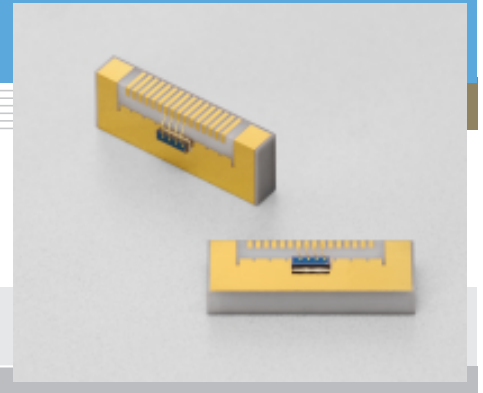


GaAs PIN photodiode array

G8921-01

Photodiode array for data communication



Features

- Active area: $\phi 0.06$ mm
Element pitch: 250 μ m
4-element array
- High-speed response: 10 Gbps [(2.5 Gbps per channel) $\times 4$]
at low bias voltage ($V_R=2$ V)
- Low dark current, low capacitance
- Up to 16 elements available as option

Applications

- Optical fiber communications
- High-speed data link

General ratings

Parameter	Symbol	Value	Unit
Active area	-	$\phi 0.06$	mm
Element pitch	-	250	μ m
Number of elements	-	4	ch

Absolute maximum ratings

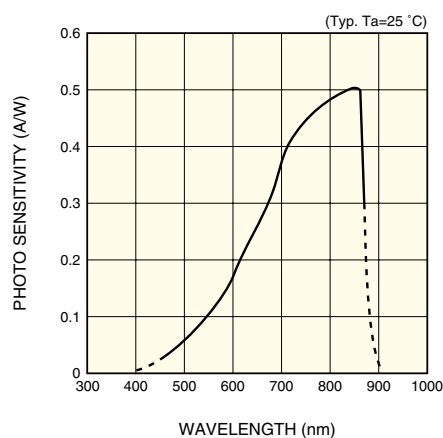
Parameter	Symbol	Remark	Value	Unit
Reverse voltage	V_R Max.		30	V
Reverse current	I_R Max.		0.5	mA
Operating temperature	T_{opr}	*	-40 to +85	$^{\circ}$ C
Storage temperature	T_{stg}		-55 to +125	$^{\circ}$ C

* In N₂ environment or in vacuum

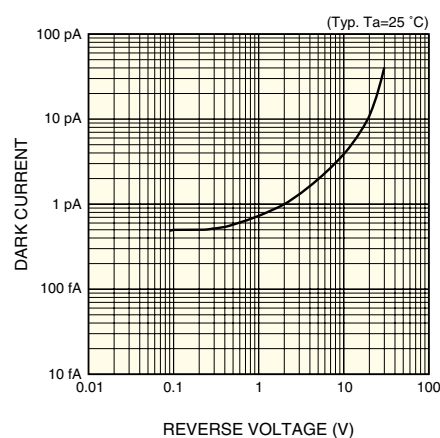
Electrical and optical characteristics (Unless other wise, $T_a=25$ $^{\circ}$ C, per 1 element)

Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Spectral response range	λ		-	470 to 870	-	nm
Peak sensitivity wavelength	λ_p		-	850	-	nm
Photo sensitivity	S	$\lambda=850$ nm	0.45	0.5	-	A/W
Dark current	I_D	$V_R=5$ V	-	2	50	pA
Terminal capacitance	Ct	$V_R=2$ V, $f=1$ MHz	-	0.35	0.5	pF
Cut-off frequency	f _c	$\lambda=850$ nm, $V_R=2$ V, $R_L=50$ Ω , -3 dB	2	-	-	GHz

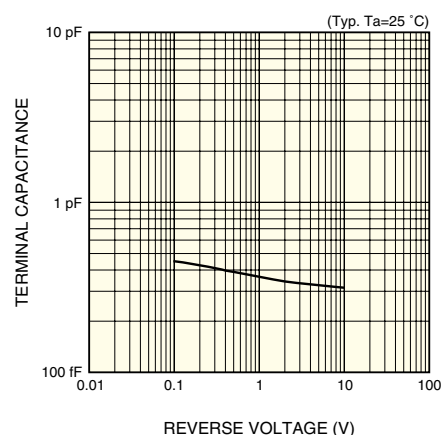
■ Spectral response



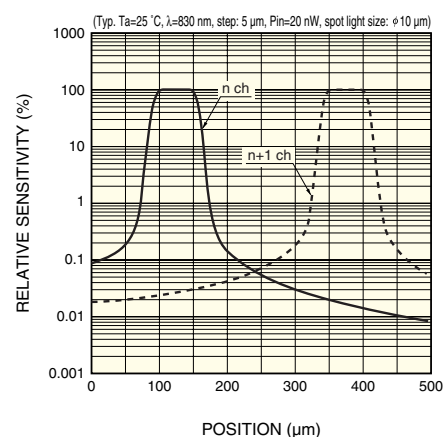
■ Dark current vs. reverse voltage



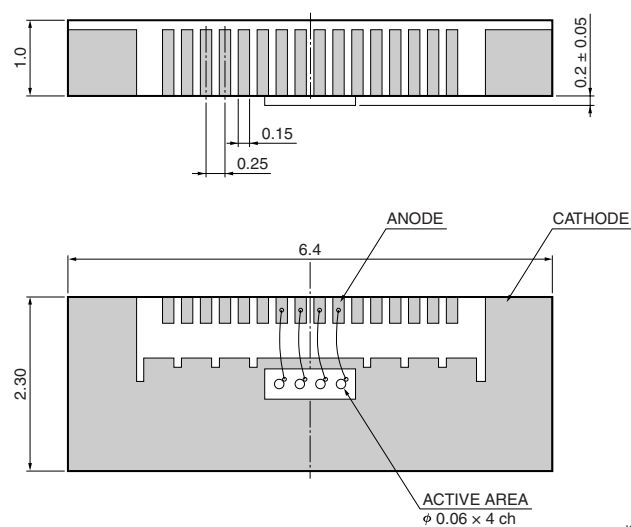
■ Terminal capacitance vs. reverse voltage



■ Cross-talk characteristic



■ Dimensional outline (unit: mm)

**HAMAMATSU**

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