

AMPLIFIED

Photodetectors

EOT's Amplified Photodetectors contain PIN photodiodes that utilize the photovoltaic effect to convert optical power into an electrical current and a fixed gain transimpedance amplifier allowing measurement of <1 mW input powers.

When terminated into 50 Ω into an oscilloscope, the pulsewidth of a laser can be measured. When terminated into 50 Ω into a spectrum analyzer, the frequency response of a laser can be measured.

EOT's Amplified Photodetectors come with their own wall plug-in power supply. Plugging a coaxial cable into the photodetector's SMA or BNC output connector and terminating into 50 Ω at the oscilloscope or spectrum analyzer is all that is required for operation.



FEATURES

- Built-in transimpedance amplifier
- Small footprint
- External wall plug-in power supply

OPTIONS

- Detector Material
- Active Area
- Fiber-coupled or free space options available

APPLICATIONS

- Monitoring high repetition rate, externally modulated CW lasers
- Viewing <1 mW laser powers

Specifications		
Part No. (Model)	120-10013-0001 (ET-2030A) ¹	120-10036-0001 (ET-3000A) ¹
Detector Material	Silicon	InGaAs
Rise Time/Fall Time (ps)	<50 / <500	<40 / <400
Conversion Gain	450 V/W at 830 nm	900 V/W at at 1300 nm
Power Supply (VDC)	24	24
Bandwidth	30 kHz to 1.2 GHz	30 kHz to 1.5 GHz
Active Area Diameter (μm)	400	100
Acceptance Angle (1/2 angle)	10°	20°
Noise Equivalent Power ²	<60 pW/√Hz at 830 nm	<30 pW/√Hz at 1300 nm
DC Monitor Output		
Maximum Linear Rating	1.3 V peak	1.3 V peak
Mounting (Tapped Holes)	8-32 or M4	8-32 or M4
Output Connector	BNC	BNC
Fiber Optic Connection ³	N/A	N/A

Notes:

1. AC coupled.
2. Noise Equivalent Power (NEP) is determined via short circuit output.
3. Multi-mode fiber available. May limit bandwidth.
4. NOTE: All specifications apply for a 50 Ω termination unless otherwise noted.

Amplified Detector Conversion Gain

