

YAG Series

Nd:YAG Optimized Photodetectors

The YAG Series of photo detectors are optimized for high response at 1060 nm, the YAG laser light wavelength, and low capacitance, for high speed operation and low noise. These detectors can be used for sensing low light intensities, such as the light reflected from objects illuminated by a YAG laser beam for ranging applications. The SPOT Series of quadrant detectors are well suited for aiming and pointing applications. These are all N on P devices.

These detectors can be used in the photovoltaic mode, for low speed applications requiring low noise, or in the photoconductive mode, with an applied reverse bias, for high speed applications.



APPLICATIONS

- Nd:YAG Pointing
- Laser Pointing & Positioning
- Position Measurement
- Surface Profiling
- Guidance Systems

FEATURES

- Nd:YAG Sensitivity
- High Breakdown Voltage
- Large Area
- High Speed
- High Accuracy

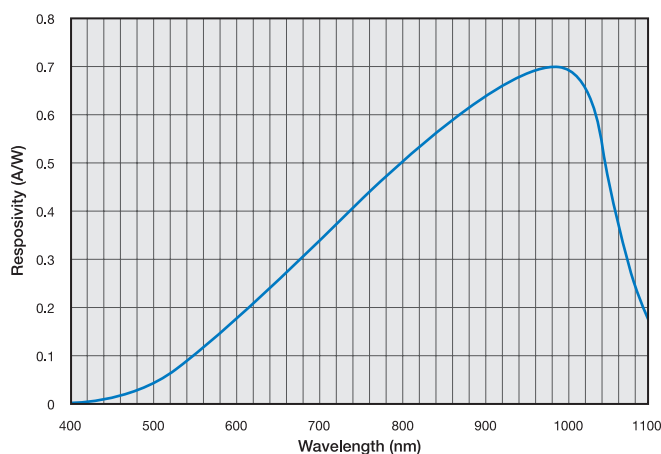
Model Number	Active Area Per Element		Peak Responsivity Wavelength	Responsivity (A/W)	Element Gap	Dark Current (nA)		Capacitance (pF)		Rise Time (ns)	NEP (W/√Hz)	Reverse Voltage (V)	Temp Range (°C)		Package Style †
	Area (mm ²)	Dimension (mm)				λ _p nm	1000nm	mm	-180 V		-180 V		1064 nm -180 V 50 Ω	1064 nm -180V	
			typ.	typ.	typ.	typ.	max.	typ.	max.	typ.	typ.	max.			
Nd:YAG Optimized Single Element															
PIN-5-YAG	5.1	2.54 φ	1000	0.6	-	50	-	5	-	5	1.2 e-14	200	-40 ~ +100	-55 ~ +125	2 / TO-5
PIN-100-YAG	100	11.28 φ				75	1000	25	-	30	2.5 e-14				20 / Metal
Nd:YAG Optimized Quadrant Photodetectors**															
SPOT-9-YAG	19.6	10 φ	1000	0.6	0.1	35	250	8	15	7	3.2 e-14	200	-20 ~ +60	-20 ~ +80	20 / Metal
SPOT-15-YAG	38.5	14.0 φ			0.2	1000	3000	15	30	8	3.4 e-14				

† Measured at $V_{bias} = -180V$, $T=23^{\circ}C$

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

** Specifications are per element

Typical YAG Series Responsivity



Typical Capacitance per Unit Area vs. Bias Voltage

