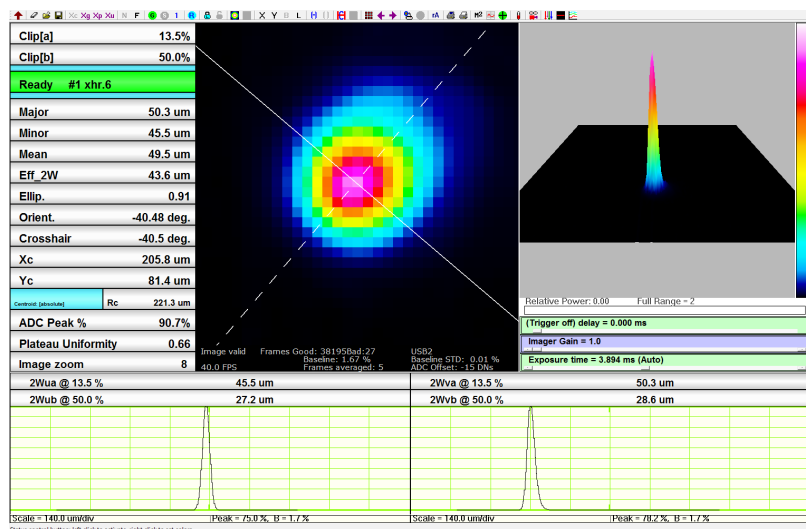


BladeCam

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

With pixel size to 3.2 μm the high resolution and highly compact BladeCam™ beam profilers have a thickness of only 0.65" (16.5 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 3.2 μm square pixels is clearly seen

The BladeCam™ 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^2 measurement with available M2DU stage.



BladeCam-XHR/HR

1.8 x 1.8 x 0.65" (with ND filter)
45.72 x 45.72 x 16.5 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 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, 1,2,3,4,5 options
- Multiple Cameras 1-8
- ISO 11146 compliant
- RoHS, WEE and CE Certified
- 1000:1 Signal to RMS Noise
- Rolling shutter (not suitable for pulsed lasers)
- Electronic auto-shutter, 162 μs to 1 sec 38dB
- 10-bit ADC
- Field-replaceable image sensors
- Window-free sensors standard for no fringing
- M^2 option – beam propagation analysis, divergence, focus
- 50 mm and 200 mm stage lengths for a wide range of Raleigh ranges

Applications

- **CW & High Rep. Rate Pulsed** laser profiling
- Field servicing of lasers and laser-based systems
- Optical assembly & instrument alignment
- Beam wander & logging
- M^2 Measurements

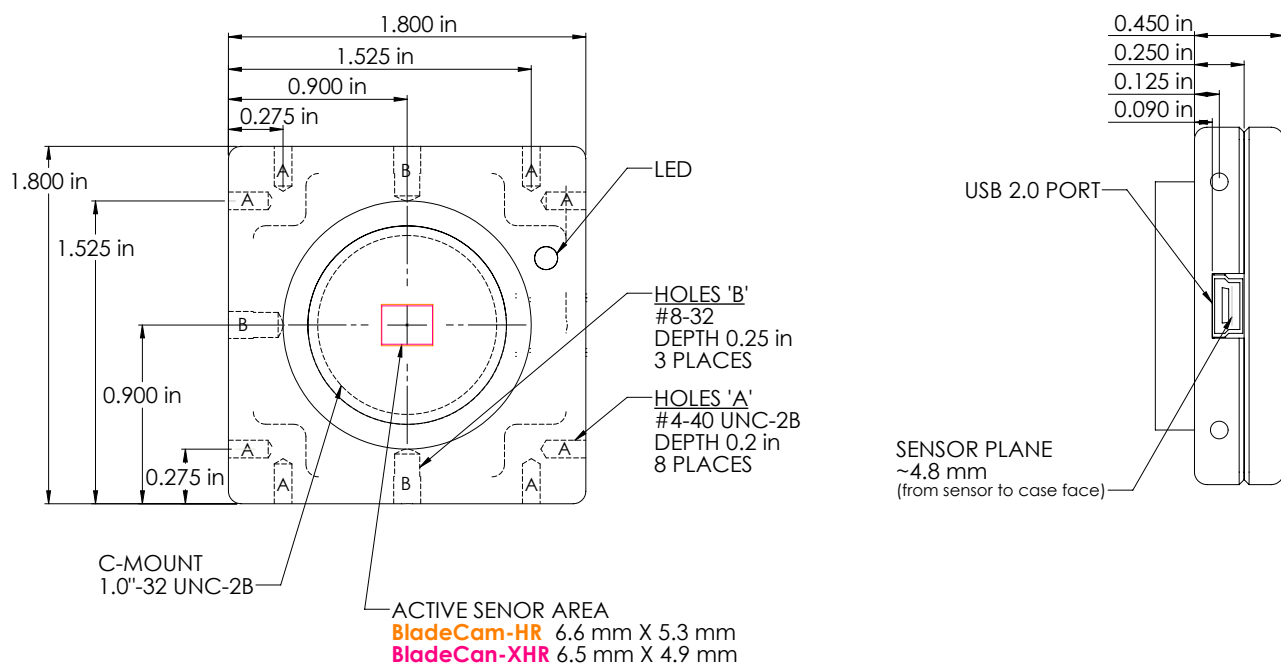
Additional Software Features

- 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

BladeCam Series Model Specifications:

BladeCam™	BC-XHR/HR-UV	BC-XHR/HR	BC-XHR/HR -1310	BC-HR-TEL
Pixel Count & H x V:	3.2/ 1.3 M Pixel 2048 x 1536 /1280 x1024	3.2/ 1.3 M Pixel 2048 x 1536 /1280 x1024	3.2/ 1.3 M Pixel 2048 x 1536 /1280 x1024	3.2/ 1.3 M Pixel 264 x 212*
Sensor image area (mm):	6.5 x 4.9 / 6.6 x 5.3	6.5 x 4.9 / 6.6 x 5.3	6.5 x 4.9 / 6.6 x 5.3	6.6 x 5.3
Pixel dimension (µm):	3.2 ² / x 5.2 ²	3.2 ² / x 5.2 ²	3.2 ² / x 5.2 ²	~25 x 25*
Min. beam (10 pixels):	32 / 52 µm	32 / 52 µm	32 / 52 µm	250 µm
Wavelength Range:	190-1100 nm	355-1100 nm	355-1350 nm	1480-1610 nm
Shutter type:	Rolling	Rolling	Rolling	Rolling
Max Frame rate:	> 10 Hz	> 10 Hz	> 10 Hz	> 10 Hz
Max. 'every pulse' PRR:	=	Not suitable for pulse capture	=	=
Single pulse capture PRR:	=	Not suitable for pulse capture	=	=
Signal to RMS Noise:	1,000:1 (30/60 dB)	1,000:1 (30/60* dB)	1,000:1 (30/60* dB)	1,000:1 (30/60* dB)
Electronic Shutter	162 µs to 1s	162 µs to 1s	162 µs to 1s	162 µs to 1s
Dynamic Range:	38 dB	38 dB	38 dB	38 dB
ADC:	10 bit	10 bit	10 bit	10 bit
Interface:	USB 2.0	USB 2.0	USB 2.0	USB 2.0

* Effective size due to phosphor



Founded in 1988, DataRay is the worldwide leader in beam profiling and analysis, delivering innovative, high-quality, affordable, and reliable instrumentation to the photonics industry. Product lines include beam profiling cameras (163 nm to 16 µm, model-dependent), and scanning slit beam profilers (190 nm to 3.9 µm, model-dependent).

S-BC-XHR-1310: High Resolution beam profiling to 1350 nm.

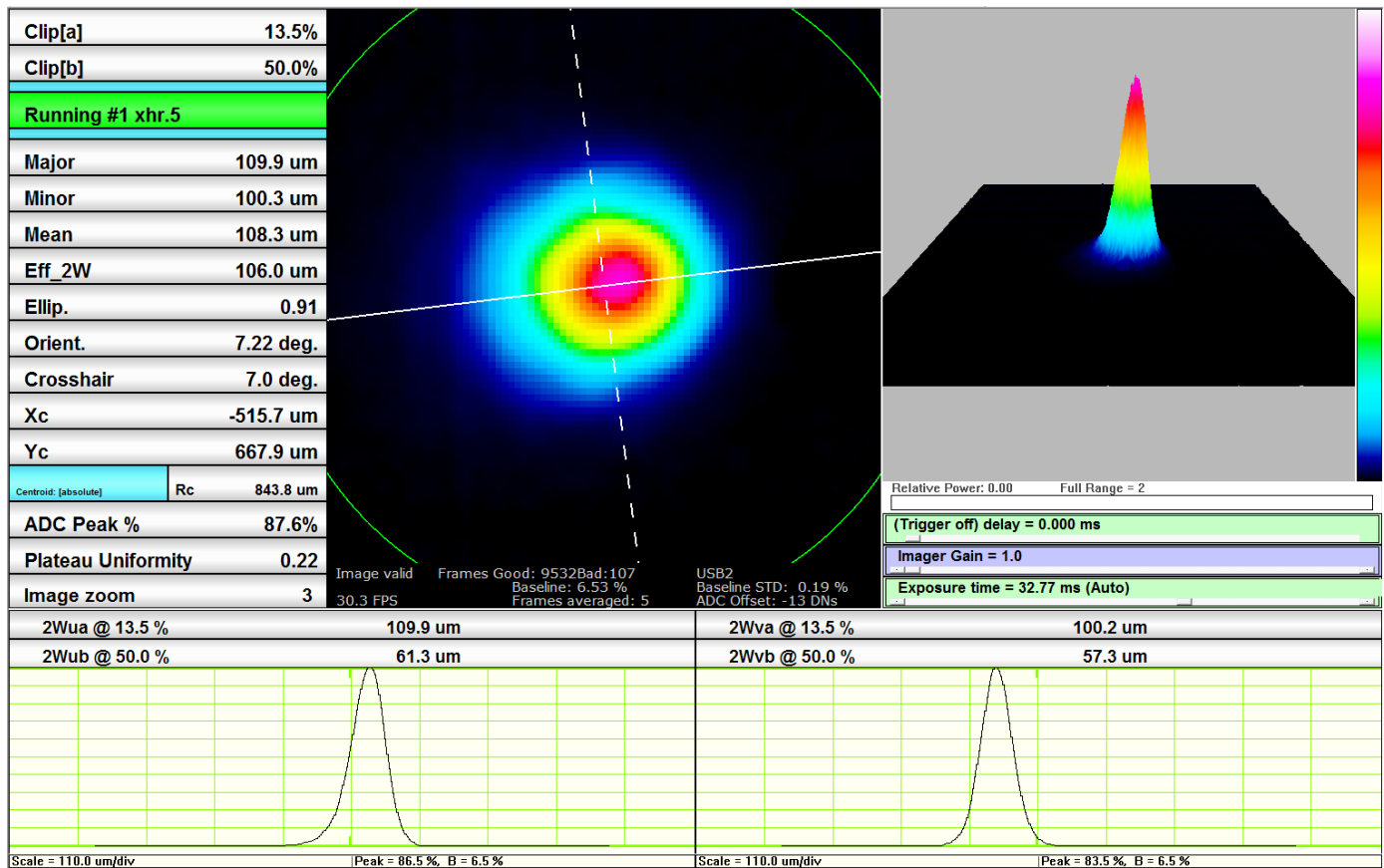
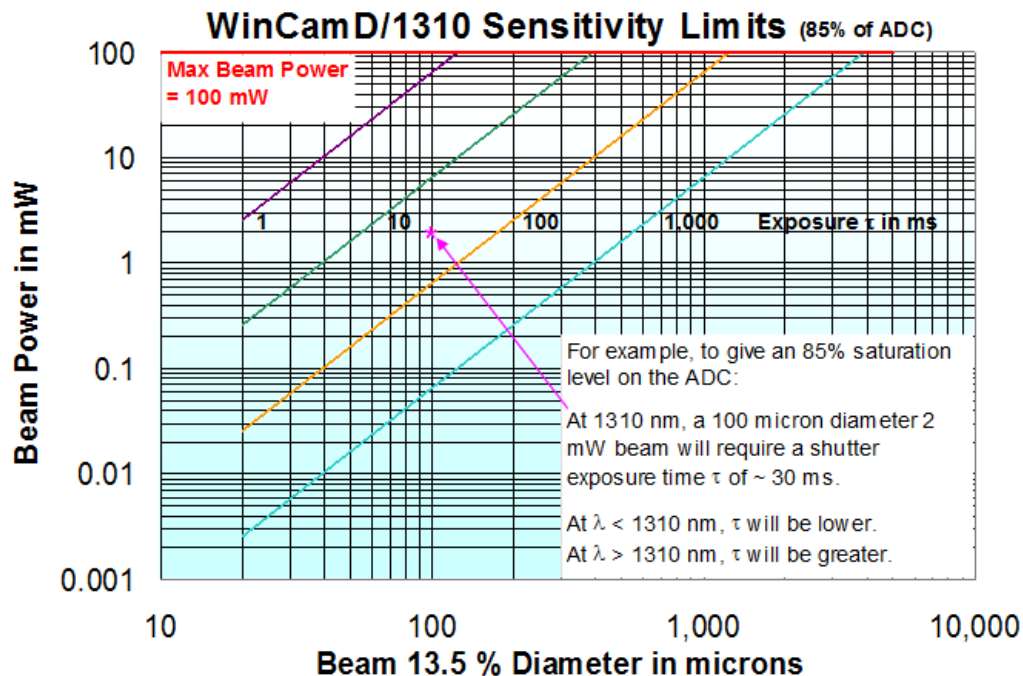
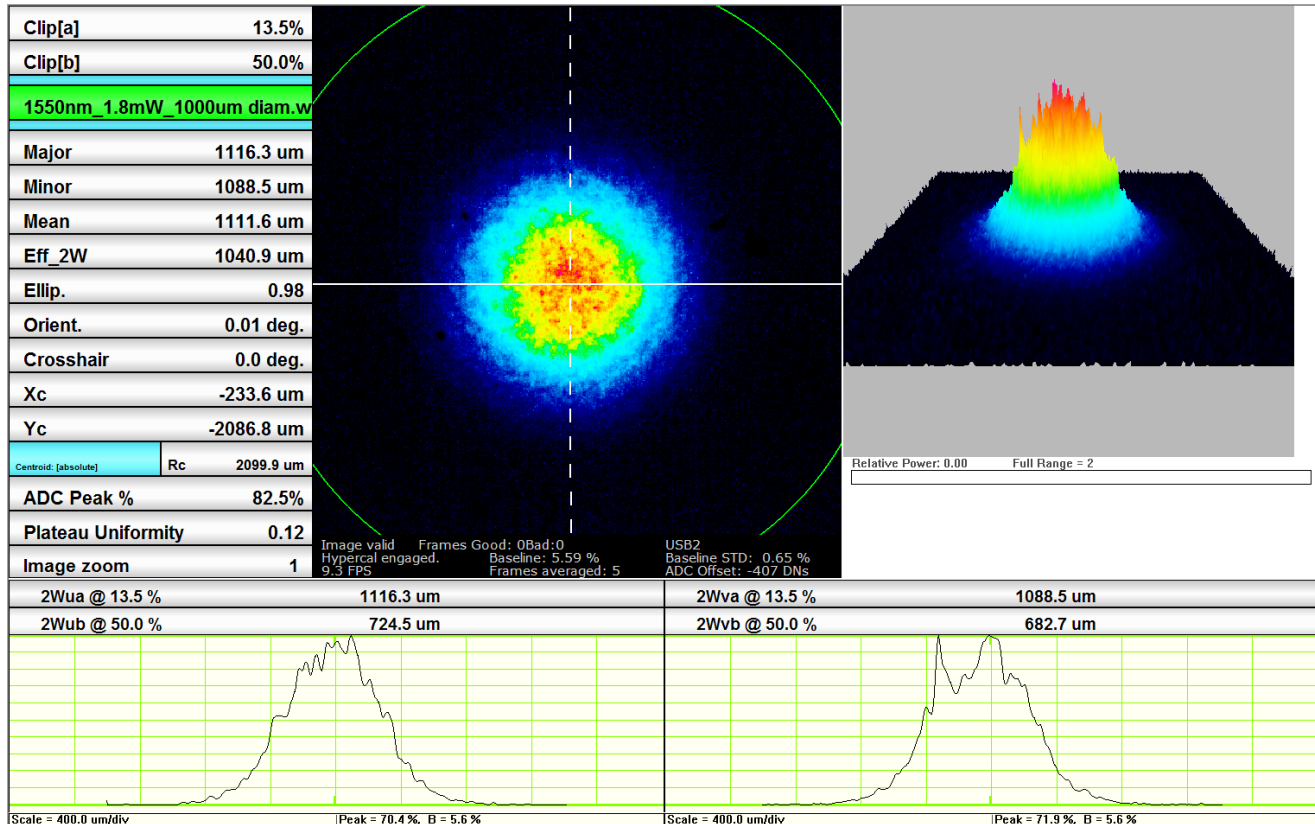


Image of a 1310 nm beam, 100 μm diameter, 1.5 mW. [43 ms Shutter, no ND filter]



S-BC-HR-TEL: Economical Telecom beam profiling, 1480 to 1610 nm



S-BC-HR-TEL for Telecom C & L bands

- 1480 to 1610 nm, IR to visible conversion phosphor on Silicon CMOS
- ≈25 μm FWHM point spread function due to phosphor
- ~20 μW to 100 mW, for 1 mm diam. @1550 nm. (With 0.02% transmission (1550 nm) ND filter e.g. 10 ms exposure on 1 mW, 1 mm diameter beam at 1550 nm.
- Gamma (γ) correction is included in the software.
- Same Ultra-compact case 45 x 45 x 16.5 mm
- USB 2.0
- Comes with 3 ND filters and a LP 1290 blocking filter for best noise reduction performance
- Port powered
- Full featured DataRay software

