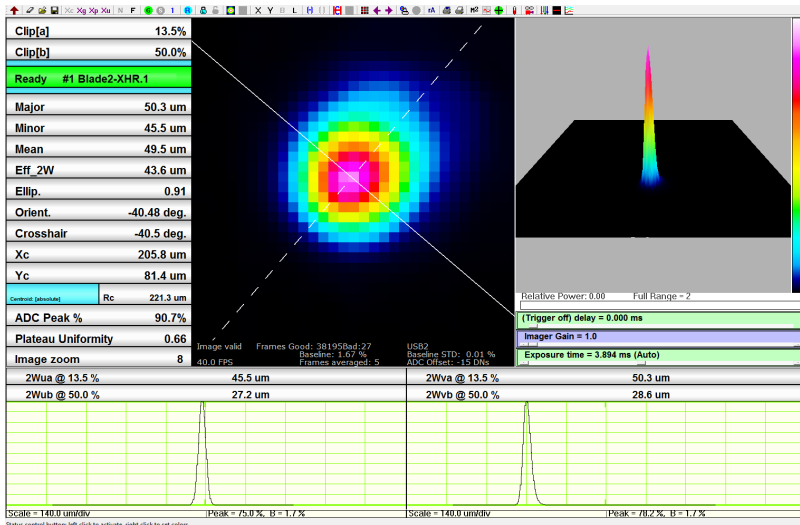


## BladeCam2

½" CMOS Beam Profiling Camera, Ultra Compact, 190 – 1610\* nm, USB 3.0

Updated with USB3 connectivity and other improvements, the BladeCam2™ offers an enhanced BladeCam™ beam profiling experience. With pixel size to 3.2 μm, the high resolution and highly compact BladeCam2™ beam profilers have a thickness of only 0.50" (12.84 mm) for insertion into tight optical trains and OEM applications.



**S-BC-XHR High Resolution beam profiling**  
Image of a 675 nm beam, 50 μm diameter  
The advantage of 3.2um square pixels is clear.

The BladeCam2™ is paired with DataRay's full featured, highly customizable, user-centric software which has no license fees, unlimited installations, and free software updates. It is perfect for applications including: CW laser profiling; field servicing of laser systems; optical assembly; instrument alignment; beam wander and logging; R&D; OEM integration; quality control; and M<sup>2</sup> measurement with available M2DU stage.



**BladeCam2-XHR/HR**  
46x46x13 mm

### System Features

- 355 to 1150 nm, CMOS detector, 190 -1610 nm options
- 3.2/1.3 MPixel, 2048 x 1536 or 1280 x 1024 pixels, ½" active area
- 3.2/ 5.2 μm pixels
- Port-powered USB 3.0/ 2.0; 3 m cable, no power brick
- HyperCal™ – Dynamic Noise and Baseline Correction software
- C-Mounted filters ND 1,2 & 4 with camera, 0.5, 1, 2, 3 ,4, and 5 options available
- Multiple Cameras (up to eight)
- ISO 11146 compliant
- RoHS, WEE and CE Certified
- 1,000:1 Signal to RMS Noise
- Rolling shutter (not suitable for pulsed lasers)
- Electronic auto-shutter
- 10-bit ADC
- Field-replaceable image sensors
- Window-free sensors standard for no fringing
- M<sup>2</sup> option – beam propagation analysis, divergence, focus

### Applications

- CW & High Rep. Rate Pulsed laser profiling
- Field servicing of lasers and laser-based systems
- Optical assembly & instrument alignment
- Beam wander & logging
- M2 Measurements
- Small form factor for tight optical trains

## Additional Software Features

- XY profiles and centroids
- Linear and logarithmic displays
- Gaussian and Top Hat least squares fits
- Ellipse Angle, Major, Minor, Mean Diameters
- ISO 11146 compliant
- Background capture and subtraction
- Image & Intensity Zoom
- Linear and area filters
- Image Averaging, 1 to continuous
- Proprietary HyperCal™ Dynamic Noise and Baseline Correction

## WinCamD-BladeCam2™ Series Model Specifications:

BladeCam2™	BC2-XHR	BC2-HR	BC2-HR-TEL
Pixel Count & H x V:	3.2M Pixel 2048 x 1536	1.3 M Pixel 1280 x 1024	1.3 M Pixel 1280 x 1024
Sensor image area (mm):	6.5 x 4.9	6.6 x 5.3	6.6 x 5.3
Pixel dimension (µm):	3.2 x 3.2	5.2 x 5.2	25 (due to phosphor)
Min. beam (10 pixels):	32 µm	52 µm	250 µm
Wavelength Range:	355-1100 nm	355-1100 nm	1480-1680 nm
Shutter type:	Rolling	Rolling	Rolling
Max Frame rate: Frame rate @ 2048 x 1536	> 6 Hz	N/A	N/A
Frame rate @ 1024 x 1024:		> 16 Hz	
Frame rate @ 512 x 512:		> 35 Hz	
Max. 'every pulse' PRR: Single pulse capture PRR:		Not suitable for pulse capture	
Signal to RMS Noise (Optical/Electrical):	1,000:1 (30/60 dB)	1,000:1 (30/60 dB)	1,000:1 (30/60 dB)
Electronic Shutter Dynamic Range:	40 µs to 1s 44dB	40 µs to 500ms 41dB	40 µs to 500ms 41dB
ADC:	10-bit	10-bit	10-bit
Interface:	USB 3.0/2.0	USB 3.0/2.0	USB 3.0/2.0

## Options

## Details

### S-BC2-HR-UV

Sensor has microlenses removed. Includes standard ND-1, ND-2, ND-4 filters and reflective NDL-1-UV, NDL-2-UV, NDL-4-UV filters with a C-mount adapter for profiling down to 190 nm.

### S-BC2-XHR-UV

Includes standard ND-1, ND-2, ND-4 filters and reflective NDL-1-UV, NDL-2-UV, NDL-4-UV filters with a C-mount adapter for profiling down to 190 nm.

### S-BC2-HR-1310

Includes standard ND-1, ND-2, ND-4 filters and a long pass filter with C-mount adapter for profiling out to 1350 nm.

### S-BC2-XHR-1310

Includes standard ND-1, ND-2, ND-4 filters and a long pass filter with C-mount adapter for profiling out to 1350 nm.

