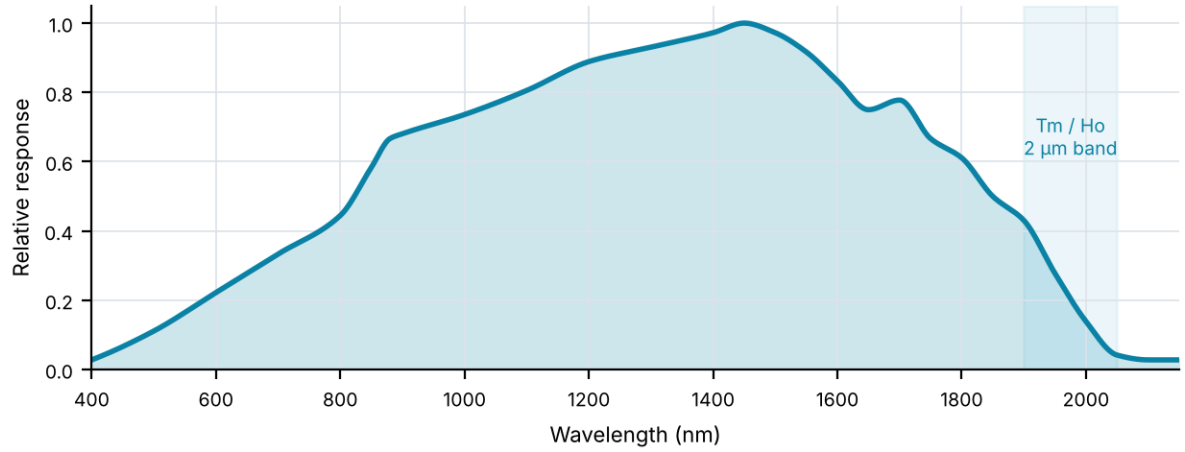
Extended SWIR Laser Beam Profiler – 1.3 MP, 400–2050 nm

Complete extended-SWIR beam profiling system for lasers from the visible to 2.05 µm, including the 2 µm thulium/holmium band: TEC-cooled camera head, software, calibration and acceptance test

Spectral range	400 – 2050 nm (extended-SWIR type-II superlattice detector, at −25 °C)
Resolution	1280 × 1024 px (1.3 MP)
Pixel size	12 µm, fill factor ≈ 100 %
Active area	15.36 × 12.29 mm (19.7 mm diagonal)
Frame rate	90 fps full frame · 189 fps at 640 × 512 (ROI)
ADC	14 bit
Full well	≈ 2 Me⁻ (min. 1.8 Me⁻)
Read noise	250 e⁻ typical, ≤ 275 e⁻
Dynamic range	> 1000 : 1
Exposure	50 µs to > 16 ms; snapshot (global) exposure; integrate-while-read or integrate-then-read
Inoperable pixels	≤ 0.75 %
Non-linearity	≤ 1 % over 98 % of the dynamic range
Cooling	3-stage TEC, set point 0 to −30 °C (typical −25 °C)
Trigger	Selectable trigger modes (hardware / software)
Interface	Camera head: Camera Link (medium, cable < 5 m). System output: GigE Vision via the included Camera Link-to-GigE converter
Lens mount	C-mount (F-mount on request); used without lens for direct beam profiling, attenuation per application
Power	< 30 W at −25 °C, external power supply included
Dimensions	77 × 77 × 138 mm (excluding lens)
Mass	≈ 1350 g (excluding lens)
Mounting	1/4"-20 UNC tripod thread on bottom face
Operating temperature	0 to 30 °C ambient, non-condensing
Export control	Classified under the U.S. EAR (ECCN 6A003.b.4.a); an export licence may be required depending on destination and end use
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	Extended-SWIR camera head, Camera Link cable, Camera Link-to-GigE converter, power supply, IZAK LBP APP license (USB key), calibration and acceptance test report
Lead time	Confirmed in the quotation

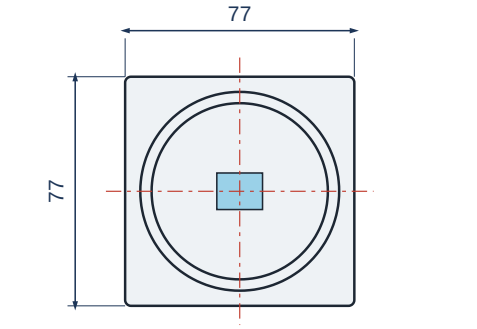
Typical values; specifications may change without notice. The quotation states the binding configuration.

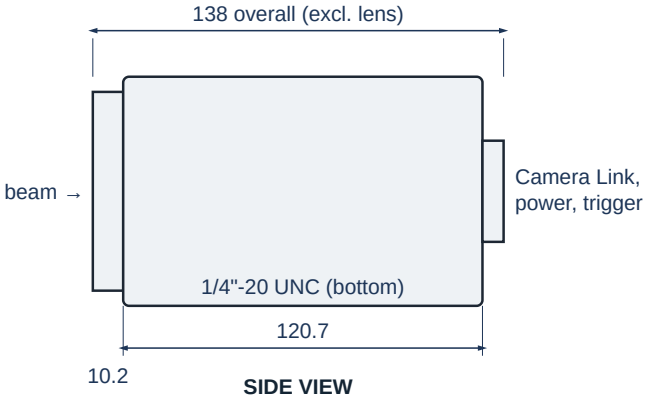
Typical relative spectral response (−25 °C)



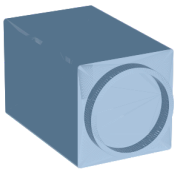
Typical detector response (normalised, camera without lens or filter); peak quantum efficiency ≈ 35 % near 1450 nm. Absolute calibration of power/energy is not part of the beam-profile measurement.

Outline drawing – dimensions in mm





Title Extended SWIR Laser Beam Profiler – 1.3 MP, 400–2050 nm – camera head outline	**SKU** 32005	**Drawing** IZAK-DWG-32005-01	**Rev** 1.0
Drawn IZAK Scientific, 2026-11-09	**Scale** not to scale	**Mount** 1/4"-20 UNC on bottom face; C-mount front	**3D** 32005_3D.step



3D envelope model (STEP AP214): 32005_3D.step – housing, front flange and rear connector envelope for mechanical integration. Mounting-hole positions and internal components are not modelled; a detailed interface drawing is available on request. Keep ≥ 60 mm free behind the connectors for the Camera Link cable bend radius, and allow free airflow around the housing (TEC heat dissipation).