

Detailed Specifications

BDL450MAX-MCP optics	
Glass display	Fused silica glass coated with indium-tin oxide conductive layer and P31 phosphor (ZnS:Ag:Cu-green, 525 nm wavelength)
Angle of acceptance	60° from sample at a distance of 37 mm
Retarding Field Analyzer	Concentric assembly of hemispherical grids
Working distance from sample	10 mm
Grid material	Gold-coated S-Steel wire mesh (100 mesh, 81% transparency)
Energy resolution	0.2% -0.5% at low modulation voltage
Monitoring	4.5" standard viewport
Linear motion	Up to 150 mm retraction from the sample; linear ball bearing and acme thread with all spring electrical connections
Magnetic shielding	Mu metal cylinder with front cover for maximum attenuation
Assembly	Extreme high vacuum compatibility with stainless steel, high alumina and Au-plated copper alloy materials
Mounting	CF4.5" (DN63CF) with Oversized tubing: 76mm (3") O.D.
Bakeability	Under vacuum, 250°C maximum

Integral miniature electron gun	
Beam energy	LEED: 0-750 eV AES: 0-3000 eV
Beam current	LEED: 2 µA at 100 eV and 0.5 mm beam size AES: up to 100 µA at 3 keV
Beam size	From 1 mm to 250 µm-adjusted by wehnelt potential, limited by exchangeable aperture down to 50 µm
Electron source	Tungsten 2% thoriated filament (standard) or single crystal LaB ₆ filament (optional)
Energy spread	0.45 eV (thoriated-tungsten filament)
Overall size	10 mm lens diameter and 80 mm length

Microchannel Plates	
Working area	41 mm
L/D ratio	40:1
Channel diameter	12 microns
Center-to-center spacing	15 microns
Plate thickness	0.48 mm
Bias angle	8°
Electron gain	10 ⁴ to 10 ⁵ per plate