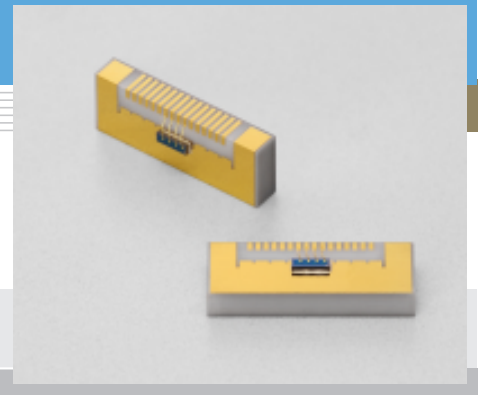


# GaAs PIN photodiode array

## G8921-01

Photodiode array for data communication



### Features

- Active area:  $\phi 0.06$  mm  
Element pitch: 250  $\mu$ 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	$\mu$ m
Number of elements	-	4	ch

### Absolute maximum ratings

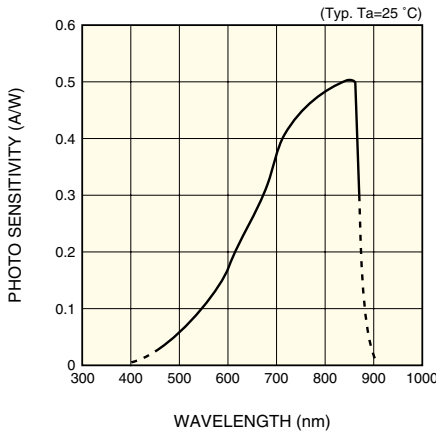
Parameter	Symbol	Remark	Value	Unit
Reverse voltage	$V_R$ Max.		30	V
Reverse current	$I_R$ Max.		0.5	mA
Operating temperature	$T_{opr}$	*	-40 to +85	$^{\circ}$ C
Storage temperature	$T_{stg}$		-55 to +125	$^{\circ}$ C

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

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

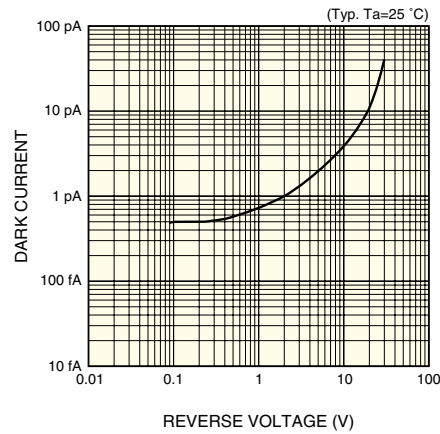
Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Spectral response range	$\lambda$		-	470 to 870	-	nm
Peak sensitivity wavelength	$\lambda_p$		-	850	-	nm
Photo sensitivity	S	$\lambda=850$ nm	0.45	0.5	-	A/W
Dark current	$I_D$	$V_R=5$ V	-	2	50	pA
Terminal capacitance	$C_t$	$V_R=2$ V, $f=1$ MHz	-	0.35	0.5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

■ Spectral response



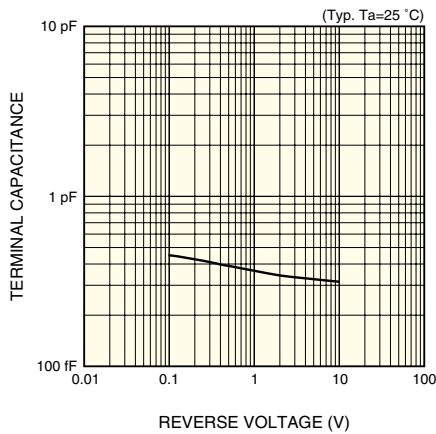
KGPD80048EA

■ Dark current vs. reverse voltage



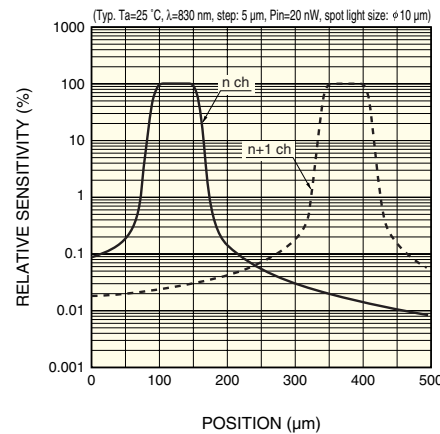
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■ Terminal capacitance vs. reverse voltage



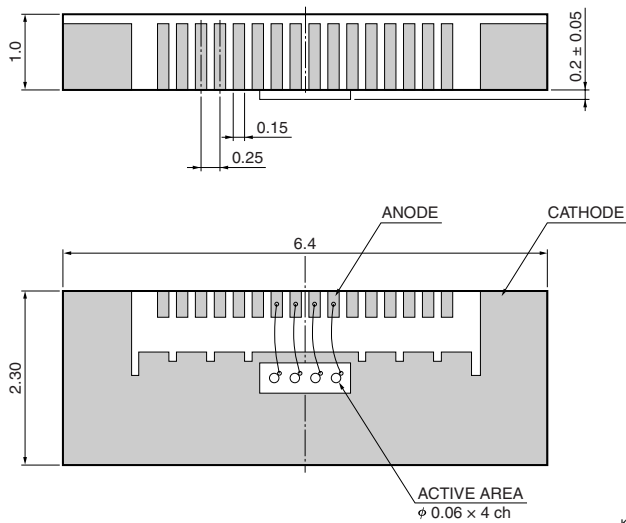
KGPD80050EA

■ Cross-talk characteristic



KGPD80051EA

■ Dimensional outline (unit: mm)



KGPD80017EA

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