

Wavelength Range:	190-1100 nm 800-1800 nm
New Dual Detector:	190-2400 nm
New Pyroelectric:	UV- 100 μm
Resolution:	0.1 μm
Smallest Beam:	0.5 μm
Scanned Area:	5 mm- Si/ Py 3.5 mm- InGaAs 2.0 mm - Ext InGaAs
BeamMap2	X-Y-Z- θ - Φ -Focus
Beam'R2	X-Y

Beam'R2™ BeamMap2™

New - Dual Detector wide λ range Heads

New - Pyroelectric Head .190 – 20 μm

Typical Applications

- ◇ Laser & Laser Assembly Verification e.g. Precision Focused Assemblies for
 - Laser Printing/Marking
 - Medical Lasers
 - Diode Laser instruments ... etc.
- ◇ Lens Focus Testing for short focal lengths.
- ◇ Fiber Optic Telecom assembly focusing.
LensPlate™ option for re-imaging waveguides and fiber ends.

Beam'R2™ single plane XY scanning of 2.5 & 25 μm slit pairs (5 & 50 μm for longer wavelengths).

High dynamic range Slit mode plus 0.1 μm resolution Knife-Edge mode, in one head:

- ◇ Linear & log X-Y profiles, centroid
- ◇ Resolution 0.1 μm
- ◇ Beams diameters 1 μm to 4 mm. Auto-zoom on profiles. Auto slit width compensation.
- ◇ Detector options, 190 nm to 12 μm (Pyroelectric)

BeamMap2™ adds multiple z-plane scanning to allow the measurement of:

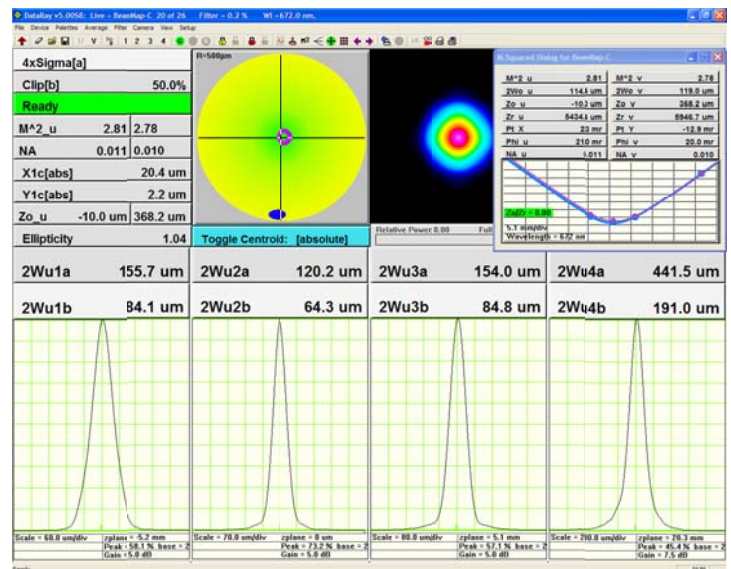
- ◇ XYZ profiles, Focus position & diameter
- ◇ Real-time M2, Divergence, Collimation

By measuring in multiple planes in z, the propagation direction, BeamMap can identify the focus position with $\pm < 1 \mu\text{m}$ repeatability. This dramatically speeds real-time diagnosis of focusing and alignment errors & the setting of multiple assemblies to the same focus.
[Protected under US Patent # 6,313,910.]

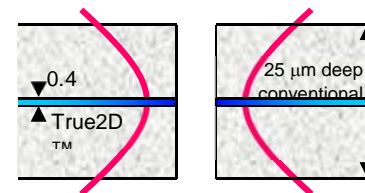
Configuration All systems comprise a compact, USB 2.0, port-powered head, 3 m cable and software for Windows XP & Vista.



Shown actual size
2.65 x 2.4 x 2.7" (W x H x D)



True2D™ Slits Profile tightly focused beams more accurately with thin, True2D™ slits. 0.4 μm thick metallic multilayer films on a sapphire substrate avoid the tunnel effect of air slits. Air slits are frequently deeper than they are wide, and can buckle under high irradiance.



Parameter	Specification	BeamMap2	Beam'R2	Comments
NEW Wavelength options:	.90-1150 nm, 650-1800 nm, .19-100 μm 800-2400 nm, 190-2400 nm	Yes	Yes	Si, InGaAs Extended InGaAs/PY Dual Detector Si/ InGaAs/
Scanned beam diameters:	0.1 μm to 4 mm (2 mm for IGA-X.X)	Yes	Yes	
X-Y Profile & Centroid				
Resolution:	0.1 μm or 0.05% of scan range	Yes	Yes	Slit scan
Accuracy:	± <2% ± ≤0.5μm			
CW or Pulsed	CW, Pulsed > 100 kHz, high duty cycle	Yes	Yes	
X-Y-Z Focus Finder:	± <1 μm (beam dependent)	X-Y-Z	X-Y only	
Beam alignment:	± 1 mrad with BeamMap2 ColliMate	Yes	-	
M ² measurement:	1 to >20, ± 5%	Yes	-	4 Z-plane hyperbolic fit
Real-time update:	5 Hz	Yes	Yes	Brushless DC motor
Maximum Power & Irradiance:	1 W Total & 0.5 mW/μm ²	Yes	Yes	Metallic film on Sapphire slits
Gain Range:	1600:1 Switched + 4096:1 ADC range	Yes	Yes	Full bandwidth 12-bit ADC
Display graphics:	All: X-Y position; Profiles, Zoom x1 to x16. BeamMap only: M ² , Focus; Divergence, Boresight/Pointing			
Measurement Analysis:	On-screen, for values & graphics, in selectable Pass / Fail colors			
Averaging:	User selectable running average (1 to ∞ samples)			
Statistics:	Min., Max., Mean, Standard Deviation. Log data over extended periods.			
Waist diameter measurement:	Second moment (4σ) diameter to ISO 11146; Fitted Gaussian & TopHat; 1/e ² (13.5%) width; User selectable % of peak; Knife-Edge mode for very small beams Product Specifications are subject to change without notice.			

Beam'R2

BR2-Si	Silicon detector; 2.5 μm & 25 μm XY dual axis Slits
BR2-IGA	InGaAs detector; 5 μm & 50 μm XY dual axis Slits
BR2-PY	Pyroelectric detector; 5 μm & 50 μm XY dual axis Slits
BR2-DD**	Dual Detector Si & InGaAs extended λ detector options to 2.4 μm; 5 μm & 50 μm XY dual axis Slits wavelength response from 190 – 1800 nm in a single unit
BR2-DD-X.X**	Dual Detector Si & InGaAs extended λ detector options to 2.4 μm; 5 μm & 50 μm XY dual axis Slits wavelength response from 190 – 2400 nm in a single unit

BeamMap2

BMS2-4XY250-Si	Silicon detector; 2.5 μm XY dual axis slits in 4 planes in z
BMS2-4XY250-IGA	InGaAs detector; 5 μm XY dual axis slits in 4 planes in z
BMS2-4XY250-PY	Pyroelectric detector; 5 μm XY dual axis slits in 4 planes in z
BMS2-4XY250-DD**	Dual Detector Si & InGaAs extended λ detector options to 2.4 μm; 5 μm XY dual axis slits in 4 planes in z, Wavelength range 190- 1800 nm in a single head
BMS2-4XY250-DD-X.X**	Dual Detector Si & InGaAs extended λ detector options to 2.4 μm; 5 μm XY dual axis slits in 4 planes in z, Wavelength range 190- 2400 nm in a single head

* Default unit has 250 μm plane spacing. 50, 100, 500, 750 & 5000 μm plane spacings available at standard pricing.

** DD = Dual Detector; Si & InGaAs. -X.X options to 2.2 μm and 2.4 μm (please state)

