

Photek AuraTek Multi-Anode Photomultiplier Tubes (MAPMT)

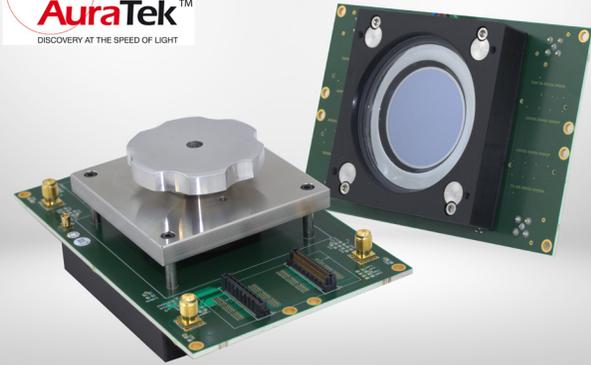
From our partners at Photek:

MAPMT228 Multi-Anode MCP-PMT

The AuraTek **MAPMT228** is a next generation Multi-Anode Micro-Channel Plate Photo-Multiplier Tube (MCP-PMT). It can be configured as a multi-channel single photon counter or analog photon pulse analyzer. The 1024 individual anodes are arranged in a 32 x 32 pattern with 0.88 mm pitch, resulting in a 28.16 mm square active area. Connection of the high density anode output is made using Photek's proprietary interconnect process based on an Anisotropic Conductive Film (ACF). Customers can request custom configurations of the full 1024 anodes via high density connectors, or group the anodes to form unique readout geometries. The timing performance is state-of-the-art, with pulse rise-time of <175 ps and single photon transit time spread of <40 ps rms per channel.

MAPMT253 Multi-Anode MCP-PMT

The AuraTek **MAPMT253** is a next generation Multi-Anode Micro-Channel Plate Photo-Multiplier Tube (MCP-PMT). It can be configured as a multi-channel single photon counter or analog photon pulse analyzer. The 4096 individual anodes are arranged in a 64 x 64 pattern with 0.88 mm pitch, resulting in a 53 mm square active area. The overall tube is 59 mm square, enabling efficient tiling of multiple MAPMT253s to cover large areas. Connection of the high density anode output is made using Photek's proprietary interconnect process based on an Anisotropic Conductive Film (ACF). Customers can request custom readout configurations of the full 4096 anodes via high density connectors, or group the anodes to form unique readout geometries. The timing performance is state-of-the-art, with pulse rise-time of <175 ps and single photon transit time spread of <40 ps rms per channel.



Features:

- ⊕ True noiseless photon counting
- ⊕ 430 ps FWHM pulse width
- ⊕ Transit time spread of < 40 ps rms
- ⊕ Extremely low dark counts
- ⊕ High density anodes
- ⊕ Customer configurable anode readout and interconnect via proprietary ACF technology
- ⊕ Immunity to magnetic fields

Applications:

- ⊕ High Content Screening
- ⊕ Time Resolved Spectroscopy
- ⊕ LIDAR
- ⊕ Wavelength Shifting Fiber Readout
- ⊕ Scintillating/Cherenkov Fiber Readout
- ⊕ Microplate Readout
- ⊕ Beam monitor
- & more



Product Specifications

Detector Characteristics

	MAPMT228	MAPMT253
● Window	Fused Silica or Fiber Optic	
● Active Area	26.5 x 26.5 mm	53 x 53 mm
● Electron Multiplier	Dual MCP	
● Anode Format	32x32	64 x 64
● Anode Pitch	0.828 mm	
● Photocathode	Solar Blind, Bialkali, S20, or S25	

Single Photon Response

	MAPMT228	MAPMT253
● Dark Counts per Channel	<2.25 cps	<2 cps
● Pulse Rise Time (10% to 90%)	<175 ps	
● Pulse Width	<430 ps FWHM	
● Transit Time Spread	<40 ps RMS	
● Pulse Height Distribution	100% FWHM	
● Linear Total Count Rate	Up to 10 MHz	

Maximum Ratings

	MAPMT228	MAPMT253
● Sensor High Voltage	< 3000 V	< 3500 V
● Operating Temperature	-50 to +50°C	
● Storage Temperature	-50 to +50°C	

For complete product details and specifications, visit www.photek.com to review the product datasheet. Photek is accredited to ISO 9001 and ISO 14001.

