

# Customized Photo Multipliers and Modules

*based on CPM Technology*

*Preliminary General Information*

Possible configurations:



*Single Photon Detection to DC measurement  
Spectral Range from UV to IR*

## APPLICATIONS

- ❖ Photon counting
- ❖ Luminescence & fluorescence spectroscopy
- ❖ Microplate readers
- ❖ Clinical diagnostics
- ❖ DNA & cell analysis
- ❖ Particle measurements
- ❖ Industrial spectroscopy
- ❖ Nucleic acid amplification (PCR)

## FEATURES

- ❖ Extremely low background noise
- ❖ Best low light level detection limits
- ❖ High dynamic range & gain
- ❖ Low microphonic & magnetic sensitivity
- ❖ Compact size & rugged design
- ❖ Multiple photocathode and window selections
- ❖ Plug and play for shortest design-in and time-to-market
- ❖ Customizations and added features available

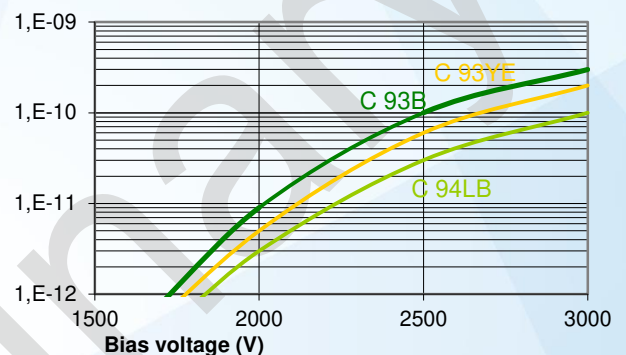
ProxiVision is pleased to introduce the Channel Photomultiplier Technology as a new product line focussing on LifeScience and Analytical applications - now available as Customized PhotoMultiplier (CPM) detectors and modules.

The CPM is an ultra high sensitivity optical detector which replaces conventional photomultipliers (PMTs) and avalanche photo diodes (APDs). This device uses a unique detector principle, resulting in a compact design with ultra high gain, high dynamic range, extremely low noise and fast response.

This high-performance detector offers fundamental advantages for analytical instrumentation applications e.g. such as emission spectroscopy, fluoroscopy and bio- and chemo luminescence. The CPM also delivers important advantages in life science products, industrial and medical equipment, and high-energy physics.

The CPM can be used in analog-DC mode, single photon counting mode and in nuclear spectroscopy (when coupled to scintillation materials like BGO, LSO, NaI, etc.). ProxiVision as a well experienced developer and manufacturer of vacuum technology and photocathodes offers a choice of window materials and photocathodes to cover the spectrum from 115 nm (UV range) to 900 nm (NIR).

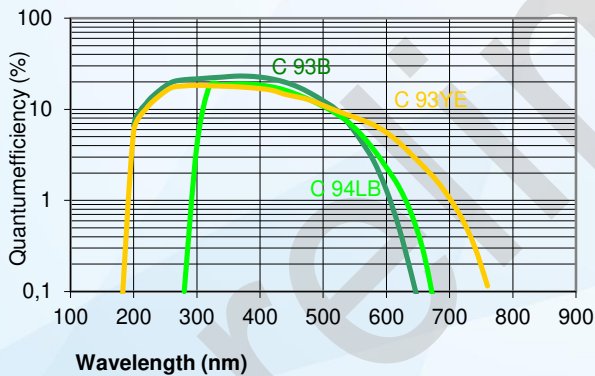
Dark Current / mA



The CPM detectors are available in different formats, from 5 mm to 15 mm active diameter. In addition all CPM types can be offered incorporated in modules with different electronics for read-out signal such as DC-Voltage output, TTL-output or signal output via RS232 interface.

ProxiVision also offers custom configurations for specific applications.

Spectral response for BioMed Applications



When compared to conventional PMTs, the CPM improves anode sensitivity by one order of magnitude, while lowering darknoise by one to two orders of magnitude. The noise level shows extreme stability over time with no "bursts". The extremely low noise results in a higher dynamic range than conventional PMTs and extends detectable limits for many applications.

Current Amplification

