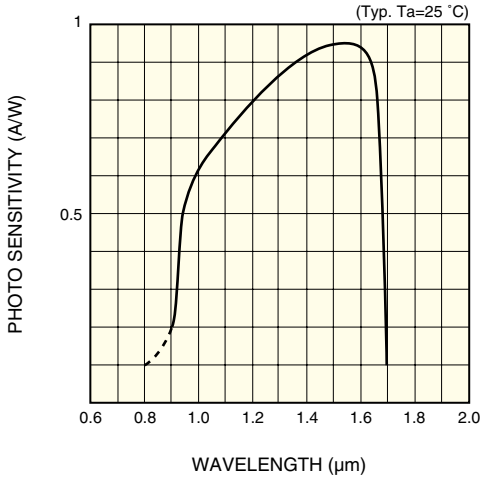
■ Electrical and optical characteristics (Ta=25 °C, per 1 element)

Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Spectral response range	λ		-	0.9 to 1.7	-	µm
Photo sensitivity	S	λ=1.31 µm	0.8	0.9	-	A/W
		λ=1.55 µm	0.85	0.95	-	
Photo response non-uniformity	PRNU		-	-	±5	%
Dark current	I_D	V_R=5 V	-	0.02	0.2	nA
Shunt resistance	Rsh	V_R=10 mV	-	8	-	GΩ
Terminal capacitance	Ct	V_R=5 V, f=1 MHz	-	1.4	-	pF
Cross-talk	-	V_R=0.1 V	-	-33	-	dB

PRELIMINARY DATA
Apr. 2002

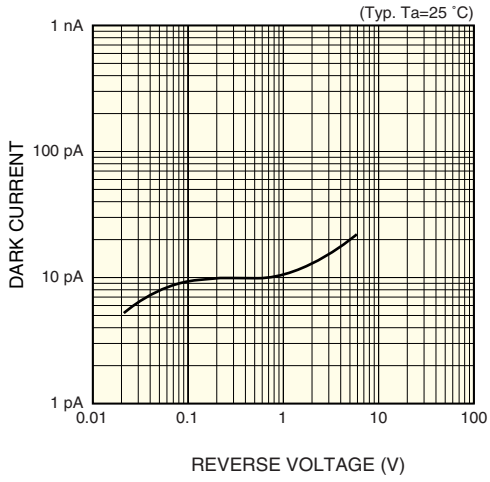
SOLID STATE DIVISION

■ Spectral response



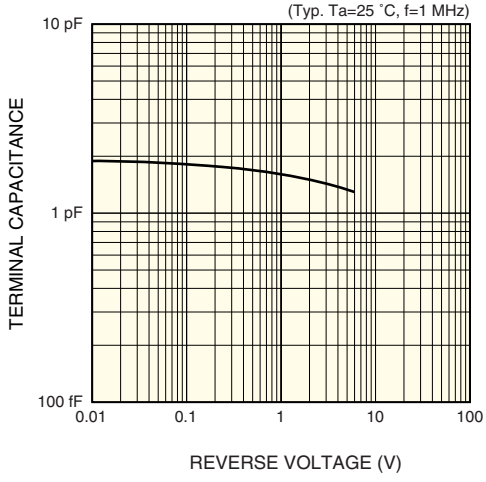
KIRDB0002EB

■ Dark current vs. reverse voltage



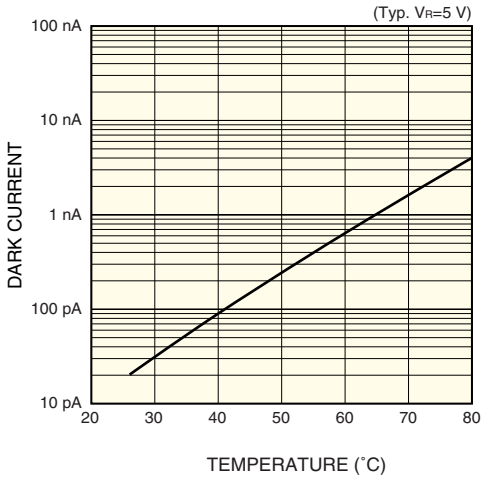
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■ Terminal capacitance vs. reverse voltage



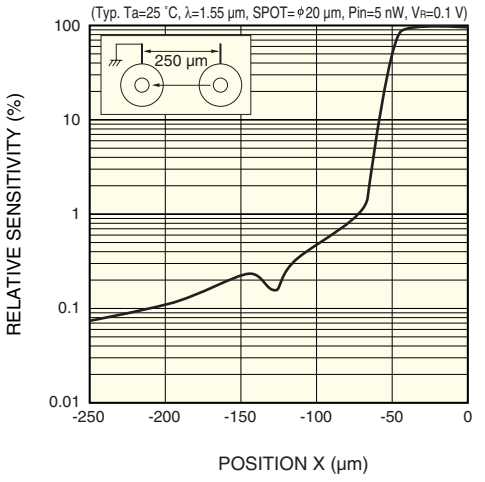
KIRDB0267EA

■ Dark current vs. temperature



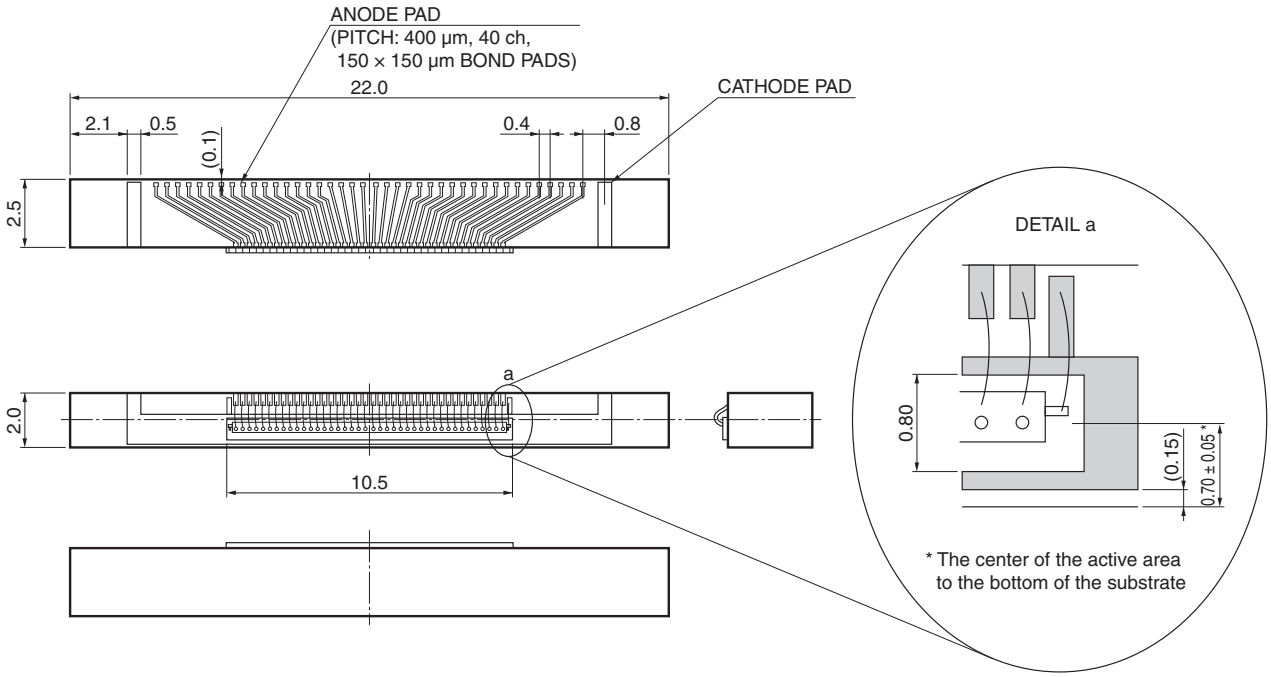
KIRDB0268EA

■ Cross-talk characteristic



KIRDB0269EA

■ Dimensional outline (unit: mm)



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