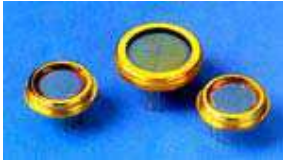


High Speed 1064nm Pulse sensing (Series 4X)



The 4X series of photodetectors are designed specifically for sensing high speed 1064 nm Nd YAG laser pulses. The detector structure is designed to be fully depleted at 150 volts reverse bias and offers high pulsed and DC responsivity at wavelengths up to 1100 nm coupled with an extremely low capacitance per unit area.

Electrical / Optical Specifications

Characteristics measured at 22°C (± 2) ambient, and a reverse bias of 150 volts, unless otherwise stated.

Single Elements

Type No.	Active Area		Responsivity A/W		Dark Current nA		NEP $\text{WHz}^{-1/2}$ $\lambda = 1064 \text{ nm}$ Typ.	Capacitance pF		Risetime ns $\lambda = 1064 \text{ nm}$ RL = 50 Ω (Typ.)	Package
	mm ²	mm	$\lambda = 1064 \text{ nm}$		Max.	Typ.		Vr=0 V	Vr=150V		
			Min.	Typ.			Max.	Max.			
OSD1-4X	1	1.13 dia	0.35	0.40	50	5	1.2e-13	8	2	12	TO18
OSD5-4X*	5	2.52 dia	0.35	0.40	100	10	1.7e-13	32	4	12	TO5
OSD50-4X	50	7.98 dia	0.35	0.40	500	50	3.9e-13	320	20	12	TO8
OSD100-4X*	100	11.3 dia	0.35	0.40	1000	100	5.5e-13	640	36	12	13

Quadrants (Values given are per element unless otherwise stated)

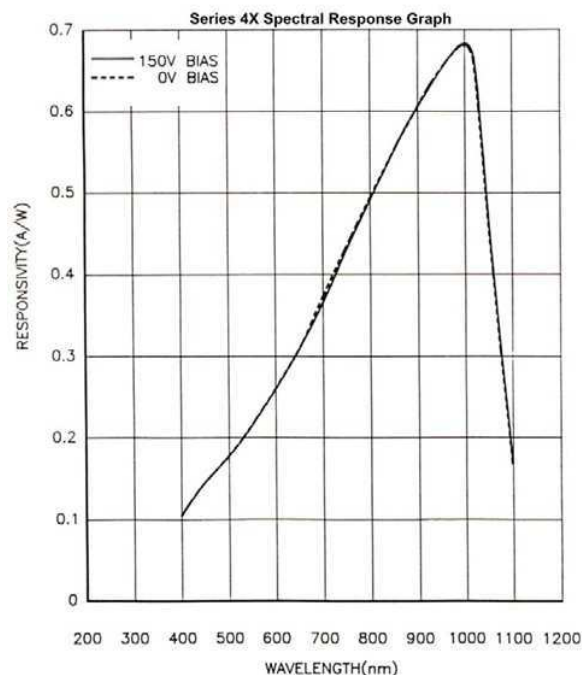
Type No.	Active Area (Total)			Responsivity A/W		Dark Current nA		NEP $\text{WHz}^{-1/2}$ $\lambda = 1064 \text{ nm}$ Typ.	Capacitance pF		Risetime ns $\lambda = 1064 \text{ nm}$ RL = 50 Ω (Typ.)	Crosstalk % $\lambda = 1064 \text{ nm}$		Package
	mm ²	mm	Sep. mm	$\lambda = 1064 \text{ nm}$		Max.	Typ.		Vr=0 V	Vr=150V		Max.	Typ.	
				Min.	Typ.			Max.	Max.					
QD50-4X	50	7.98 dia	0.2	0.35	0.40	150	10	1.7e-13	80	7	12	5	1	10
QD100-4X	100	11.3 dia	0.2	0.35	0.40	300	20	2.5e-13	155	12	12	5	1	12
QD320-4X*	320	20.2 dia	0.2	0.35	0.40	1000	60	4.3e-12	480	30	12	5	1	14

* Supplied with optional guard ring connected

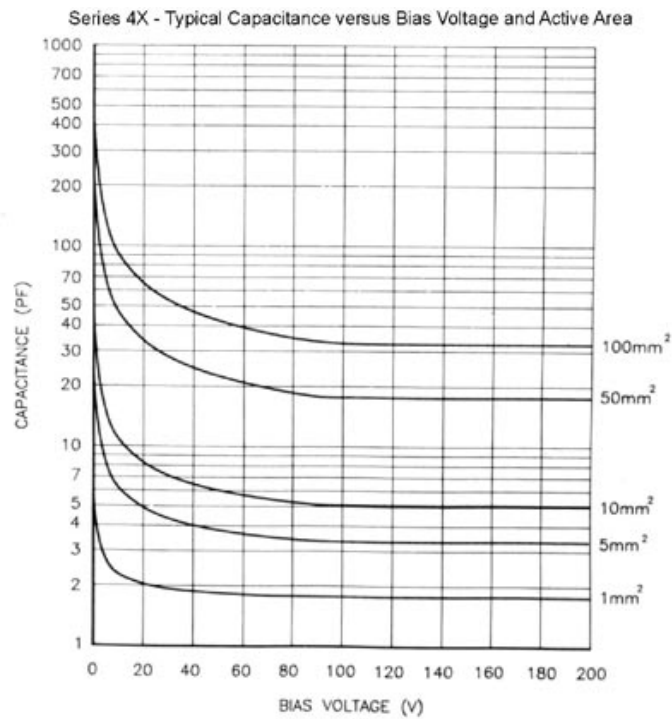
Note: Recommended operating voltage range 0 to 150 volts, for all series 4X Detectors

Highlighted items are Centronic standard products generally available from stock

Series 4X Spectral Response Graph



Capacitance versus Bias Voltage



Due to our policy of continued development, specifications are subject to change without notice.