

Blue and UV sensitive (Series 1)

Series 1 photodiodes offer a broadband spectral response extending into the UV region. The series is particularly intended for applications from 250 to 430nm where high levels of illumination occur. The detectors may be operated with reverse bias up to 10 volts or in the photovoltaic mode for best signal to noise performance. And are particularly suitable for monitoring the operation of UV lamps.

Electrical / Optical Specifications

Characteristics measured at 22°C (± 2) ambient, and a reverse bias of 30 volts, unless otherwise stated.

Single Elements

Type No.	Active Area		Responsivity A/W				Dark Current nA		NEP $\text{WHz}^{-1/2}$ $\lambda = 250 \text{ nm}$ Typ.	Capacitance pF		Package
	mm ²	mm	$\lambda = 250 \text{ nm}$		$\lambda = 436 \text{ nm}$		Max.	Typ.		Vr=0 V Max.	Vr=10V Max.	
			Min.	Typ.	Min.	Typ.						
OSD1-1	1	1.13 dia	0.03	0.04	0.12	0.16	10	1	6.0e-13	12	4	1
OSD5-1	5	2.52 dia	0.03	0.04	0.12	0.16	20	5	1.3e-12	52	12	3
OSD15-1	15	3.8 x 3.8	0.03	0.04	0.12	0.16	60	20	2.7e-12	150	35	3
OSD50-1	50	7.98 dia	0.03	0.04	0.12	0.16	500	100	6.0e-12	500	110	3
OSD100-1	100	11.3 dia	0.03	0.04	0.12	0.16	1500	400	1.2 x 10 ⁻¹¹	1000	220	13

Quadrants (Values given are per element unless otherwise stated)

Type No	Active Area			Responsivity A/W				Dark Current nA		NEP $\text{WHz}^{-1/2}$ $\lambda = 250 \text{ nm}$ Typ.	Capacitance pF		Crosstalk % $\lambda = 250 \text{ nm}$		Package
	mm ²	mm	Sep. mm	$\lambda = 250 \text{ nm}$		$\lambda = 436 \text{ nm}$		Max.	Typ.		Vr=0 V Max.	Vr=10V Max.	Max	Typ.	
				Min	Typ.	Min.	Typ.								
QD7-1	7	2.99 dia	0.2	0.03	0.04	0.12	0.16	25	2	8.4e-13	20	8	5	1	7
QD50-1	50	7.98 dia	0.2	0.03	0.04	0.12	0.16	100	20	2.7e-12	127	28	5	1	10
QD100-1	100	11.3 dia	0.2	0.03	0.04	0.12	0.16	200	40	3.8e-12	250	55	5	1	11

Linear Arrays (Values given are per element unless otherwise stated)

Type No.	No. of Elements	Array Dimensions				Responsivity				Dark Current nA		NEP $\text{WHz}^{-1/2}$ $\lambda = 250 \text{ nm}$ Typ.	Capacitance pF		Package
		Area mm ²	Width. mm	Lgth. mm	Sep. mm	$\lambda = 250 \text{ nm}$		$\lambda = 436 \text{ nm}$		Max.	Typ.		Vr=0V Max	Vr=10V Max	
						Min	Typ.	Min	Typ.						
LD2A-1	2	1.00	2.00	0.5	0.05	0.03	0.04	0.12	0.16	15	1	6.0e-13	12	4	4
LD2B-1	2	2.02	1.42	1.42	0.45	0.03	0.04	0.12	0.16	20	2	8.4e-13	22	8	4
LD20-1	20	3.6	4.0	0.9	0.05	0.03	0.04	0.12	0.16	50	5	1.3e-12	38	10	16
LD35-1	35	4.42	4.6	0.96	0.03	0.03	0.04	0.12	0.16	50	5	1.3e-12	46	15	17

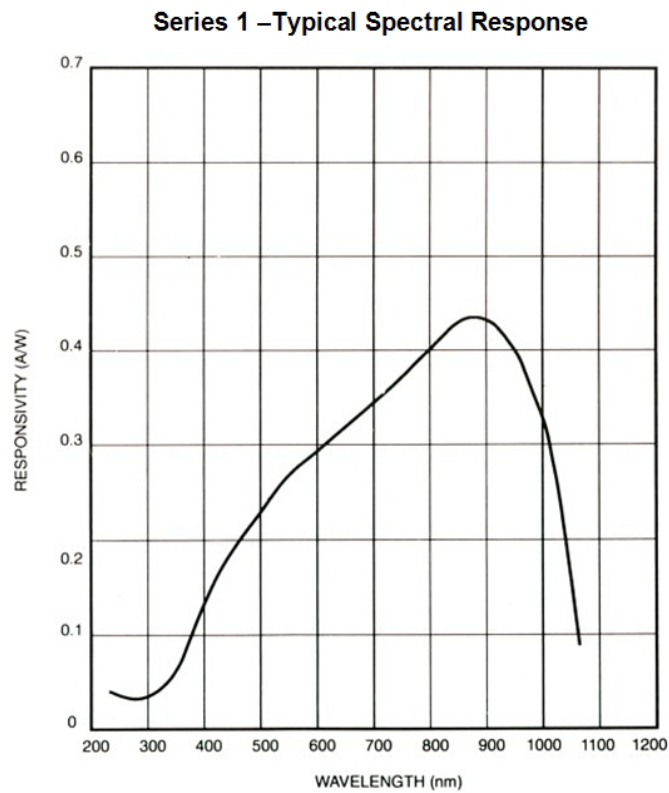
Matrix Arrays (Values given are per element unless otherwise stated)

MD25-1	5 x 5	7.29	2.7	2.7	0.1	0.03	0.04	0.12	0.16	2000	20	4.0e-12	92	15	18
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Note: Recommended operating voltage range 0 to 10 volts, for all Series 1 Detectors.

Highlighted items are Centronic standard products generally available from stock

Series 1 Spectral Response Graph



Capacitance versus Bias Voltage

Series 1 – Typical Capacitance versus Bias Voltage and Active Area

