10.8×8.7mm MWIR and FIR Beam Profiling (without M2 test)

Product Description

IdealPhotonics' infrared beam quality analyzer can detect light spots and analyze parameters in the 1.2-15 μ m range. It offers spatial analysis accuracy down to the 10μm level, featuring an ultra-wide sensitivity range, a large target area, ultra-high resolution, and multi-functional software capabilities

Product features

Ultra-wide sensitivity range、 Large target area、 Ultra-high resolution

Part Number

MP-BQA-MIR-640-17-25

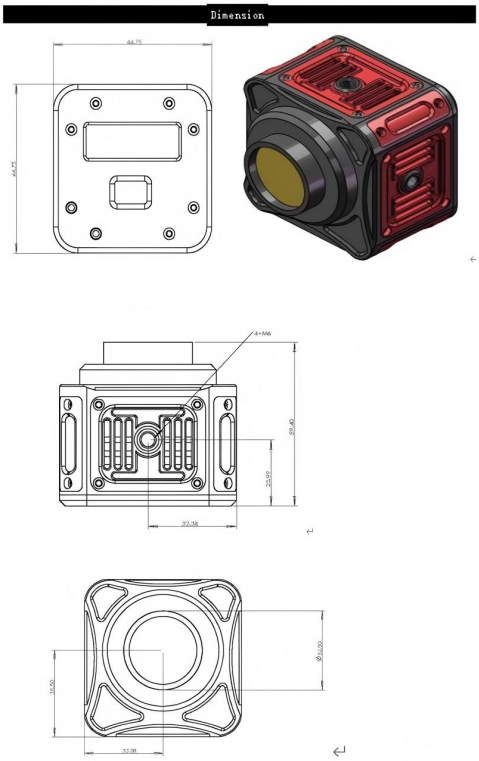
Application area

Infrared Imaging、 Infrared Laser M^2 Testing、 Infrared Optical System Characterization

Core parameters

Wavelength Range	Active Area	Max. Optical Power
1.2-15um	10.8x8.7mm	300mW(with attenuation filter)

Dimension Drawing



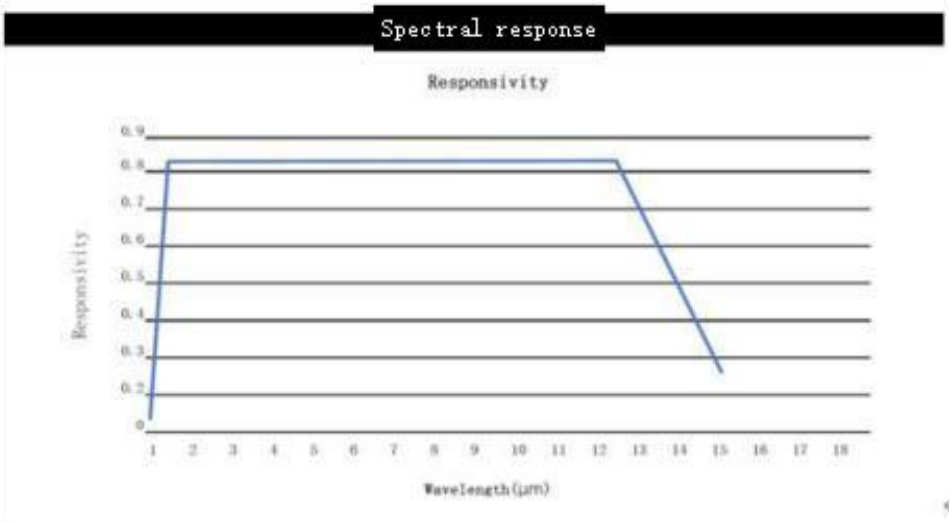
General Parameters

Optical Characteristics	Unit	Typical Value		
Light Sensitive Surface		Composite thin-film VOx micro-measuring thermal radiation focal plane		
Wavelength Range	μm	1.2μm-15μm		
Resolution		640× 512	640× 512	1280× 1024
Light Sensitive Surface Size	mm	10.8 ×8.7mm	7.6 ×6.1mm	15.3 × 12.2mm
Pixel Size	μm	17μm	12μm	12μm
Min. Detectable Light Intensity	μW/cm2	100μW/cm2		
Saturation Light Intensity	mW/cm2	200mW/cm2		
Damage Threshold	mW/cm2	250mW/cm2		
Min. Detectable Spot Size		10×pixel size		
Sampling Resolution	bit	14bit		
Signal-to-Noise Ratio (SNR)		⩾1000:1		

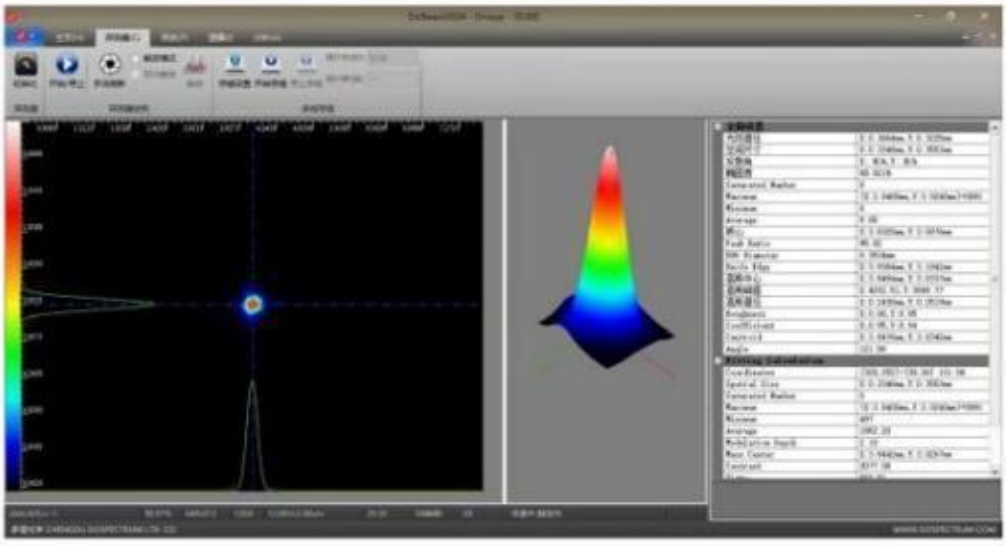
Laser Mode Measurement		Continuous (CW) or Repetition rate ⩾1kHz
Output Frame Rate	FPS	25FPS
Communication Interface		TYPE-C/USB3.0
Max. Laser Power	mW	300mW (with attenuation filter)/ 2mW (without attenuation filter)
Measurement Software		DoBEAM2024
Special Algorithms		Infrared interference fringe removal algorithm, adaptive background noise correction algorithm
Expansion Components		M^2 measurement module, including rail and lens system, conforms to ISO 11146 standard

Physical Parameters	Unit	Typical Value
Operating Temperature	℃	10~40℃
Storage Temperature	℃	0~50℃
Power Supply Interface		TYPE-C (shared with communication power, no separate power required)
Support Rod Interface		M6×4

Optical Interface		SM1×1
Dimensions	mm	64.75mm×64.75mm×59.40mm
Light Sensitive Surface Depth	mm	~15mm
Detector Net Weight	kg	0.3kg



Software and operation Method



Quick Operation Guide:

Connect the Detector: Plug in the USB cable and USB key. The system will recognize the detector in about 10 seconds.

Launch Software: Double-click the DoBEAM2024 icon (run as administrator if needed).

Initialize the Detector:

Click "Detector" > "Initialize", wait 8 seconds for the screen to load.

Automatic Exposure Adjustment:

The software adjusts exposure automatically. Do not exceed 2mW without attenuation filters. The default password is "0000".

Stabilize the Detector:

Wait 60 seconds for stabilization. If there’s background interference, refresh manually or use the "Collect Background" and "Use Background" functions.

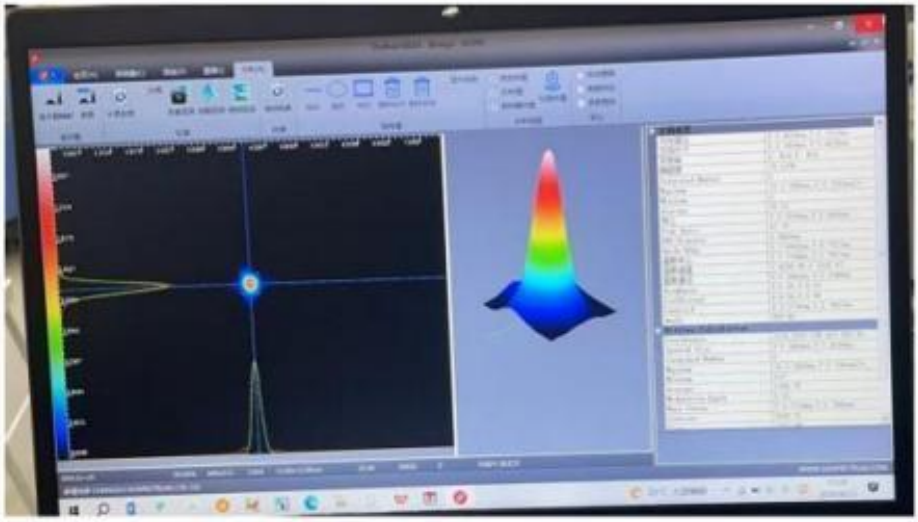
Storage & Playback:

Click "Detector" > "Storage Settings" to choose storage options. Click "Start Storage" to save data. Use "Playback" to open saved files.

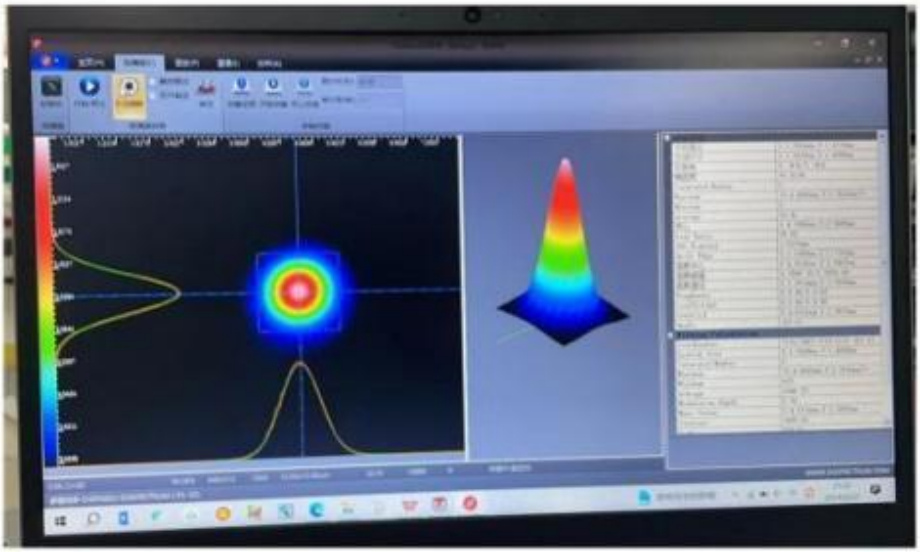
Save PDF Report:

Click "Analysis" > "Save Result" to generate a PDF report.

5.26μmQCLLaser spot detection results



1392nm DFB Laser spot detection results:



Model and Part Number Comparison Table

Model	Specifications
MP-BQA-MIR-6 40-17-25	Superwide Mid-Infrared Beam Quality Analyzer (without M2 testing, photodetector size: 10.8 × 8.7mm), Max. Optical

	Power: 300mW (with attenuator), Wavelength Range: 1.2-15um
MP-BQA-MIR-640-12-25-M2	Superwide Mid-Infrared Beam Quality Analyzer (with M2 testing, photodetector size: 7.6 × 6.1mm), Max. Optical Power: 300mW (with attenuator), Wavelength Range: 1.2-15um
MP-BQA-MIR-640-12-25	Superwide Mid-Infrared Beam Quality Analyzer (without M2 testing, photodetector size: 7.6 × 6.1mm), Max. Optical Power: 300mW (with attenuator), Wavelength Range: 1.2-15um
MP-BQA-MIR-1280-12-25-M2	Superwide Mid-Infrared Beam Quality Analyzer (with M2 testing, photodetector size: 15.3 × 12.2mm), Max. Optical Power: 300mW (with attenuator), Wavelength Range: 1.2-15um
MP-BQA-MIR-1280-12-25	Superwide Mid-Infrared Beam Quality Analyzer (without M2 testing, photodetector size: 15.3 × 12.2mm), Max. Optical Power: 300mW (with attenuator), Wavelength Range: 1.2-15um