

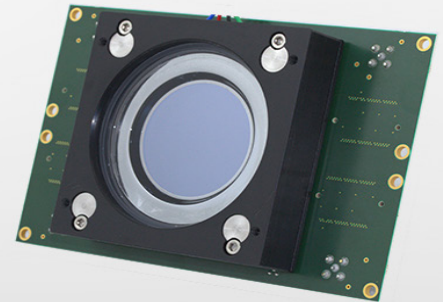
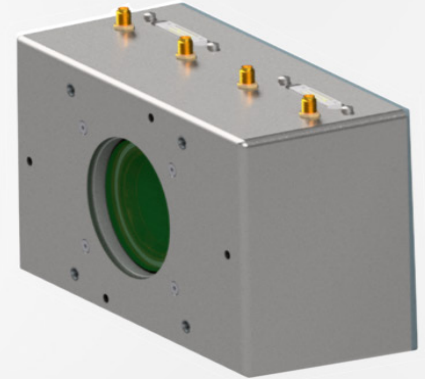
Photek AuraTek Photon Counting System

From our partners at Photek:

AuraTek is the next generation Multi-channel Photon Counter offering excellent single photon timing of <math><40\text{ps rms}</math>, high density adaptable channel formats, and with optional integrated readout electronics.

Three formats are currently available PCS-256, MAPMT228 and MAPMT253. Here, we will overview the Photon Counting System.

The **AuraTek Photon Counting System (PCS-256)** is an innovative, photon counting system that combines a Multi-Anode MCP-PMT with the high performance TOFPET readout electronics. The easy-to-use system contains 256 independent, high performance photon counting channels, each having a time stamp with 44 ps resolution and timing performance of <math><100\text{ ps rms}</math> after amplitude walk correction. The system is self-triggering and event driven, with time and amplitude data provided for each photon detected. The maximum count rate for each channel is 160 kcps, with a maximum total system count rate of about 10 Mcps. An optional user provided event identifier can be time stamped and included in the data stream by replacing one of the 256 anodes with an external input. The 160 MHz clock used by the sensor head is available to synchronize external circuits, or optionally, the user can provide their own 160 MHz clock. A Gigabit Ethernet link (640 Mbps max data rate) makes the final connection to a data acquisition computer providing online data display and storage of raw data to disk for later processing. The PCS256 is available with any of Photek's high sensitivity photocathodes, each providing high quantum efficiency with extremely low dark counts for optimal signal-to-noise performance. Customization of the PCS-256 for your specific needs includes; fibre optic input window for proximity focusing, multi-photon pulse readout, and varying pixel size and geometry using Photek's proprietary Anisotropic Conductive Film technology. Software is provided to allow real-time monitoring of data and to optimize data post-processing.



Applications:

- ⊕ High Content Screening
- ⊕ Time Resolved Spectroscopy
- ⊕ Wide Field Time Correlated Single Photon Counting
- ⊕ Fluorescence Lifetime Imaging Microscopy (FLIM) & more

Product Specifications

Detector Characteristics

⊕	Window	Fused Silica or Fiber Optic
⊕	Active Area	26.5 x 26.5 mm
⊕	Electron Multiplier	Dual MCP
⊕	Anode Format	16 x 16
⊕	Anode Pitch	1.656 mm
⊕	Photocathode	Solar Blind, Bialkali, S20, or S25

Single Photon Response

⊕	Dark Counts per Channel	~2 cps
⊕	Time Stamp Resolution	44 ps
⊕	Transit Time Spread	<100 ps
⊕	Channel Trigger Rate (Maximum)	160 kHz

Maximum Ratings

⊕	Sensor High Voltage	< 3000 V
⊕	Average Total Count Rate	107 cps
⊕	Operating Temperature	-50 to +50°C
⊕	Storage Temperature	-50 to +50°C
⊕	Power	12V @ 5 A
⊕	Sensor Head (WxHxD)	188 mm x 120 mm x 82 mm

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



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