



Electro-Optics Technology, Inc.



海纳光学

电话: 0755-84870203

网址: www.highlightoptics.com

<10 GHz

Photodetectors

Innovative High Quality
Laser Solutions



FEATURES

- Small footprint
- Internal voltage bias
- DC to 2 GHz

OPTIONS

- External wall plug-in power supply available
- Fiber-coupled or free space options available
- Detector Material

APPLICATIONS

- Monitoring the output of Q-switched lasers
- Monitoring the output of mode-locked lasers

EOT's <10 GHz Photodetectors contain PIN photodiodes that utilize the photovoltaic effect to convert optical power into an electrical current.

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 <10 GHz Photodetectors come with their own internal bias supply consisting of long-life lithium cells. Plugging a coaxial cable into the photodetector's BNC output connector and terminating into 50 Ω at the oscilloscope or spectrum analyzer is all that is required for operation.



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SPECIFICATIONS

| | | | | | | |
|-------------------------------------|---|---|---|--|--------------------------|--------------------------|
| Part No. (Model) | 120-10011-0001 (ET-2030) | 120-10028-0001 (ET-2040) | 120-10133-0001 (ET-2060) | 120-10134-0001 (ET-2070) | 120-10034-0001 (ET-3000) | 120-10050-0001 (ET-3010) |
| Detector Material | Silicon | Silicon | Silicon | Silicon | InGaAs | InGaAs |
| Rise Time/Fall Time | <300 ps/<300 ps | <30 ns/<30 ns | <320 ps/<320 ps | 3 ns/3 ns | <175 ps/<175 ps | <175 ps/<175 ps |
| Responsivity | 0.47 A/W at 830 nm | 0.6 A/W at 830 nm | 0.47 A/W at 830 nm | 0.56 A/W at 830 nm | 0.9 A/W at 1300 nm | 0.9 A/W at 1300 nm |
| Power Supply | 9 VDC | 24 VDC | 9 VDC | 24 VDC | 6 VDC | 6 VDC |
| Bandwidth | >1.2 GHz | >25 MHz | >1.1 GHz | >118 MHz | >2 GHz | >2 GHz |
| Active Area Diameter | 0.4 mm | 4.57 mm | 0.4 mm | 2.55 mm | 100 μm | 100 μm |
| Dark Current | <0.1 nA | <10 nA | <0.1 nA | <10 nA | <2.0 nA | <3.0 nA |
| Acceptance Angle (1/2 angle) | 10° | 60° | N/A° | 50° | 20° | N/A° |
| Noise Equivalent Power | <0.01 pW/√Hz | <0.09 pW/√Hz | <0.01 pW/√Hz | <0.10 pW/√Hz | <0.03 pW/√Hz | <0.03 pW/√Hz |
| Maximum Linear Rating | CW current: 3 mA Pulse current: 3 mA | CW current: 2 mA Optical input: 3 mW | CW current: 3 mA Optical input: 3 mA | CW current: 2.5 mA Pulse current: 15 mA | CW current: 5 mA | CW current: 5 mA |
| Mounting (Tapped Holes) | 8-32 or M4 | 8-32 or M4 | 8-32 or M4 | 8-32 or M4 | 8-32 or M4 | 8-32 or M4 |
| Output Connector | BNC | BNC | BNC | BNC | BNC | BNC |

Product specifications are subject to change. All products are RoHS compliant.

° Includes FC receptacle

