

Discrete Amplification Photon Detector Thermoelectrically Cooled Device Evaluation Module



Amplification Technologies DEM2DAPD10 series evaluation module is a high-speed module designed for testing and evaluation of thermoelectrically cooled multichannel Discrete Amplification Photo Detector (DAPD) in TO-8 package.

The DEM2DAPD10 series evaluation module consists of a low noise package with built-in bias filtering circuit and RF analog output. The module is designed for comprehensive evaluation of DAPD in TO-8 packages in all operating modes. It allows for the easy use of various DAPD Thermoelectrically cooled devices as well as user defined operating voltage and detector temperature for optimal signal detection, an ideal tool to develop and test the DAPD for specific applications.

The DEM2DAPD series evaluation module is useful for detection of light pulses from single photon to several thousand photons, as it allow easy observance of a single electron response pulse. The module could be coupled directly to an external amplifier of the user's choice. We recommend Mini-Circuits ZX60-4016E S+, 20dB, 20-4000MHz).

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Specifications (at an ambient temperature of 25°C)

Parameter	DEM2DAPD10 series				Unit
	-018	-030	-050	-100	
Active area diameter	0.18	0.30	0.50	1.00	mm
Single Electron Response output voltage	2 - 4	2.5 - 3	1 - 2	0.5 - 1.5	mV
Max Output voltage	0.2 - 0.5	0.4 - 1	0.6 - 1.8	1.2 - 5	V
Output impedance after external amplifier	50				Ω
Connectors	SMA connectors for power supply & signal output, TE cooler and thermistor				
Temperature range of the sensor	From 25 to -30°				°C
Dimensions	Diameter 60, height 40				mm

Module Dimensions (unit: mm)

Basic circuit diagram for DAPD DEM