

# Photon Detector

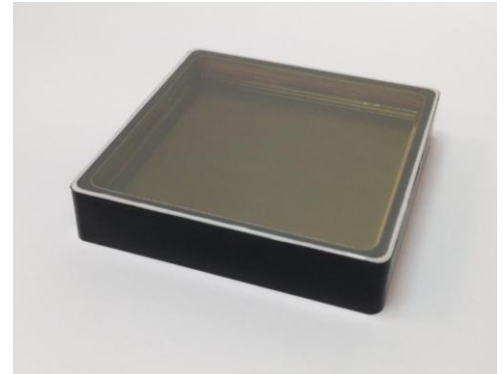
# XP85022

**25µm MCP-PMT  
32x32 Anode  
53 mm Square**

## PLANACON®

### Applications

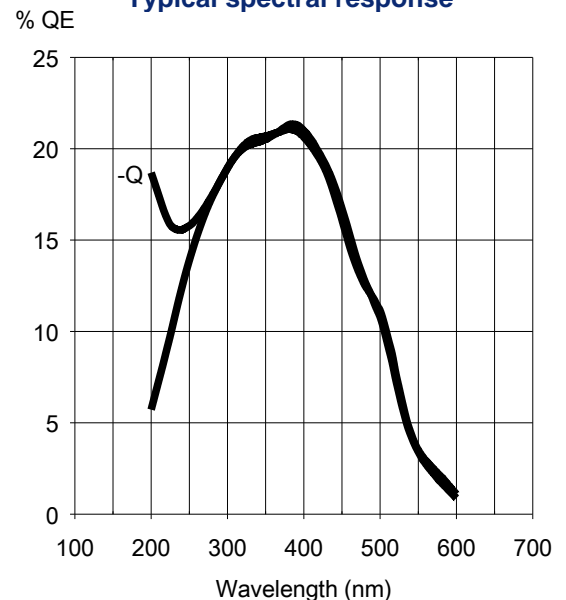
- ✓ Specialized Medical Imaging
- ✓ Cherenkov – RICH, TOF, TOP, DIRC
- ✓ High Energy Physics Detectors
- ✓ Homeland Security



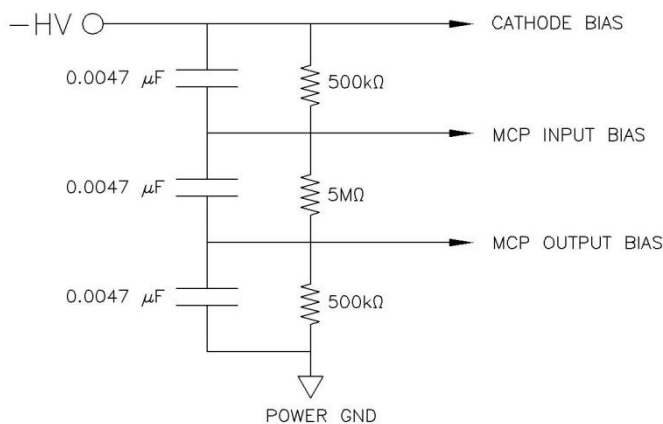
Description	
Window options	Schott 8337B or equivalent, UVFS (-Q)
Photocathode	Bialkali
Multiplier structure	MCP chevron (2), 25 µm pore, 40:1 L:D ratio
Anode structure	32x32 array, 1.1 / 1.6 mm (size / pitch)
Active area	53x53 mm
Package open-area-ratio	80%

Photocathode characteristics	Min	Typ	Max	Unit
Spectral range:	200		650	nm
Maximum sensitivity at		380		nm
Sensitivity:				
Luminous *	50	60		µA/lm
Blue *	7.5	8.5		µA/lmF
Radiant, at peak		70		mA/W
Quantum Efficiency		22		%
Characteristics	Min	Typ	Max	Unit
Overall Voltage for 10 <sup>5</sup> Gain *		1800	2400	V
Total anode dark current @ 10 <sup>5</sup> gain *		2	10	nA
Rise time		0.6		ns
Pulse width		1.8		ns

Typical spectral response

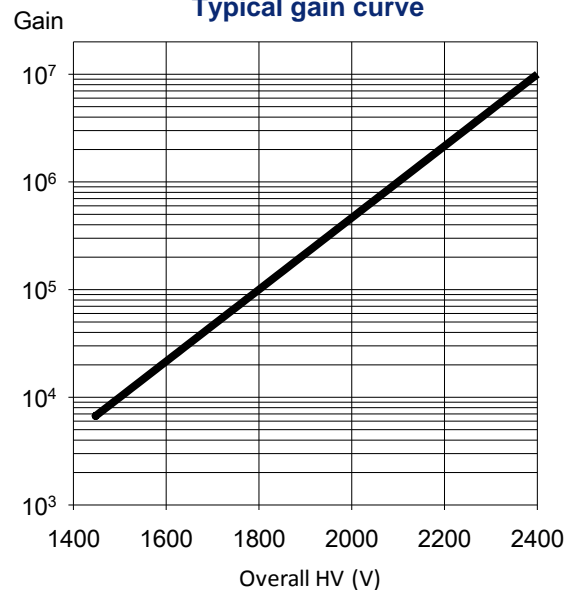


### Recommended Voltage Divider (not included)



CAUTION: POWER GROUND CONNECTION AND UNUSED ANODES MUST BE CONNECTED TO GROUND FOR SAFETY AND PROPER TUBE OPERATION

Typical gain curve



\* Characteristic measured and recorded on the test ticket of each tube

# PHOTONIS

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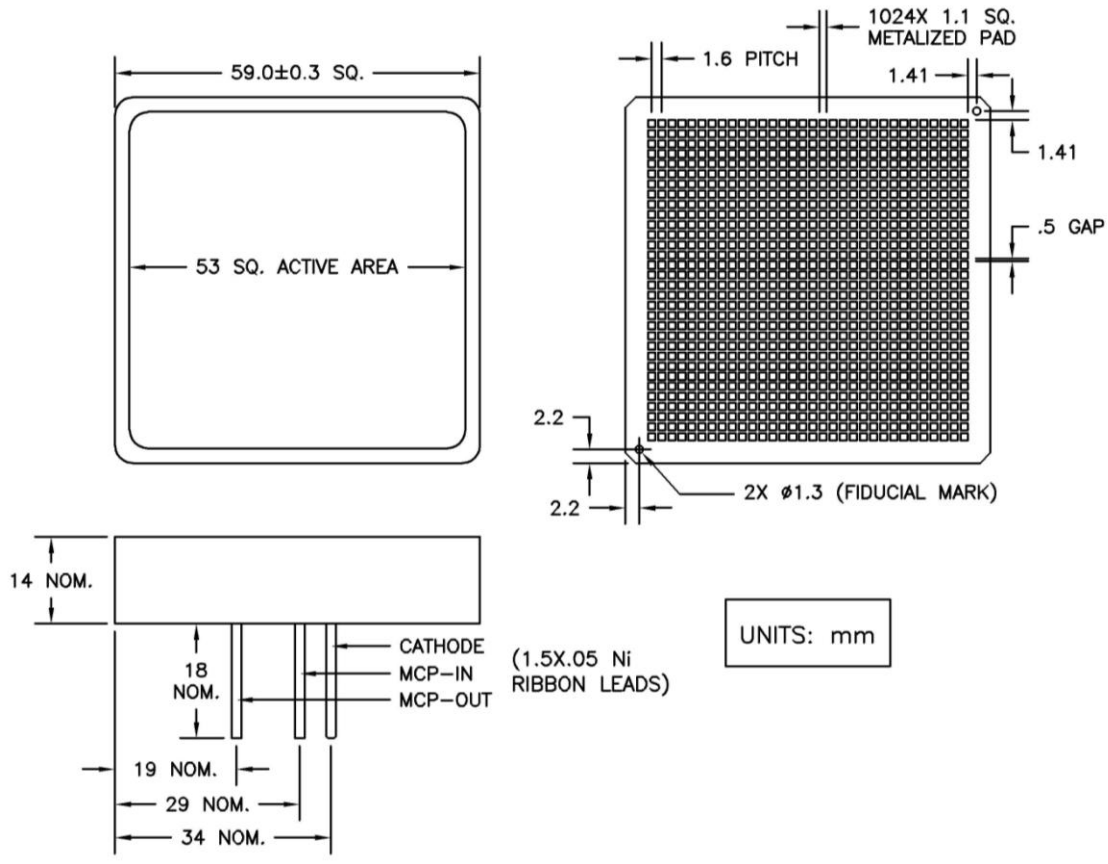
Rev10-Jan14

# Photon Detector

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Outline (dimensions in mm)

## XP85022



Limiting values	Min	Max	Unit
Cathode to MCP <sub>in</sub> voltage		500	V
MCP <sub>in</sub> to MCP <sub>out</sub> voltage		2000	V
MCP <sub>out</sub> to Anode voltage		500	V
Overall HV when using recommended voltage divider		2400	V
Total anode current under uniform illumination		3	μA
Ambient temperature:			
Operating Temperature	0	+50	°C
Storage Temperature (for extended periods)	-15	+50	°C

\* Warning: Continuous operation at maximum ratings may result in shorter product life or unreliable performance.

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