

For current pricing, please see our website.

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M² Beam Quality Analysis Extension Sets for Camera and Slit Beam Profilers

NEW
versions



BC1M2-150
BC106-VIS CCD Beam Profiler (Sold Separately) Shown Mounted onto the Extension Set

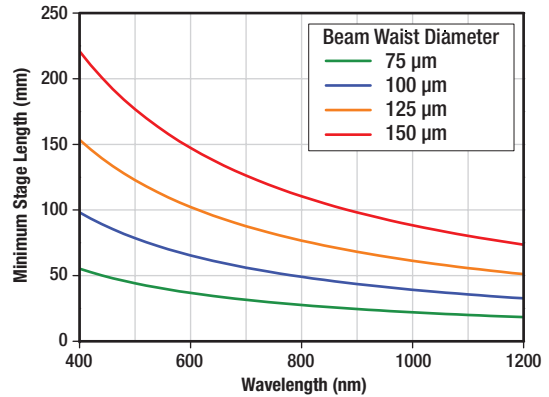
These optional M² Analysis Extension Sets allow automated, motorized, computer-controlled M² analysis when combined with our Camera Beam Profilers (BC100 Series featured on page 1615) or Slit Beam Profilers (BP100 Series featured on page 1614). Each extension set includes the motorized translation stage as well as the necessary hardware to mount the appropriate beam profiler onto the stage. Via the RS232 connection, the translation stage is controlled by the beam profiler's M² software module. Alternatively, a USB port can be used with the included adapter.

During operation, the profiler is automatically moved, step-wise, along the beam path and analyzes the beam at various positions. The beam quality is determined via curve fitting of the beam diameter versus profiler position. To perform the tests, the laser beam must be aligned with the translation path of the stage and focused within a certain divergence angle. The divergence angle of unfocused, nearly parallel beams can be accurately determined by a divergence measurement, which is based on a linear curve fit. The adapters for the CCD and Slit Beam Profilers have been designed such that the sensors are at the same height, so that users can easily switch between the two series.

A power supply, serial cable, and USB-to-RS232 adapter are included with the extension set. The camera or slit beam profiler as well as any other necessary components for beam alignment and adjustment are sold separately. Each Beam Profiler includes a software package with an easy-to-operate Graphical User Interface (GUI). Version 4.0 or newer fully supports automated M² measurements as well as basic beam profiling measurements and can be downloaded for free from www.thorlabs.com.

Features

- Two Models Compatible with Our BC106 Series of CCD Camera Beam Profilers
 - 150 mm Translation (BC1M2-150)
 - 300 mm Translation (BC1M2-300)
- Two Models Compatible with Our BP100 Series of Slit Beam Profilers
 - 150 mm Translation (BP1M2-150)
 - 300 mm Translation (BP1M2-300)
- Measures M², Divergence, Waist Diameter, Waist Position, and Rayleigh Range
- Compatible with CW and Quasi-CW Pulsed Laser Sources
- ISO 11146 Compliant
- USB and Serial Interface



The figure above shows the minimum required stage length to achieve a measurement of M² = 1 for four different waist diameters. Find your operating wavelength along the x-axis, go up to the curve representing your expected waist diameter, and read off the minimal required translation range. Multiply this result with the highest expected M² value of your laser source, and round up to the next available translation stage length. Please note that this length is a minimum requirement for M² detection.

ITEM #	CCD BEAM PROFILER EXTENSION SETS		SLIT BEAM PROFILER EXTENSION SETS	
	BC1M2-150	BC1M2-300	BP1M2-150	BP1M2-300
Translation Stage	VT-80 + Pollux Controller			
Controller Interface	RS232, Convertible to USB			
Translation Range	150 mm	300 mm	150 mm	300 mm
Travel Speed (Max)	13 mm/s			
Optical Axis Height	90 mm			
Size of Translation Stage	48 mm x 317 mm x 72.5 mm	48 mm x 467 mm x 72.5 mm	48 mm x 317 mm x 72.5 mm	48 mm x 467 mm x 72.5 mm
Stage Size ^a	145 mm x 332 mm x 120 mm	145 mm x 482 mm x 120 mm	150 mm x 327 mm x 120 mm	150 mm x 477 mm x 120 mm
Weight of Extension ^b	<1.7 kg	<2.0 kg	<1.7 kg	<2.0 kg

^aWith Mounting Plates, Adapter, and Beam Profiler ^bWithout Power Supply and Adapter

ITEM #	\$	£	€	RMB	DESCRIPTION
BC1M2-150	\$ 3,706.80	£ 2,668.90	€ 3,224.90	¥ 29,543.20	M ² Beam Propagation Analyzer Extension Set for CCD Beam Profilers, 150 mm
BC1M2-300	\$ 5,279.80	£ 3,801.50	€ 4,593.40	¥ 42,080.01	M ² Beam Propagation Analyzer Extension Set for CCD Beam Profilers, 300 mm
BP1M2-150	\$ 3,706.80	£ 2,668.90	€ 3,224.90	¥ 29,543.20	M ² Beam Propagation Analyzer Extension Set for Slit Beam Profilers, 150 mm
BP1M2-300	\$ 5,279.80	£ 3,801.50	€ 4,593.40	¥ 42,080.01	M ² Beam Propagation Analyzer Extension Set for Slit Beam Profilers, 300 mm