Infrared Thermopile Array Sensors

Beam Profiler
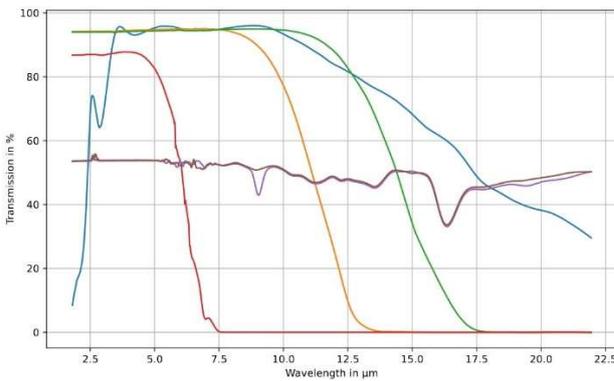## Infrared Thermopile Array Sensors for Laser Beam Profiling

Our high-resolution array sensors are equipped with various planar filters for use with different laser beams of varying wavelengths. Depending on the use case and equipment, it is possible to choose between a sensor with a pixel pitch of either 90 µm (80×64) or 45 µm (160×120). Supported power levels ranging from microwatts to milliwatts

Depending on the sensor type, the Laser Beam Profiler comes either as a UDP module with an Ethernet port for 80x64 or as a USB module for 160x120.

Optional: Beam profile analysis software

Available Filters and Transmissions

Filter	Ge w/ARC	CaF$_2$	BaF$_2$	Al$_2$O$_3$ (Sapphire)	Si uncoated	HRFZ–Si supports THz lasers

The transmission plot is limited by the spectrometer. Possible Range: <1.1* µm to THz

* Please contact us for more information.

Model

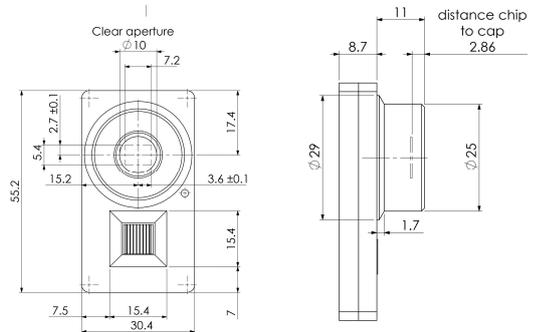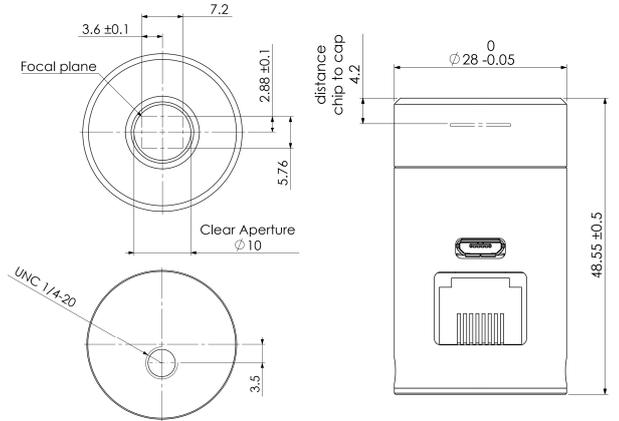**160x120 Beam Profiler w/ USB**
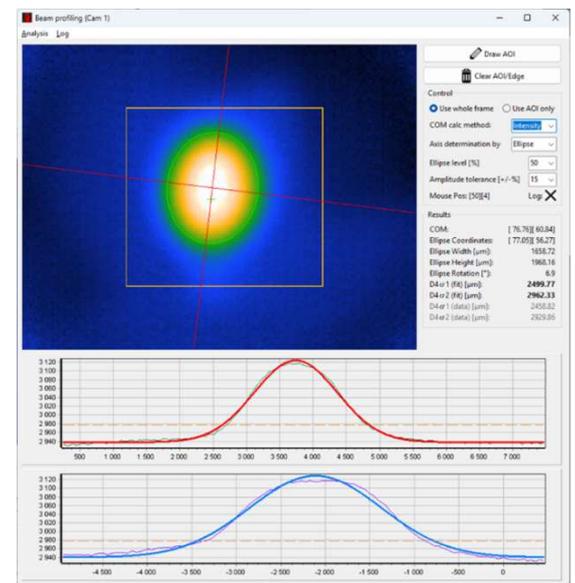
80x64 Beam Profiler w/ UDP

Dimensions

Laser Beam Spot Visualized with ArraySoft

Scope of Delivery

- Tripod
- USB Cable
- USB Mount Module (M6 and UNC)*

*160x120 only

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Software Functional Description

The separately sold software allows to fit the beam with the following algorithms:
- Gauss- and Super-Gauss
- Hermite-Gauss
- Laguerre-Gauss
- Knife-Edge-Method
- Ellipsoid fit for lateral distribution and position
- Several analysis methods: FWHM, D4σ, D1/e^2

Further features:
- COM and COM^2 (Center Of Mass) calculation
- Visualization amplitude reading vs time
- Data logging (fitted and optional raw data)
- Several preset color palettes
- Customizable color palettes
- Customizable AOI (Area Of Interest)
- Dark frame subtraction
- API (Python example included) for reading relevant data from external applications

Order Code

HTPA80x64d	R2	Beam Profiler	(UDP)	**[Ge]**
HTPA80x64d	R2	Beam Profiler	(UDP)	**[CaF$_2$]**
HTPA80x64d	R2	Beam Profiler	(UDP)	**[BaF$_2$]**
HTPA80x64d	R2	Beam Profiler	(UDP)	**[FZSi]**
HTPA80x64d	R2	Beam Profiler	(UDP)	**[Si]**
HTPA80x64d	R2	Beam Profiler	(UDP)	**[Al$_2$O$_3$]**
HTPA160x120d	R1	Beam Profiler	(USB)	**[Ge]**
HTPA160x120d	R1	Beam Profiler	(USB)	**[CaF$_2$]**
HTPA160x120d	R1	Beam Profiler	(USB)	**[BaF$_2$]**
HTPA160x120d	R1	Beam Profiler	(USB)	**[FZSi]**
HTPA160x120d	R1	Beam Profiler	(USB)	**[Si]**
HTPA160x120d	R1	Beam Profiler	(USB)	**[Al$_2$O$_3$]**

Bold: Selectable options
Regular: Fixed/Not selectable