

PHYSICAL CHARACTERISTICS of MCPS

Quality Diameter:	40mm Minimum
Center-to-Center Spacing:	12 μ m Nominal
Pore Size:	10 μ m Nominal
Bias Angle:	8° ± 1°
Open Area Ratio:	55% Minimum
Quality Level:	Detection ¹
Additional Coating:	Cesium Iodide (CsI)
Coating Location:	Input Side of Input MCP
Coating Thickness:	3000 Angstroms ± 300 Angstroms
Coating Diameter:	44.45 mm (1.750") ± 0.13 mm
Coating Channel Penetration:	1.5 Channel Diameters Minimum

ELECTRICAL CHARACTERISTICS of DETECTOR

Electron Gain @ 2400 Volts Maximum:	1 x 10 ⁷ Minimum
Bias Current Range @ 2400 Volts:	8-79 Microamps
Resistance @ Gain Voltage:	30-300 Megohms Reference
Dark Count:	5 cts/sec/cm ² Maximum
Pulse Height Distribution @ Gain Voltage:	100% Maximum
Linear Output Current Density: (Microamps/cm ²)	Typically 10% of Bias Current Density

¹Inspection level applies prior to coating. Non-Uniform appearances in coatings which do not affect electrical performance are acceptable under PHOTONIS test conditions.

²The electrical characteristics are measured at the optimum MCP operating voltage (the lowest bias voltage required to attain the specified values).

The Chevron™ Model 3040MA detector assembly contains two Detection Quality Advanced Performance Long-Life™ Microchannel Plates and a metal anode readout mounted in stainless steel hardware. The input surface of the input MCP is coated with Cesium Iodide. The assembly is bakeable to 80°C.

Detection Quality detector assemblies are intended for use in applications where image quality is not critical. These economical devices are used as signal detectors and amplifiers and are typically used in applications such as time-of-flight mass spectrometry, residual gas analysis (RGA), or point source detectors.

