

# BEAMAGE

CMOS Beam Profiling Cameras



## KEY FEATURES

- 1. USB 3.0 FOR THE FASTEST TRANSFER RATES**  
Up to 10X faster than regular USB 2.0 connections (also USB 2.0 compatible)
- 2. HIGH RESOLUTION**  
2.2 and 4.2 MPixels resolutions give accurate profile measurements of very small beams
- 3. LARGE APERTURES**
  - 11.3 x 6.0 mm for the Beamage-3.0
  - 11.3 x 11.3 mm for the Beamage-4M
  - 20.5 x 20.5 mm for the Beamage-4M-FOCUS
- 4. AVAILABLE WITH IR COATING**  
Beamage-IR cameras have a special Phosphor coating for IR wavelengths (1495-1595 nm)
- 5. ISO COMPLIANT**  
D4 $\sigma$  Definition of Diameter, Centroid, Ellipticity and Orientation are ISO 11146:2004 and 11146:2005 compliant
- 6. INTUITIVE SOFTWARE INTERFACE**  
Easy to navigate interface, with many displays and control features:
  - 2D, 3D and XY Displays
  - Background Subtraction Function
  - Unique “Animate” Function
  - Gaussian Fit
  - Semi-Log Graph
- 7. EXTERNAL TRIGGER**  
To synchronize the camera with a pulsed laser

## AVAILABLE MODELS



Beamage-3.0 and Beamage-3.0-IR  
(2.2 MPixels with 5.5  $\mu$ m Pixels  
6.0 x 11.3 mm Sensor)



Beamage-4M and Beamage-4M-IR  
(4.2 MPixels with 5.5  $\mu$ m Pixels  
11.3 x 11.3 mm Sensor)



Beamage-4M-FOCUS  
(4.2 MPixels with 10  $\mu$ m Effective Pixels  
20.5 x 20.5 mm Effective Aperture)

## ACCESSORIES



Stand with Delrin Post  
(Model Number: 200428)



BA Series  
Optical Attenuators



Stackable ND Filters  
(0.5, 1.0, 2.0, 3.0, 4.0 & 5.0)



UV and IR Filters



UV Converters &  
IR Adaptors



Pelican Carrying Case

## SEE ALSO

- ACCESSORIES FOR BEAM DIAGNOSTICS **190**
- LIST OF REGULAR ACCESSORIES **206**

### APPLICATION NOTE

- HOW TO CHOOSE A UV CONVERTER [202182](#)
- PROFILING AN IR LASER [202190](#)

Watch the Introduction video available on our website at [www.gentec-eo.com](http://www.gentec-eo.com)

DISPLAYS &  
PC INTERFACES

ENERGY DETECTORS

POWER DETECTORS

HIGH POWER SOLUTIONS

PHOTODETECTORS

THZ DETECTORS

OEM DETECTORS

SPECIAL PRODUCTS

BEAM DIAGNOSTICS

## BEAMAGE



## SPECIFICATIONS

	BEAMAGE-3.0	BEAMAGE-3.0-IR	BEAMAGE-4M	BEAMAGE-4M-IR	BEAMAGE-4M-FOCUS
<b>SENSOR TECHNOLOGY</b>	CMOS	CMOS (with Phosphor Coating)	CMOS	CMOS (with Phosphor Coating)	CMOS (with Fiber Optic Taper)
<b>EFFECTIVE APERTURE</b>	11.3 x 6.0 mm	11.3 x 6.0 mm	11.3 x 11.3 mm	11.3 x 11.3 mm	20.5 X 20.5 mm <sup>b</sup>
<b>MEASUREMENT CAPABILITY</b>					
Wavelength Range					
Camera Only	350 - 1150 nm	1495 - 1595 nm	350 - 1150 nm	1495 - 1595 nm	350 - 1150 nm
With UG11-UV Filter	250 - 370 nm	---	250 - 370 nm	---	---
With B3-IR-FILTER	1250 - 1350 nm	---	1250 - 1350 nm	---	---
Pixel Count	2.2 MPixels	2.2 MPixels	4.2 MPixels	4.2 MPixels	4.2 MPixels
H x V	2048 x 1088	2048 x 1088	2048 x 2048	2048 x 2048	2048 x 2048
Minimum Measurable Beam	55 μm	70 μm	55 μm	55 μm	120 μm
Frame Rate	---		6.2 fps @ 4.2 MPixels (Full Frame)		
	11 fps @ 2.1 MPixels (Full Frame)		11.4 fps @ 2.1 MPixels (2048 x 2048)		
	20 fps @ 1.1 MPixels (2048 x 544)		18.6 fps @ 1.1 MPixels (2048 x 544)		
	32 fps @ 0.066 MPixels (256 x 256)		32 fps @ 0.066 MPixels (256 x 256)		
RMS Noise	1000:1 (60 dB)		1000:1 (60 dB)		
ADC Level (User Settable)	12 bit (default) / 10 bit (option)		12 bit (default) / 10 bit (option)		
<b>DAMAGE THRESHOLDS<sup>a</sup></b>					
Maximum Average Power	1 W with ND filter				
Maximum Density (1064 nm)	CW: 10 W/cm <sup>2</sup> ; Pulsed: 300 μJ/cm <sup>2</sup>				
<b>SOFTWARE</b>					
Displays	2D, 3D, XY and Beam Tracking				
Display Features	2D: Print Screen, Reset View, Show/Hide Beam Diameter 3D: Print Screen, Reset View, Top View XY: Save Data, Zoom, Gaussian Fit, Semi-Log, Show/Hide Cursor, Show/Hide FWHM, Show/Hide 1/e <sup>2</sup> Beam Tracking: Save Data, Print Screen, Reset View, Zoom				
Beam Diameter Definitions	D4σ (ISO compliant) 1/e <sup>2</sup> along crosshairs (13.5%) FWHM along crosshairs (50%) Custom (%)				
Buffer Controls	Open File, Save Current Data, Save All Data, Previous/Next Image, Clear Buffer, Animate				
Printing and Reports	Full Report in Print Ready Format (2D, 3D, XY, Measures, Parameters) Print Screen in BMP format (2D and 3D)				
<b>PHYSICAL CHARACTERISTICS</b>					
Sensor Size	11.3 x 6.0 mm	11.3 x 6.0 mm	11.3 x 11.3 mm	11.3 x 11.3 mm	11.3 x 11.3 mm
Sensor Area	0.67 cm <sup>2</sup>	0.67 cm <sup>2</sup>	1.28 cm <sup>2</sup>	1.28 cm <sup>2</sup>	1.28 cm <sup>2</sup>
Effective Aperture	Same as sensor	Same as sensor	Same as sensor	Same as sensor	20.5 x 20.5 mm <sup>b</sup>
Dimensions (not including filter)	61H x 81.1W x 19.7D mm	61H x 81.1W x 19.7D mm	61H x 81.1W x 19.7D mm	61H x 81.1W x 19.7D mm	61H x 81.1W x 46.5D mm
Weight (head only)	138 g	138 g	138 g	138 g	235 g
<b>ORDERING INFORMATION</b>					
Product Name	Beamage-3.0	Beamage-3.0-IR	Beamage-4M	Beamage-4M-IR	Beamage-4M-FOCUS
Product Number (without stand)	201939	202360	202880	202955	203191

Specifications are subject to change without notice // Compatible stand: P/N 200428

a. With ND4 filter

b. With a typical pixel multiplication factor (PMF) of 1.8.