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BC106N-UV - August 31, 2021

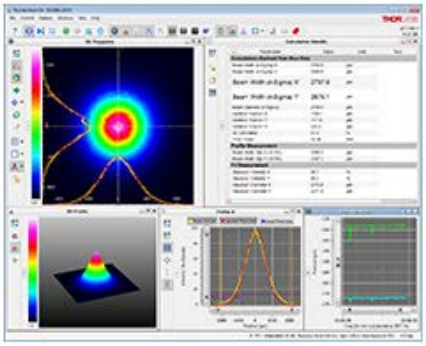
Item # BC106N-UV was discontinued on August 31, 2021 For informational purposes, this is a copy of the website content at that time and is valid only for the stated product.

CCD CAMERA BEAM PROFILER

- **190 - 350 nm and 350 - 1100 nm Wavelength Ranges Available**
- **Beam Diameter: 30 µm - 6.6 mm**
- **For Continuous Wave, Pulsed Beams, and Single Pulses**
- **M^2 Measurement with Optional Extension Set**

BC106N-UV
Filter Wheel with 6 Neutral Density Filters Included

Post and Post Holder Sold Separately



Versatile Software Package

Application Idea

Use the BC106N-VIS with the M2MS M2 Extension Set to create a complete beam quality measurement system.

OVERVIEW

Features

- Full 2D Analysis of Complex Beam Profiles
- For CW or Pulsed Laser Beam and Single Pulse Analysis
- High Resolution: 1360 x 1024 Pixels
- Low Noise: S/N ≥ 62 dB
- 12-Bit CCD Camera
- Large Sensor Area (8.77 mm x 6.6 mm) for Uniformity and Linearity
- Removable, AR-Coated, Wedged Window Protects Sensor from Dust
- User-Calibratable Power Readout
- Auto Exposure from 20 µs to 1 s and Gain Control from 1x to 16x
- Black Level and Ambient Light Compensation
- External Shutter Trigger Input
- Optional M² Extension Kit for Automated M² Analysis (See Below)

Item #	BC106N-UV(/M)	BC106N-VIS(/M)
Wavelength Range	190 - 350 nm[a]	350 - 1100 nm
Power Range	50 fW - 1 W[b]	1 fW - 1 W[c]
Beam Diameter	30 µm - 6.6 mm	
Compatible Light Sources	CW, Pulsed[d]	
Pulse Frequency	1 Hz - 50 kHz (Single Pulse Exposure), Unlimited (Multi-Pulse Exposure)	

- Design range of Lumigen coating, sensitivity is given throughout 1100 nm but shows increased non-uniformity and noise compared to uncoated BC106N-VIS.
- @ 200 nm, depending on Beam Diameter & ND Filter. See *Specs* and *ND Filter* tabs for details.
- @ 550 nm, depending on Beam Diameter & ND Filter. See *Specs* and *ND Filter* tabs for details.
- Damage threshold data is currently not available for our beam profilers. For use with pulsed lasers, we recommend the following procedure as a guideline for determining a safe upper limit: Set the beam profiler to the maximum integration time (i.e., set the exposure to 1 s). Slowly increase the power until your signal reaches approximately 50% of the intensity as shown in the Profile window of the Beam software package. Multiply this power by a factor of 10. This is the safe upper limit of the mean pulse power for the beam profiler.

Thorlabs' Camera-Based Beam Profilers allow complex mode patterns (like flat top and donut) to be identified while optimizing a laser system. Compared to scanning slit beam profilers, camera beam profilers can capture a more detailed beam profile and provide a true 2D analysis of the beam's power density distribution.

These beam profilers are suited for use with either continuous wave or pulsed sources. Several trigger modes allow flexible capturing of single pulses, including a TTL input for triggered single pulse detection of signals with a repetition rate lower than 50 kHz. In non-trigger mode, pulses with repetition rates above 50 kHz will be seen as a continuous wave source by the beam profiler.

Click to Enlarge
Front View of the BC106N-UV Beam Profiler

Each beam profiler contains a high-quality 12-bit CCD camera with an active sensor size of 8.77 mm x 6.6 mm, a resolution of 1.4 Megapixels, and a 20 µs minimum exposure time. Compared to CMOS profilers, the high-quality CCD camera offers excellent sensitivity and low noise and enhanced global shutter efficiency for improved exposure accuracy and uniformity. The automatic dark level calibration provides very stable dark currents independent of the device settings, eliminating the need to recalibrate the dark level for each user setting.

An integrated filter wheel with 6 high-quality neutral density (ND) filters allows the profiler to be adapted for use with beam intensities from femtowatts to 1 W (see the *Specs* and *ND Filter* tabs for details). Each filter housing is internally SM05 (0.535"-40) threaded for easy integration with Thorlabs' lens tube systems and mounts for other optical components such as additional attenuation filters. An 8-32 (M4) tap on the side of the beam profiler housing and 8-32 (M4) and 1/4"-20 (M6) taps on the bottom of the housing allow for two different mounting orientations.

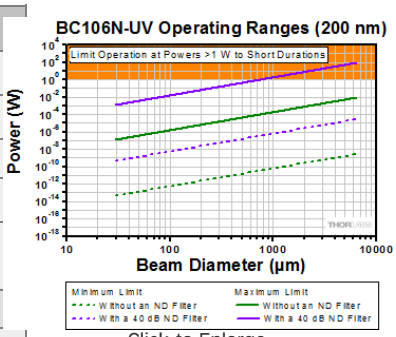
The integrated power meter can be user calibrated and is perfectly suited for simultaneous power and beam shape optimization without the need for an external power meter. A measured mean value of the ambient light intensity is subtracted from the beam profile measurement so as to compensate for ambient light. The automatic exposure and gain control feature adapts the camera settings to the actual beam intensity. The USB 2.0 interface allows up to 10 full frames per second at full resolution. Measurements at higher frame rates can be achieved and transferred with reduced frame sizes.

The BC106N Beam Profilers are shipped with Thorlabs' Beam software package. Features of the software package are listed under the *User Interface* tab. Thorlabs' Beam software can be downloaded via the links on the *Software* tab, along with programming reference guides for LabVIEW™, Visual C++, Visual C#, and Visual Basic.

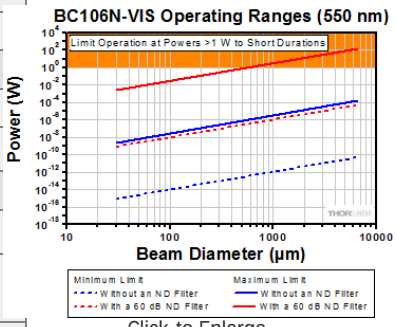
Extension sets are available below to convert these camera beam profilers into a fully-automated M² measurement system. Thorlabs also offers a scanning slit beam profiler, as well as a complete M² analysis systems with the beam profiler included.

SPECS

Item #	BC106N-UV(/M)	BC106N-VIS(/M)
Wavelength Range	190 - 350 nm[a]	350 - 1100 nm
Power Range	50 fW - 1 W[b]	1 fW - 1 W[c]
Beam Diameter	30 µm - 6.6 mm	
Compatible Light Sources	CW, Pulsed[d]	
Pulse Frequency	1 Hz - 50 kHz (Single Pulse Exposure), Unlimited (Multi-Pulse Exposure)	
Absorptive Neutral Density Filters		
Nominal Values	20 dB, 30 dB, 40 dB	20 dB, 40 dB, 60 dB (Two Sets)[e]
AR Coating Wavelength Range	350 - 700 nm[f]	350 - 700 nm (Three Filters)
		650 - 1050 nm (Three Filters)
Reflective Neutral Density Filters		
Nominal Values	20 dB, 30 dB, 40 dB	N/A
AR Coating (Back Side of Filter)	220 to 240 nm[g]	N/A
Sensor		
Coating	Lumigen[a]	None
Chip	2/3" Sony EXview HAD™ CCD Sensor ICX285AL, Windowless	
Aperture Size (Max)	8.77 mm x 6.6 mm	
Pixel Size	6.45 µm x 6.45 µm	
Resolution (Max)	1360 x 1024 pixels, ROI Selectable	

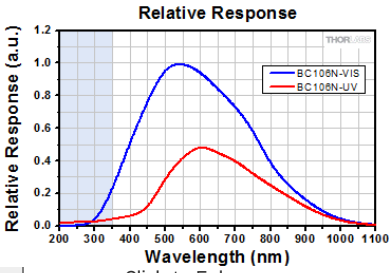


Click to Enlarge
The neutral density filter will begin to heat up and can be damaged if exposed to incident powers above 1 W for more than a few seconds.



Click to Enlarge
The neutral density filter will begin to heat up and can be damaged if exposed to incident powers above 1 W for more than a few seconds.

Camera	
Shutter	Global
Max. Frame Rate @ Full Resolution	10 fps[h]
Frame Rate @ 640 x 480	>27 fps[h]
Frame Rate @ 320 x 240	>43 fps[h]
Image Digitization	8 bit (0 - 255 Digits) or 12 bit (0 - 4095 Digits)
Signal-to-Noise Ratio	≥62 dB
Exposure Range	20 µs - 1 s
Gain Range	1x - 16x
Image Capture Modes	Single Frame, Continuous, Hardware Triggered
Sensor Distance to Front Filter HolderSurface[i]	14.0 mm (0.55")
Interfaces	
Trigger Input	TTL Level , BNC Jack
Trigger Delay	42 µs - 1 s, Programmable
PC Interface	High Speed USB 2.0
General	
Operating Temperature	5 to 35 °C
Storage Temperature	-40 to 70 °C
Physical Size (H x W x D)	80 mm x 80 mm x 36.5 mm Including Base Plate, Filter Wheel and Filters
Weight	310 g
Mounting	1/4"-20 (M6) and 8-32 (M4) Taps on Bottom, 8-32 (M4) Tap on Side
Power Supply	2.4 W, USB Bus Powered
Safety	CE Compliant



Click to Enlarge

The graph above shows the relative reponse curves of the BC106N-VIS and the BC106N-UV without the use of an ND filter. The blue-shaded region marks the specified operating wavelength range for the BC106N-UV, while the white shaded region is this range for the BC106N-VIS. The Lumigen coating on the CCD in the BC106N-UV increases the chip response at lower wavelengths, at the expense of sensitivity at visible wavelengths.

- Design range of Lumigen coating, sensitivity is given throughout 1100 nm but shows increased non-uniformity and noise compared to uncoated BC106N-VIS. Wavelength range of supplied UV ND filters start at 220 nm.
- @ 200 nm, depending on Beam Diameter and ND Filter.
- @ 550 nm, depending on Beam Diameter and ND Filter.
- Damage threshold data is currently not available for our beam profilers. For use with pulsed lasers, we recommend the following procedure as a guideline for determining a safe upper limit: Set the beam profiler to the maximum integration time (i.e., set the exposure to 1 s). Slowly increase the power until your signal reaches approximately 50% of the intensity as shown in the Profile window of the Beam software package. Multiply this power by a factor of 10. This is the safe upper limit of the mean pulse power for the beam profiler.
- One set of filters is AR coated for the 350 nm to 700 nm range while the other is AR coated for the 650 nm to the 1050 nm range. See the *ND Filters* tab for more information and coating curves.
- These filters are provided for use near the 350 nm upper wavelength range of the BC106N-UV(/M). See the *ND Filters* tab for more information.
- The AR-coating on the non-reflective side of these filters provides <0.25% average reflectivity over this specified wavelength range. The filter still provides attenuation outside of this region (as shown on the *ND Filters* tab), but the the AR coating will not perform as well.
- Highly dependent on PC processor and graphic adapter performance.
- Please click here for a detailed drawing that shows the distance between the sensor position and the various edges of the beam profiler's housing.

All technical data are valid at 25 ± 5 °C and 45 ± 15% relative humidity.

ND FILTERS

Neutral Density Filters

Six neutral density (ND) filters are included with each CCD camera beam profiler. The absportive ND filters have antireflection (AR) coatings on both sides,

while the reflective ND filters that come with the BC106N-UV have an AR coating on their non-reflective surface. This feature, combined with a 30 arcminute wedge, reduces artifacts in the measured beam profile that result from internal reflections in the filter. The plots below show the filter attenuation curves in dB. The equivalent % transmission is provided in the raw data file for each filter set.

BC106N-UV(/M)

The BC106N-UV comes with six neutral density filters, three of which are absorptive and three are reflective. The three reflective ND filters have an AR coating for the 220 to 340 nm range on their non-reflective surface. Since the BC106N-UV's camera is also sensitive to short wavelength visible light (see the relative response curve on the *Specs* tab), three absorptive ND filters with an AR coating on both sides are included for use near the 350 nm upper limit of the specified wavelength range.

ND Filters Included with BC106N-UV(/M)						
Type	Reflective			Absorptive		
AR Coating Wavelength Range	220 nm to 340 nm[a]			350 nm to 700 nm[b]		
Nominal Filter Attenuation	20 dB	30 dB	40 dB	20 dB	30 dB	40 dB
Item #	NDUV520B	NDUV530B	NDUV540B	NE520B-A	NE530B-A	N/A[c]
Filter Wheel Position	1	2	3	4	5	6

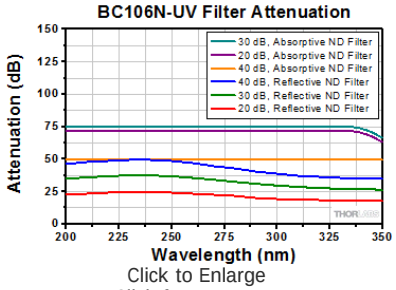
- The AR-coating on the non-reflective side of these filters provides <0.25% average reflectivity over this specified wavelength range. The filter still provides attenuation outside of this region (as shown in the plot below), but the the AR coating will not perform as well.
- This is the specified wavelength range for optimum performance of the AR coating. These filters are included for use near the upper limit of the BC106N-UV's wavelength range, since the camera is also sensitive to short wavelength visible light. The filter still provides attenuation outside of this region (as shown in the plot below), but the the AR performance is not specified over this range.
- This filter is not available separately.

BC106N-VIS(/M)

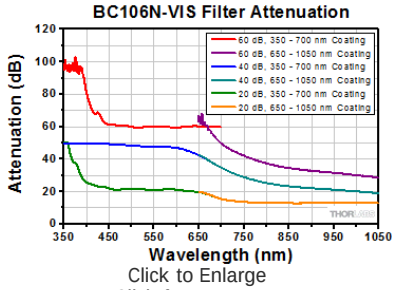
The BC106N-VIS comes with six absorptive ND filters. The filters have an AR coating deposited on both sides, with one set coated for the 350 nm to 700 nm range and the other coated for the 650 to 1050 nm range.

ND Filters Included with BC106N-VIS(/M)						
Type	Absorptive			Absorptive		
AR Coating Wavelength Range	350 nm to 700 nm			650 nm to 1050 nm		
Nominal Filter Attenuation	20 dB	40 dB	60 dB	20 dB	40 dB	60 dB
Item #	NE520B-A	N/A[a]	NE560B-A	NE520B-B	N/A[a]	NE560B-B
Filter Wheel Position	1	2	3	4	5	6

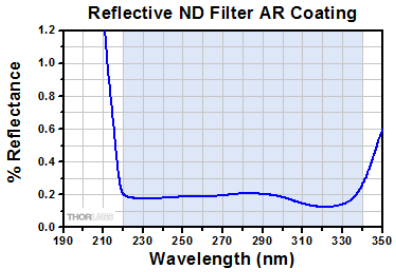
- These filters are not available separately.



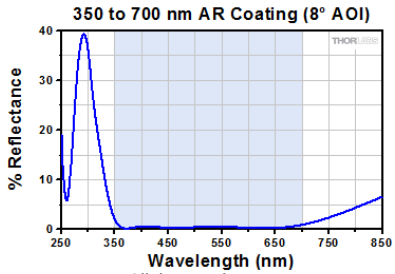
Click to Enlarge
Click for Raw Data
The graph above shows the filter attenuation with respect to wavelength for the six filters included with the BC106N-UV. The absorptive filters are recommended for use near the 350 nm upper limit of the BC106N-UV's operating wavelength range.



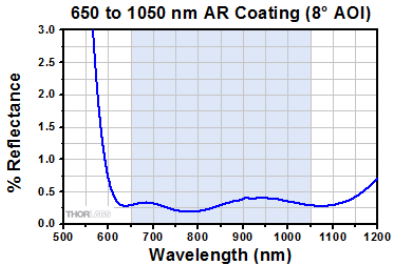
Click to Enlarge
Click for Raw Data
The graph above shows the filter attenuation with respect to wavelength for the six filters included with the BC106N-VIS.



Click to Enlarge
The graph above provides an example of the performance of the AR coating applied the reflective ND filters that are included with the BC106N-UV(/M). The coating is designed to provide less than 0.25% average reflectance over the blue-shaded region.



Click to Enlarge
The graph above provides an example of the performance of the AR coating applied to three of the filters that are included with the BC106N-VIS(/M) and the absorptive ND filters included with the BC106N-UV(/M). The coating is designed to provide less than 0.5% average reflectance over the designated coating range. More information on the coating performance may be found here.

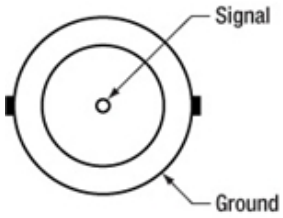


Click to Enlarge

The graph provides and example of the performance the AR coating applied to three of the filters that are included with the BC106N-VIS(/M). The coating is designed to provide less than 0.5% average reflectance over the specified AR coating range. More information on the coating performance may be found here.

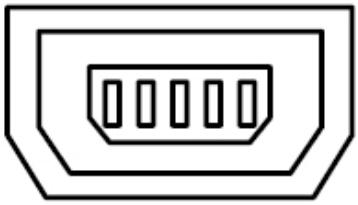
PIN DIAGRAMS

Trigger Input
BNC Female



Do not exceed -0.5 V ... +6.5 V. Input Impedence > 100 kΩ

Computer Connection
USB Type Mini-B



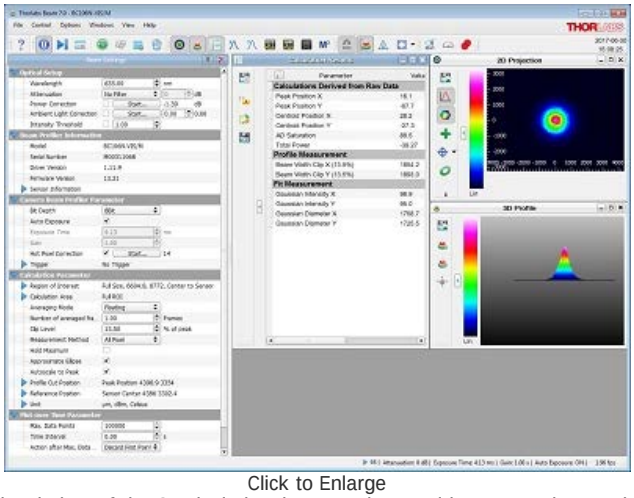
USB Type Mini-B to Type A Cable Included

USER INTERFACE

Thorlabs Beam Software for the BC106N Beam Profilers

- GUI with Adjustable Layout: Windows with Different Measurement Results
  can be Rearranged and Resized within the Workspace
- 2D and 3D Views of the Beam Profile
  - Selectable Overlays such as Peak, Centroid, and Cut Profiles
  - 3D View is Fully Rotatable
- M² and Divergence Measurements Compliant with ISO 11146
- Data Export:
  - Results can be Exported from Windows in Different Formats
  - Sequential Saving
- Pass/Fail Tests with Customizable, Lockable and Saveable Pass/Fail Parameters
- Power Correction Available for Absolute Power Measurements
- Supports TSP01 for Temperature Logging During Long-Term Measurements

Main Window



Click to Enlarge

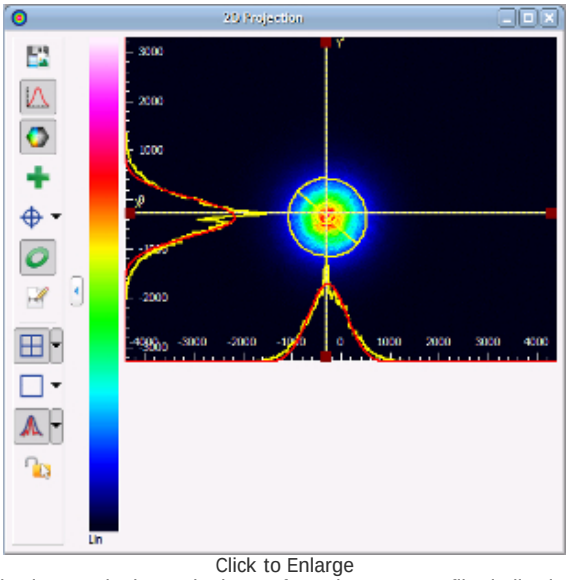
The main window of the GUI includes the menu bar, tool bar, status bar, and a frame where several windows can be displayed. This version of the Main Window includes several panels: Beam Settings, Calculation Results, 2D Projection, and 3D Profile. The Beam Settings Panel displays all important information in a single location; this panel can be unpinned from the main window and moved to a second location, such as another monitor.

Thorlabs' Camera Beam Profilers, Scanning Slit Beam Profilers, and M² Measurement Systems all use the Thorlabs Beam software package. The screenshots below highlight key features and measurement modes that can be used with our camera beam profilers, including 2D projections of the beam profile and

measurement of the beam stability and position. If an M² Extension Set (available below) is added to the system, the software also enables M² and beam divergence measurements.

The latest version of the Beam software package can be downloaded from the *Software* tab.

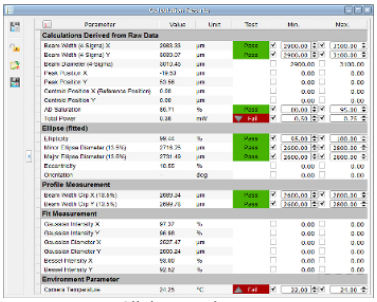
2D Projection of the Beam Profile



Click to Enlarge

The 2D Projection graph shows the image from the Beam Profiler indicating the power intensity distribution within the selected Region of Interest (ROI). Buttons along the side allow users to save the image, show or hide the x and y scales, mark the centroid or peak positions, and display an approximated Beam Ellipse superimposed on the image.

Calculation Results

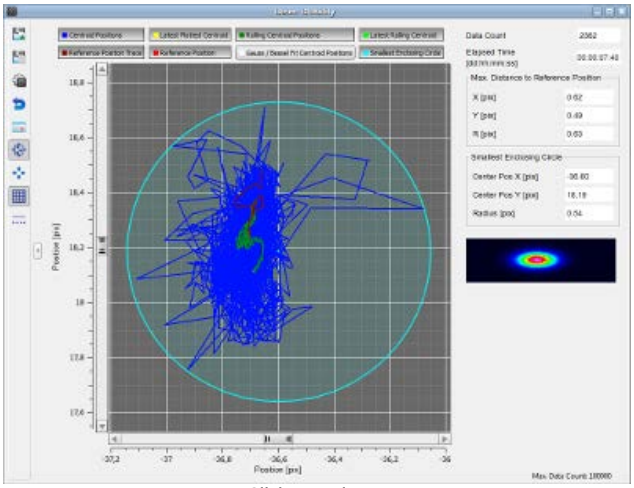


Click to Enlarge

Click to Enlarge

The Calculation Results window displays the results of calculations performed by the software, including beam width, centroid and peak positions, power, ellipticity, and fits of the beam profile. This panel also includes a Pass/Fail test. For each parameter, a minimum or maximum can be set as criteria. After the calculations are complete, the user can save them in .txt, csv, or .xls format. In addition to saving single measurement results, diagrams, and device data, the software can automatically sequentially save this information for a series of measurements.

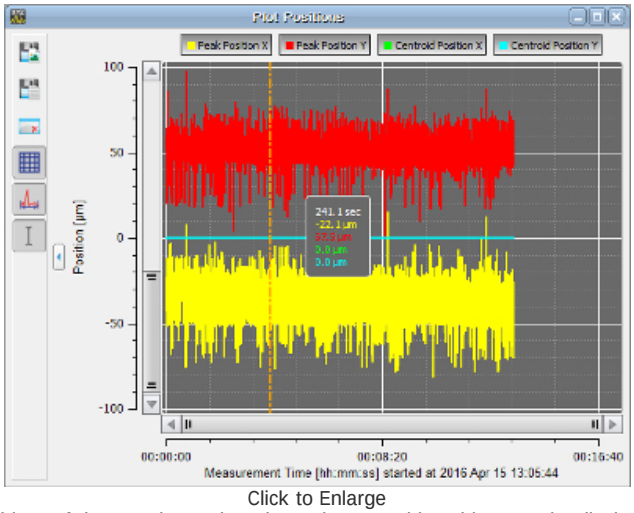
Beam Stability



Click to Enlarge

The Beam Stability Window allows the stability versus time to be recorded and viewed. Display options include the Centroid Positions, Latest Plotted Centroid, Rolling Centroid Positions, Reference Positions, and Smallest Enclosing Circle.

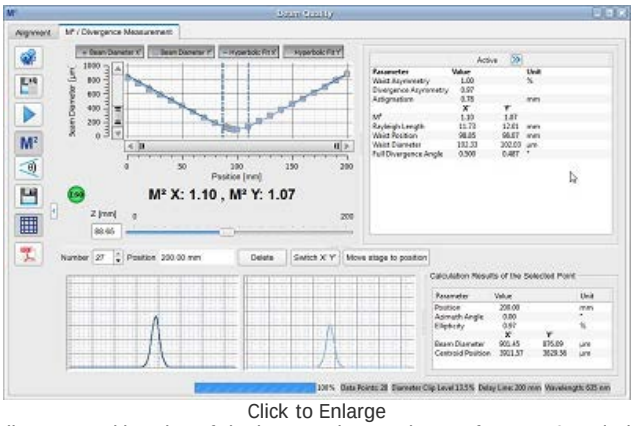
Plot Centroid and Peak Positions



Click to Enlarge

The positions of the X and Y peak and X and Y centroid positions can be displayed as a function of time in this window.

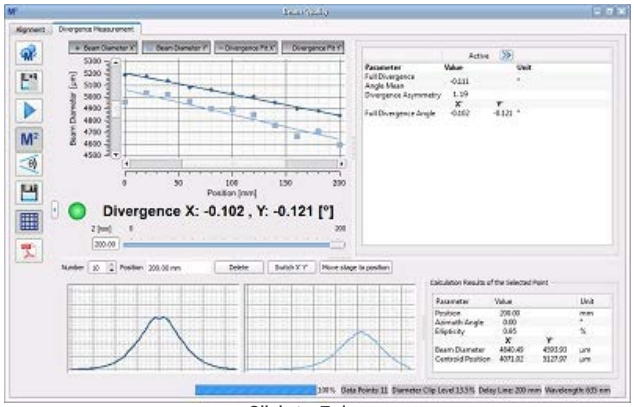
M^2 Measurements



Click to Enlarge

The beam diameter and location of the beam waist are shown after an M² analysis has been performed. Note: This functionality is only enabled when one of the M² analysis systems is connected to the PC.

Divergence Measurements



Click to Enlarge

The divergence of the beam is shown after an M² analysis has been performed. Note: This functionality is only enabled when one of the M² analysis systems is connected to the PC.

SOFTWARE

Software Packages for Thorlabs' Beam

System Requirements	

Profilers

The Beam software package can be downloaded by clicking on the Software button below. The software download page also offers programming reference notes for interfacing with our beam profilers using LabVIEW™, Visual C++, Visual C#, and Visual Basic. Please see the *Programming Reference* tab on the software download page for more information and download links.

Features

- Settings Panel Displays All Important Parameters in a Central Location
- Customizable Calculation Results
  - Measured Parameters can be Individually Hidden
  - Adjustable Row Heights
  - Enhanced Beam Stability Window Measures and Displays the Smallest Enclosing Circle Around the Centroid Point Cloud
- Alignment Wizard to Aid in Correctly Aligning the M2MS M^2 Measurement Systems
- Language Settings of English, German, or Chinese

Operating System		Windows® 7 (32 Bit), 7 x64 Edition (64 Bit) 8.1 (32 Bit), 8.1 x64 Edition (64 Bit), 10 (32 Bit), or 10 x64 Edition (64 Bit)
Connectivity		USB 2.0 High Speed Port
Monitor Resolution		1024 x 758 Pixel (Min), ≥16 Bit Color Depth
Processor (CPU)	Minimum	Pentium 4 (2.6 GHz Min), Intel or A64 3000+ AMD (3.0 GHz Min)
	Recommended	Intel Core 2 i5 or AMD Ryzen 5 (3.0 GHz Min)
Memory (RAM)	Minimum	4.0 GB RAM
	Recommended	8.0 GB RAM
Graphics Adapter	Required	OpenGL (Specification GLX 1.3 Up)
	Minimum	Radeon: X100 Series ≥X850, X1000 Series ≥X1600, HD Series ≥2400; Geforce: 7 Series ≥7600, 8 Series ≥8500, 9 Series ≥9600; Quadro: FX Series ≥FX770M
	Recommended	Radeon: HD Series ≥7000; Geforce: GTX Series ≥500;

Software

Version 7.1.4871.269 (June 21, 2021)

Standard full version of software package for 32-bit and 64-bit Windows with driver and graphical user interface for operating the device in standard applications.

Software

SHIPPING LIST

Item #	Beam Profiler	Filter Wheel with Neutral Density Filters	Accessories
BC106N-UV(/M)	Camera Beam Profiler for 190 - 350 nm	Reflective ND Filters (240 nm - 350 nm AR Coating on Back Surface): 20 dB, 30 dB, 40 dB Absorptive ND Filters with Coating for 350 - 700 nm:[a] 20 dB, 30 dB, 40 dB	A to Mini B USB 2.0 Cable, 3.0 m Quick Start Guide
BC106N-VIS(/M)	Camera Beam Profiler for 350 - 1100 nm	Absorptive ND Filters with Coating for 350 - 700 nm: 20 dB, 40 dB, 60 dB Absorptive ND Filters with Coating for 650 - 1050 nm: 20 dB, 40 dB, 60 dB	

- These filters are provided for use near the 350 nm upper wavelength range of the BC106N-UV(/M); they are not designed for UV wavelengths.

CCD Camera Beam Profiler

Part Number	Description	Price	Availability

BC106N-UV/M	**CCD Camera Beam Profiler, Ø30 µm - 6.6 mm, UV, 190 - 350 nm, Metric**	**$4,924.72**	**Lead Time**
BC106N-VIS/M	**CCD Camera Beam Profiler, Ø30 µm - 6.6 mm, VIS, 350 - 1100 nm, Metric**	**$4,647.70**	**Lead Time**
BC106N-UV	**CCD Camera Beam Profiler, Ø30 µm - 6.6 mm, 190 - 350 nm**	**$4,924.72**	**Lead Time**
BC106N-VIS	**CCD Camera Beam Profiler, Ø30 µm - 6.6 mm, 350 - 1100 nm**	**$4,647.70**	**Lead Time**

M² Measurement Extension Sets

- Combine with BC106N Scanning Slit Beam Profilers to Build Complete M^2 Measurement System
- Mirrors for the 250 - 600 nm or 400 - 2700 nm Range
- Mounting Adapters for BC106N Camera and BP209 Scanning Slit Beam Profilers
- Includes an Alignment Laser

These extension sets are designed to convert Thorlabs' Camera or Scanning Slit Beam Profilers into a fully automated, motorized M² measurement system. The M2MS has internal mirrors for wavelengths between 400 - 2700 nm and the M2MS-AL has internal mirrors for wavelengths between 250 - 600 nm. A magnetic mount at the input port allows the included AR-coated lenses (see boxes below) to be easily switched out to optimize the system for your laser source.

The beam profiler and focusing lens remain in a fixed position. For M^2 measurements, the beam path length is varied using a movable retroreflector mounted on a previous-generation DDSM100/M translation stage, which has a translation range of 100 mm and a maximum velocity of 500 mm/s.

The side of the M² measurement system features an integrated USB 2.0 hub, which has ports for the beam profiler, one other device such as the TSP01 USB temperature and humidity controller, and a mini USB output connection to a PC. The translation stage inside of the system also communicates with the computer through this hub. The system is controlled via the Thorlabs Beam software package, which is also use to control our beam profilers (see the *Software* tab), which enables accurate measurements of a variety of beam-related parameters.

The housing of the M^2 measurement rests on four feet at the corners created by a 0.5 mm deep relief cut in the base. A set of RDF1 rubber damping feet are included. Five M6 taps allow for the installion of four damping feet with one near each corner or in a configuration using three damping feet.

More information about these complete M² measurement systems, as well information about M^2 measurement systems that incorporate our CCD camera beam profilers can be found here.

Item #	M2MS	M2MS-AL
Wavelength Range	400 - 2700 nm[a]	250 - 600 nm[a]
Beam Profiler Compatibility[b]	BC106N-VIS(/M) BP209-VIS(/M) BP209-IR(/M) BP209-IR2(/M)	BC106N-UV(/M) BP209-VIS(/M)
Translation Stage	DDSM100/M[c]	
Travel Range	100 mm	
Velocity (Max)	500 mm/s	
Effective Translation Range	200 mm (Total) ±100 mm (from Focal Point)	
Lens Focal Length	250 mm	
Optical Axis Height	70 mm (Without Additional Feet)	
M² Measurement Range	>1.0 (No Upper Limit)	
Typical M² Accuracy	±5% (Depends on Optics and Alignment)	
Minimum Detectable Divergence Angle	<0.1 mrad	
Applicable Light Sources	CW, Pulsed[a]	
Typical Measurement Time	15 - 30 s (Depends on Beam Shape and Settings)	
General Specifications		
Size	300 mm x 175 mm x 109 mm (Without Beam Profiler)	
Weight	4.2 kg (Without Beam Profiler)	

- Depending on the beam profiler used with the system.
- The BP10x previous-generation beam profilers are compatible with the M2MS.
- This previous-generation item is not available for individual purchase.

Lenses Included with M2MS-AL*

Lenses with f = 250 mm Mounted in CXY1QF Quick Release Plate:

- LA4158-UV (AR Coated for 245 - 400 nm)
- LA1461-A (AR Coated for 350 - 700 nm)

*Additional lenses for shorter UV wavelengths and the CXY1QF quick release front plate are available separately to enable further customization of the M^2 measurement system.

Lenses Included with M2MS*

Lenses with f = 250 mm Mounted in CXY1QF Quick Release Plate:

- LA1461-A (AR Coated for 350 - 700 nm)
- LA1461-B (AR Coated for 650 - 1050 nm)
- LA1461-C (AR Coated for 1050 - 1700 nm)
- LA5255-D (AR Coated for 1650 - 3000 nm)

*Additional lenses for longer IR wavelengths and the CXY1QF quick release front plate are available separately to enable further customization of the M2 measurement system.

Accessories Included with M2MS-AL and M2MS

- Alignment Laser
- USB 2.0 to Mini B Cable, 3 m
- USB 2.0 to Mini B (Angled), 0.5 m)
- 15 V, 3.0 A Power Supply
- 0.05" Hex Key
- 3 mm Balldriver
- 4 Rail Clamps
- 6 M4 Cap Screws

Part Number	Description	Price	Availability
M2MS	M² Measurement System Extension Set, 400 - 2700 nm	$6,211.35	Today
M2MS-AL	M² Measurement System Extension Set, 250 - 600 nm	$6,211.35	Lead Time