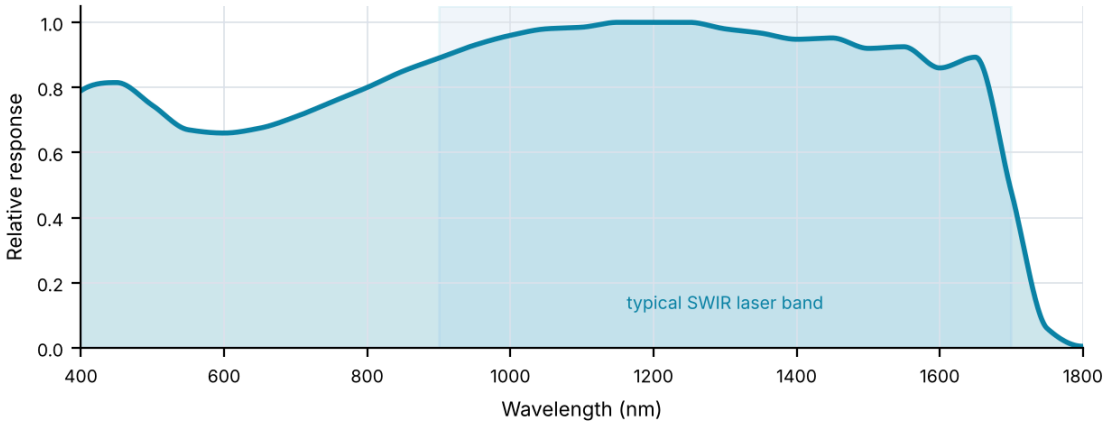
SWIR Laser Beam Profiler – High Resolution, 3.2 MP

Complete SWIR beam profiling system for SWIR lasers up to 1700 nm: camera head, software, calibration and acceptance test

Resolution	2048 × 1536 px (3.2 MP)
Pixel size	3.45 µm
Active area	7.07 × 5.30 mm (1/1.8")
Frame rate	80.3 fps (full frame)
Interface	2.5GigE Vision, M12 connector, PoE
Spectral range	400 – 1700 nm (InGaAs sensor response)
Shutter	Global shutter
ADC / pixel format	8 / 10 / 12 bit, Mono8 – Mono16
Trigger / I/O	M8 GPIO: 1 opto-isolated input, 1 opto-isolated output, 2 bi-directional; software/hardware trigger, PTP (IEEE 1588)
Lens mount	C-mount (used without lens for direct beam profiling; attenuation per application)
Power	PoE (IEEE 802.3af) or 12 – 24 VDC, < 3 W
Dimensions	44 × 29 × 45.3 mm housing; 64.6 mm overall incl. C-mount and connectors
Mass	≈ 90 g (camera head)
Environment	IP67 · operating −20 to 50 °C (case) · non-condensing
Cooling	None (passive)
Software	IZAK LBP APP: beam width/diameter, centroid, ellipticity and azimuth; peak position/value with saturation indication; fixed ROI or Auto-ROI; automated Pass/Fail test mode with exportable results; image save and measurement export. Optional API/DLL integration and AI Insights & Reporting add-on
Included	SWIR camera head, M12–RJ45 GigE cable (2 m), power supply, tripod adapter plate, IZAK LBP APP license (USB key), calibration and acceptance test report

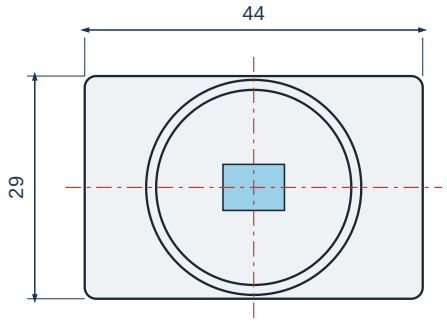
Typical relative spectral response



Typical sensor response (normalised, camera without lens or filter). Absolute calibration of power/energy is not part of the beam-profile measurement.

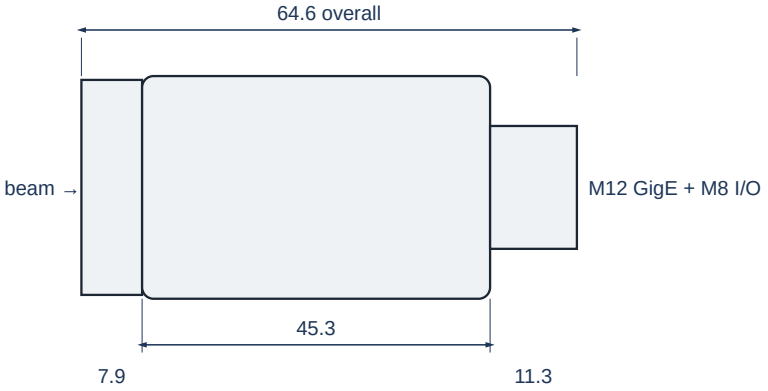
Typical values; specifications may change without notice. The quotation states the binding configuration.

Outline drawing – dimensions in mm



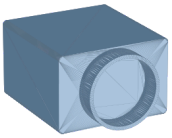
C-mount (1"-32 UN), sensor centred

FRONT VIEW (beam side)



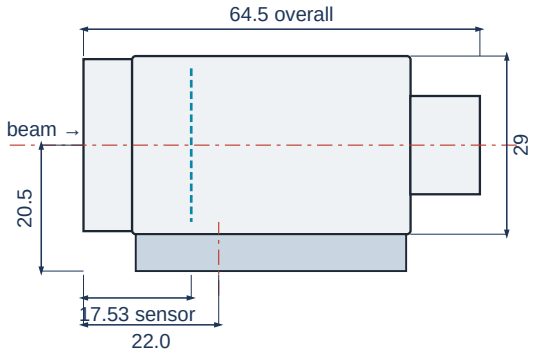
SIDE VIEW

Title SWIR Laser Beam Profiler – High Resolution, 3.2 MP – camera head outline	**SKU** 32003	**Drawing** IZAK-DWG-32003-01	**Rev** 1.1
Drawn IZAK Scientific, 2026-11-10	**Scale** not to scale	**Mount** C-mount; M3 threaded holes on top and bottom faces, tripod adapter plate included	**3D** 32003_3D.step

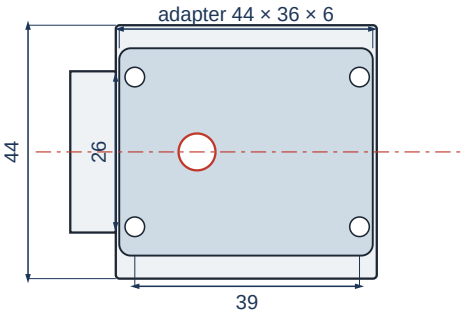


3D envelope model (STEP AP214): 32003_3D.step – housing, C-mount, connector envelope and tripod adapter plate for mechanical integration. Internal components are not modelled; mounting dimensions are given on page 3. Keep ≥ 40 mm free behind the connectors for cable bend radius.

Mounting drawing – tripod adapter plate (dimensions in mm)



SIDE VIEW – mounted on tripod adapter

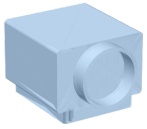


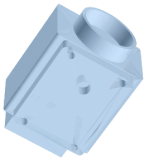
BOTTOM VIEW – adapter footprint

- Tripod adapter plate (included)
- 1/4"-20 UNC tripod thread
- Adapter-to-camera screw holes Ø3.4 (4 × M3 (included))
- Sensor plane (17.53 mm behind the C-mount reference face)

Optical axis 20.5 mm above the adapter base. Tripod thread (1/4"-20 UNC) 22.0 mm behind the C-mount reference face (sensor plane 17.53 mm behind this face). Adapter 44 × 36 × 6 mm, aluminium, fixed with 4 × M3 (included). The plate can also be fitted rotated by 180 degrees; the tripod thread then sits at the mirrored position. Dimensions after the camera manufacturer's drawings; verify against the STEP model before machining fixtures.

Title SWIR Laser Beam Profiler – High Resolution, 3.2 MP – mounting with tripod adapter	**SKU** 32003	**Drawing** IZAK-DWG-32003-02	**Rev** 1.2
Drawn IZAK Scientific, 2026-11-10	**Scale** not to scale	**Interface** 1/4"-20 UNC tripod / post thread	**3D** 32003_3D.step (incl. adapter)





Typical set-ups: 1/2" optical post with 1/4"-20 stud, or 1/4"-20 tripod. For fixtures, use the adapter hole pattern or the camera's own mounting threads (see the STEP model).