

NIR-MIR PHOTODETECTOR COMPONENTS

EOS offers a complete product line of photodetector components for the 1.0 to 5.5 micron wavelength range. The variety of detectors allows the potential user to achieve optimum performance/price for a given application. The following table is a representative list of our standard configurations. All components can be customized according to size, package, and cooling options.

Photodiodes:

Material	Part Number	Active Dia (mm)	Operating Wavelength (μm)	Operating Temp (K)	Responsivity at λ_p (A/W) (min)	Shunt Resistance (Ω) (min)	Shunt Capacitance (pF) (typ)	NEP at λ_p , 1kHz (pW/Hz ^{1/2}) (max)	*Package
InAs	IA-0025	0.25	1.0 - 3.5	295	1.5 @ 3.2 μm	150	50	6.7	TO-18
	IA-0025/TE2	0.25	1.0 - 3.4	243	1.5 @ 3.2 μm	5k	50	1.0	TO-8
	IA-010	1.0	1.0 - 3.5	295	1.0 @ 3.2 μm	15	400	33.0	TO-18
	IA-010/TE2	1.0	1.0 - 3.4	243	1.5 @ 3.2 μm	500	400	3.5	TO-8
	IA-020	2.0	1.0 - 3.5	295	0.8 @ 3.2 μm	10	1200	55.0	TO-5
	IA-020/TE2	2.0	1.0 - 3.4	243	1.5 @ 3.2 μm	100	1200	8.0	TO-8
InSb	IS-0025	0.25	1.0 - 5.5	77	2.2 @ 5.0 μm	>10M	40	0.2	LN Dewar
	IS-010	1.0	1.0 - 5.5	77	2.2 @ 5.0 μm	>1M	400	0.7	LN Dewar
	IS-020	2.0	1.0 - 5.5	77	2.2 @ 5.0 μm	>200k	1200	1.5	LN Dewar
	IS-030	3.0	1.0 - 5.5	77	2.2 @ 5.0 μm	>150k	1800	2.5	LN Dewar
	IS-040	4.0	1.0 - 5.5	77	2.0 @ 5.0 μm	>100k	3000	3.0	LN Dewar
	IS-050	5.0	1.0 - 5.5	77	2.0 @ 5.0 μm	>50k	7000	5.0	LN Dewar
	IS-070	7.0	1.0 - 5.5	77	1.8 @ 5.0 μm	>10k	15000	6.0	LN Dewar
	IS-100	10.0	1.0 - 5.5	77	1.8 @ 5.0 μm	>2k	30000	12.0	LN Dewar

Photoconductors:

Material	Part Number	†Active Size (mm)	Operating Wavelength (μm)	Operating Temp (K)	Responsivity at λ_p (V/W) (typ)	Dark Resistance (Ω) (min)	Time Constant (μs)	NEP at λ_p , 1kHz (pW/Hz ^{1/2}) (max)	*Package
PbS	PBS-0x0	1,2,3,5	1.0 - 2.8	295	10 ⁵ - 10 ⁶	0.5 - 2.0 M	300	1.0 - 12	TO style depends on detector size
	PBS-0x0/TE2	10	1.0 - 2.8	243	2x10 ⁵ - 2x10 ⁶	1.0 - 10 M	500	0.3 - 3	
PbSe	PBSE-0x0	1,2,3,5	1.0 - 4.5	295	2000 - 15000	0.1 - 0.5 M	15	20 - 100	
	PBSE-0x0/TE2		1.0 - 4.5	243	5000 - 25000	0.2 - 2.0 M	30	5 - 25	
HgCdTe	MCT3.5-0x0	0.25	1.0 - 3.5	295	100 - 2000	200 - 1000	3.0	1 - 10	TO-5
	MCT3.5-0x0/TE2		1.0 - 3.5	243	300 - 5000	200 - 1000	5.0	0.5 - 5	TO-8
	MCT4.5-0x0	0.50	1.0 - 4.5	295	100 - 1000	100 - 500	3.0	5 - 40	TO-5
	MCT4.5-0x0/TE2	1.0	1.0 - 4.8	243	300 - 5000	100 - 500	5.0	1 - 8	TO-8
	MCT5.0-0x0		1.0 - 5.0	295	50 - 500	50 - 200	1.0	12 - 100	TO5
	MCT5.0-0x0/TE2	2.0	1.0 - 5.4	243	200 - 2000	50 - 200	2.0	1 - 10	TO8

**Listed is standard package. Other packages are available; Please consult factory for details.*

†Standard square sizes listed. Other sizes, rectangular elements, and multi-element configurations available.