

Hybrid Photo Diodes

SENSITIVE  
SIGNAL  
AMPLIFICATION



# Count more photons

Photonis custom manufactures Hybrid Photo Diodes to detect the largest amount of photons while eliminating any extra noise. Hybrid Photo Diodes combine vacuum-based image intensification techniques with a silicon diode. Ideal for single photon counting applications, with Photonis' Hybrid Photo Diode solutions you will be the first to examine new phenomena.

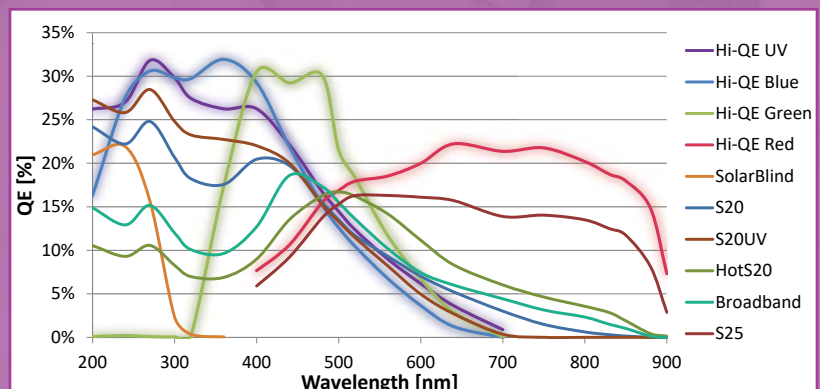


## Optimized spectral range

**By combining sensitivity of the photomultiplier tubes with the spectral response of our Hi-QE photocathodes, your detector will perform exactly as expected.**

Photonis offers the Hi-QE photocathode option in four versions: UV, blue, green and red. The improved spectral response is achieved by limiting the response range when compared to the broader range of a traditional S20 or S25 photocathode. With Photonis' Hi-QE photocathode, quantum efficiency increases by up to 50% and the dark count rate is lowered by as much as 10X.

Figure 1



## Custom designed detectors

Photonis' ability to provide customized photon detectors will allow you to get your research started quickly. Below are some customization options available for our Hybrid Photo Diodes:

- Proximity or electrostatic focus
- Large detection area (16, 18, 25, 40 or 72 mm)
- Single or multi-stack MCP configuration
- Single or multi-pixel configuration
- Hi-QE photocathode option



## Unique Features

Hybrid Photo Diodes are available in a wide variety of formats, proximity or electrostatically focused. They all provide excellent single photon detection capability, with an extremely good linearity and fast timing. Additionally, Photonis offers both quartz and fiber optic entry windows to avoid any coupling loss in the connection. It is these unique features which make Photonis' Hybrid Photo Diodes ideal for the following applications.

- **High Energy Physics Research**
- **Specialized Medical Imaging**
- **Space Exploration**
- **Single Photon Counting**



# PHOTONIS

Scientific Detectors

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