

Detailed Specifications

BDL800IR-MCP-100DEG 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	100° from sample at a distance of 33 mm
Retarding Field Analyzer	Concentric assembly of hemispherical grids
Working distance from sample	10 mm
Grid material	Gold coated St-Steel wire mesh (100 mesh, 81% transparency)
Energy resolution	0.2% -0.5% at low modulation voltage
Monitoring	8" standard viewport
Linear motion	Up to 150 mm retraction from the sample; linear ball bearing and acme thread with all spring electrical connections
Integral shutter	Manual shutter driven by a rotary feedthrough
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	CF8" (DN150CF) double-sided conflat flange w. sample distance 145 mm - 400mm
Bakeability	Under vacuum, 250°C maximum

Integral miniature electron gun	
Beam energy	LEED: 0-750 eV AES: 0-3000 eV
Beam current	LEED: 2 μ A at 100 eV and 0.5 mm beam size AES: up to 100 μ A at 3 keV
Beam size	From 1 mm to 250 μ m-adjusted by wehnelt potential, limited by exchangeable aperture down to 50 μ m
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	75 mm
L/D ratio	40:1
Channel diameter	25 microns
Center to center spacing	32 microns
Plate thickness	1.0 mm
Bias angle	8°
Electron gain	10 ⁴ to 10 ⁵ per plate