

**Powerful
Efficient
Innovative**



HIGH COLLECTION EFFICIENCY MCPs

The new High Collection Efficiency MCPs from Photonis offer significant improvement over traditional MCPs in terms of collection efficiency.

In order to maximize the MCP gain, it has been demonstrated that the collection efficiency (CE) should be optimized in order to obtain a high value of Detection Quantum Efficiency (DQE).

With Hi-CE MCPs from Photonis, you can increase your collection of incoming electrons 90%, compared to 50 - 65% in traditional MCPs. This innovative technology is ideal for applications which do not require sub-nanosecond time resolution. It is available in a variety of our custom photon detectors, including the MCP-PMTs, Image Intensifier Tubes, and even the Imaging Photon Counter.

Optimizing Collection Efficiency: Hi-CE MCPs

Figure 1

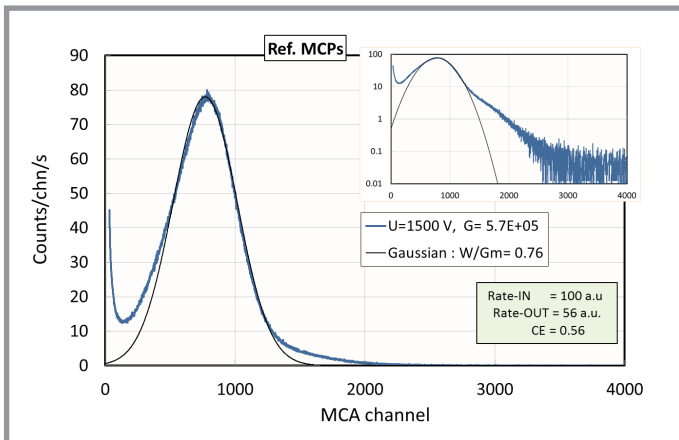
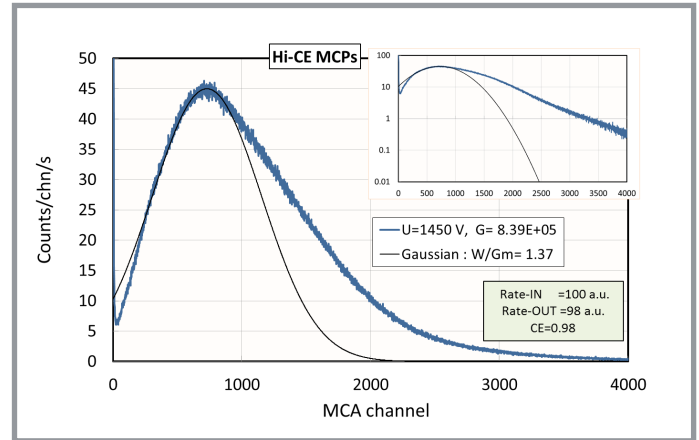


Figure 2



Note: The Hi-CE MCPs shown in Figure 2 were used in an MCP-PMT detector from Photonis

Figure 1 and Figure 2 show the typical Pulse Height Distribution (PHD) of both traditional MCP (Figure 1) and Hi-CE MCP (Figure 2). The flux of photoelectrons to the MCP-in was calibrated (Rate-in) and the amount of electron pulses arriving to the anode (Rate-out) was obtained from the PHD measurements. Both MCPs have an open aspect ratio of 0.64, however, the CE is much better for the Hi-CE MCP (0.98 to 0.56) resulting in an increase of the DQE by almost a factor of two.



The Photonis Hi-CE option is available in a wide range of custom-designed photonic detection solutions that would normally use a standard MCP, to improve overall detection efficiency

Image Intensifiers | MCP-PMTs | Imaging Photon Camera

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