

BEAM PROFILING

Overview of the different models



BEAM PROFILING CAMERAS

Profiling a laser beam is a convenient complement to the measurement of its power or energy because it provides very useful additional information, like spatial energy or intensity distribution, beam widths, centroid, ellipticity and orientation, that may help you determine if your laser-based systems are operating optimally.

The Beamage is the most cost-effective USB3.0 Beam Profiling Camera on the market. It is available for UV to IR wavelengths and in 2 sizes. It comes with an intuitive and complete software that features an array of useful tools and functions. Its calculations are ISO compliant.

MAIN SPECIFICATIONS

	BEAMAGE-3.0	BEAMAGE-3.0-IR	BEAMAGE-4M	BEAMAGE-4M-IR	BEAMAGE-4M-FOCUS
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
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	20.5 x 20.5 mm
Frame rate (full frame)	11 fps	11 fps	6.2 fps	6.2 fps	6.2 fps

BEAM QUALITY MEASUREMENT

The performance of a laser in practical applications is critical in the design of optical systems and focusing applications, and it can be quantified by measuring M^2 , the laser beam quality factor, which indicates how close a laser is to being an ideal Gaussian beam.

The Beamage-M2 acquires a sequence of beam profile measurements to automatically perform beam quality measurements within a few seconds. It is equipped with the largest optics on the market for easy alignment and fast measurements that you can trust. Its software is both intuitive and ISO compliant.



ACCESSORIES

Specifications



IF YOUR **LASER SPECIFICATIONS EXCEED THE LIMITS** IN TERMS OF

YOU CAN MANAGE THEM WITH THE ACCESSORIES PRESENTED BELOW

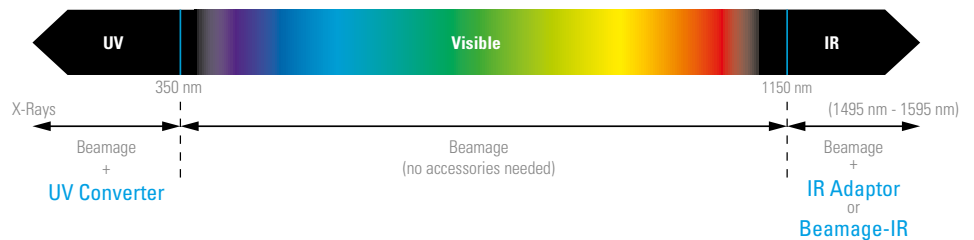
> **WAVELENGTH**

> **BEAM SIZE**

> **LASER POWER**

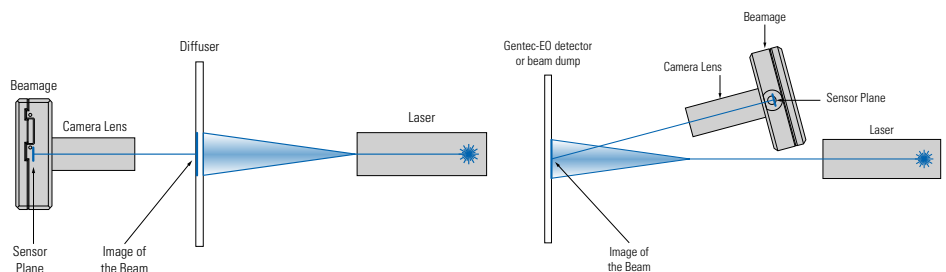
MANAGE THE WAVELENGTH

Since CMOS sensors are not sensitive to every frequency of the electromagnetic spectrum, we offer several wavelength management solutions to enhance the capabilities of the Beamage beam profiling cameras.



MANAGE THE BEAM SIZE

A simple solution is offered to those who need to profile beams that are larger than the CMOS sensor (> 11.3 mm x 11.3 mm). This solution is a beam reducing optical component called camera lens. It works either by indirectly imaging the transmission of the beam after it has passed through a diffusing element or by directly imaging the beam that is incident on a Gentec-EO detector or beam dump.



MANAGE THE LASER POWER

CMOS sensors have low saturation levels as well as low damage thresholds. It is thus very important that you control your laser power to get the best measurement possible and avoid damaging the Beamage camera.

- For laser power under 1 W, you can attenuate the beam with ND filters
- For laser power up to 1000 W, you can sample a small fraction of the beam with a BA optical sampler

