

## Series E

### Eye Response Detectors

Series E photodiodes are Blue-enhanced detectors with high quality color-correcting filters. The resulting spectral response approximates that of the human eye.

In addition to the Series E photodiodes listed, OSI Optoelectronics can provide other photodiodes in this catalog with a variety of optical filters.



#### APPLICATIONS

- Photometry/Radiometry
- Medical Instrumentation
- Analytical Chemistry

#### FEATURES

- Human Eye Response
- TO Can Packages

Model Number	Active Area		Responsivity nA Lux <sup>-1</sup>		Dark Current (nA)		NEP (WHZ <sup>-1/2</sup> )	Capacitance (pF)		Shunt Resistance Megaohms**		Reverse Voltage (DC)	Spectral Curve	Temp. Range (°C)		Package Style †
	Area (mm <sup>2</sup> )	Dimensions (mm)	min.	typ.	max.	typ.	550 nm VR=0	Vr=0V max.	Vr=12V max.	min.	typ.	max.		Operating	Storage	
<b>OSD-E Series</b>																
OSD1-E	1	1.0 x 1.0	1	2.2	1	0.2	1.5 x 10 <sup>-14</sup>	35	7	250	1000	15	1	-25 ~ +85	-40 ~ +120	7 / TO-18
OSD3-E	3	2.5 x 1.2	3	6.6	2	0.5	1.8 x 10 <sup>-14</sup>	80	20	100	700		1			7 / TO-18
OSD5-E	5	2.5 dia.	5	11	2	0.5	1.9 x 10 <sup>-14</sup>	130	35	100	600		1			5 / TO-5
OSD15-E	15	3.8 x 3.8	15	33	10	2	5.2 x 10 <sup>-14</sup>	390	80	50	80		1			5 / TO-5
OSD60-E	100	11.3 dia.	30	56	30	8	1.2 x 10 <sup>-13</sup>	2500	520	2	10		2			72 / TO-8

Characteristics measured at 22° C (±2) and a reverse bias of 12 volts unless otherwise stated.

\*\* Shunt Resistance measured at +/- 10mV.

† For mechanical drawings please refer to pages 58 thru 69.

### Unit Conversion Table for Illuminance

The Series E photodiodes have been color corrected to provide a photopic eye response. These devices can be used as low illuminance monitors, i.e. visible light measurement instruments and adjusting brightness of visible display.

Lux lx (lm/m <sup>2</sup> )	Phot Ph (lm/cm <sup>2</sup> )	Foot-candle fc (lm/ft <sup>2</sup> )	Watt per square cm* W/cm <sup>2</sup>
1	1.000 x 10 <sup>-4</sup>	9.290 x 10 <sup>-2</sup>	5.0 x 10 <sup>-6</sup>
1.000 x 10 <sup>4</sup>	1	9.290 x 10 <sup>2</sup>	9.290 x 10 <sup>-2</sup>
1.076 x 10 <sup>1</sup>	1.076 x 10 <sup>-3</sup>	1	5.0 x 10 <sup>-5</sup>
2.0 x 10 <sup>5</sup>	1.0 x 10 <sup>1</sup>	1.9 x 10 <sup>4</sup>	1

\*Total irradiance (measured value) by the CIE standard light source "A".

### CIE Curve vs. E Type Parts

