



**JINSP Company Ltd.**  
spectralanalyser.com

## CMOS 280nm ~1100nm Laser Beam Analyzer BA1023 USB 1920x1200 Real-Time Monitoring

Our Product Introduction

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### Basic Information

- Place of Origin: CHINA
- Brand Name: JINSP
- Certification: CE ISO9001 IP30 IP40
- Model Number: BA1023
- Minimum Order Quantity: 1
- Price: Negotiable
- Packaging Details: 1PC/BOX
- Delivery Time: 30 Working Days
- Payment Terms: T/T
- Supply Ability: 20PCS Per Month



### Product Specification

- Wavelength Range: 280nm-1100nm
- Dimension: 78 \*45 \*38.5mm (without Base)
- Power Supply: USB Powered Or 12V DC Externally Powered
- Effective Sensing Area: 11mm\*7mm
- Sensor: 2.3MP, 1/1.2" CMOS
- SNR: 40 DB
- Cell Size: 5.86μm\*5.86μm
- Minimum Detection Area: 30μm (5 Pixls)
- Maximum Frame Rate: 41 Fps@1920\*1200
- Data Interface: USB3 Vision, GenICam
- Highlight: **1100nm Laser Beam Analyzer, 280nm Laser Beam Analyzer, cmos beam profiler 1920x1200**



### More Images



Standard Parts



Optional Parts

## Product Description

**Product Description:**

**JINSP Beam Profilers are mainly designed for:**

- Measuring: The size of the light spot utilization of recycled metal resources and enhance the value of recycled metals.
- Marking: The position of the light spot quality of incoming raw materials and outgoing metal products.
- Comparing: The change in the light spot.
- Real-time monitoring.

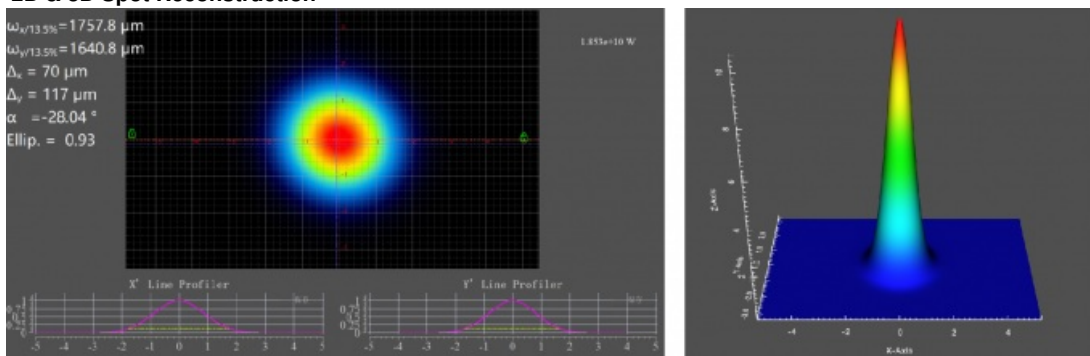
**Product Selection Table & Parameters:**

Product Code	BA1023	BA1024Ga	BA1024Gb	BA1024Ua	BA1024Ub
Probe wavelength range	280nm ~ 1100nm				
Effective sensing area	11mm*7mm		13mm*8.7mm	7mm*5.5mm	4.9mm*3.7mm
Sensor	2.3MP, 1/1.2" CMOS		20MP, 1" CMOS	2MP, 1/1.7" CMOS	0.4MP, 1/2.9" CMOS
SNR	40 dB	44.9 dB	41.5 dB	43.7 dB	42.9 dB
Gain control	0~20dB	0~24dB			
Cell size	5.86μm*5.86μm		2.4μm*2.4μm	4.5μm*4.5μm	6.9μm*6.9μm
Minimum detection area	30μm (5 pixls)		12 μm (5 pixls)	22.5 μm (5 pixls)	
Maximum frame rate	41 fps@1920*1200		5.9 fps @5472*3648	90 fps @1624*1240	526.5 fps @ 720*540 Mono 8
Ingress protection	IP30	IP40			
Data interface	USB	GigE		USB	
File storage	*.jpg, *.mat, *.csv, *.xml				
Light attenuation component	Insertable and barrel-type options are available, compatible with 1-inch unframed filters				
Storage temperature	-30 ~ +70				

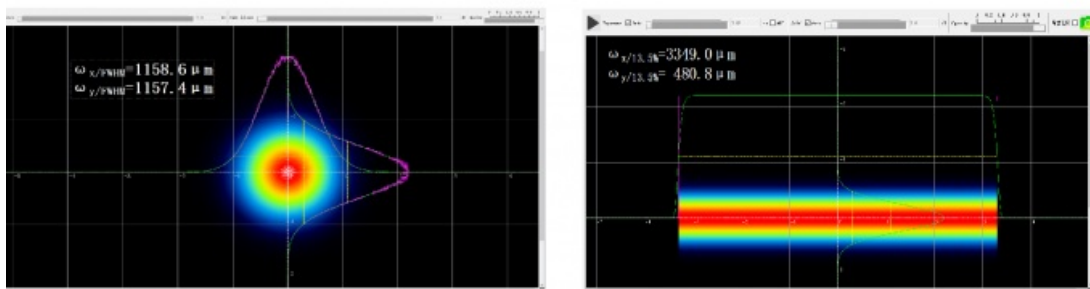
## Main Functions:

- This software is designed to be compatible with both Windows 10 (64-bit version) and Linux operating systems, specifically Ubuntu X86, ensuring a wide range of users can utilize its features.
- It offers comprehensive control over camera settings, including exposure, gain, and resolution adjustments, allowing users to fine-tune the camera's performance to suit their specific needs.
- The software provides real-time pseudo-color visualization for both 2D and 3D representations of spots, enhancing the clarity and detail of the images. Additionally, it displays the long and short axes of spots using Gaussian and Super-Gaussian curves, aiding in precise analysis.
- Users can measure essential parameters such as the length and width of the spot's axes, its ellipticity, and the rotation angle, facilitating accurate data collection and analysis.
- Special functions are included to enhance user experience, such as real-time comparison of dual light spots, background cropping to focus on the subject, and light intensity camera capabilities for detailed imaging.
- The software enables users to record and export all the measured parameters, making it convenient to save and share data for further analysis or reporting purposes.

### 2D & 3D Spot Reconstruction



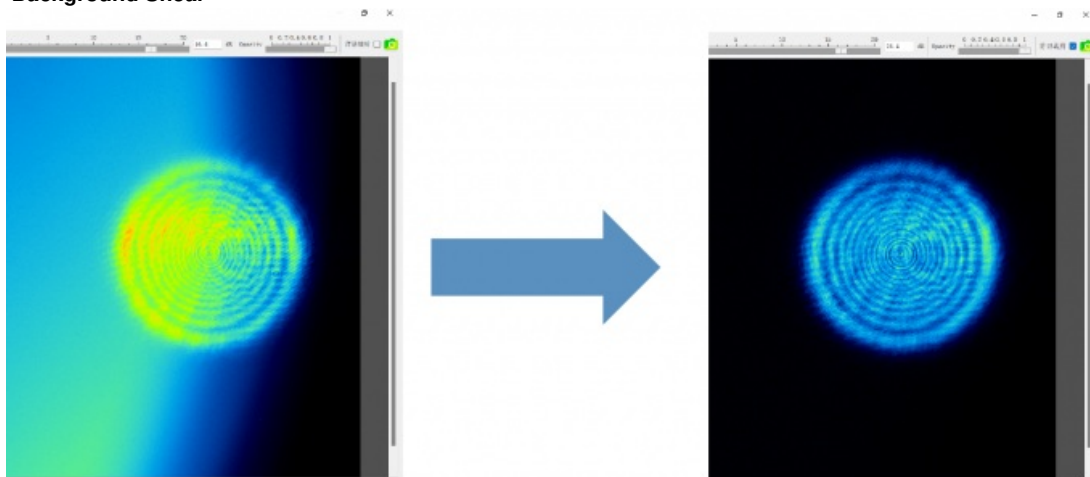
### Gaussian & Super-Gaussian fitting



### Gaussian Fitting

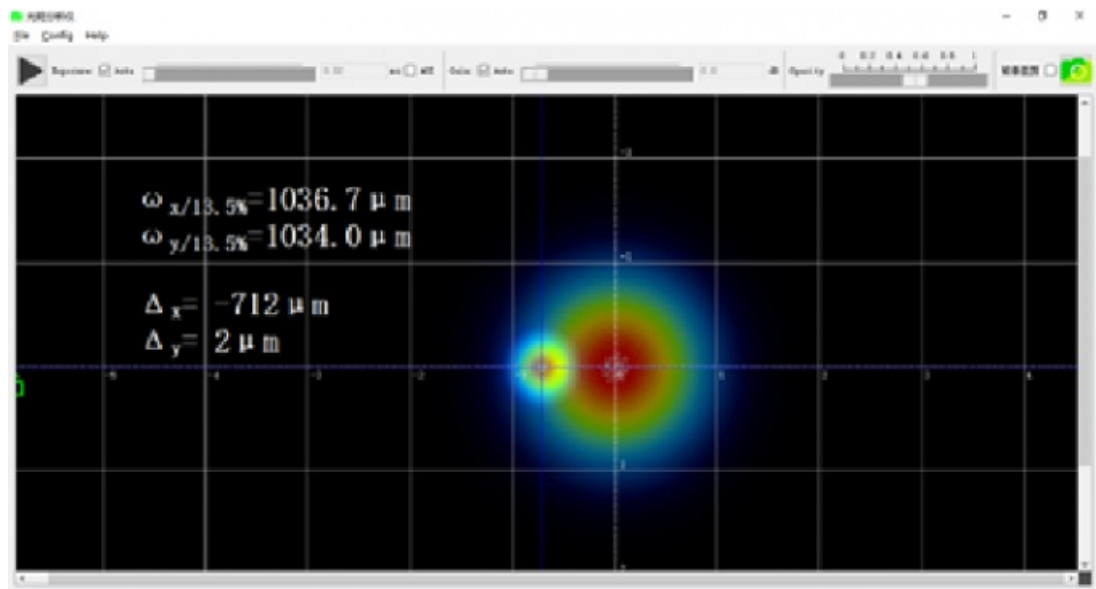
### Gaussian & Super-Gaussian fitting

### Background Shear

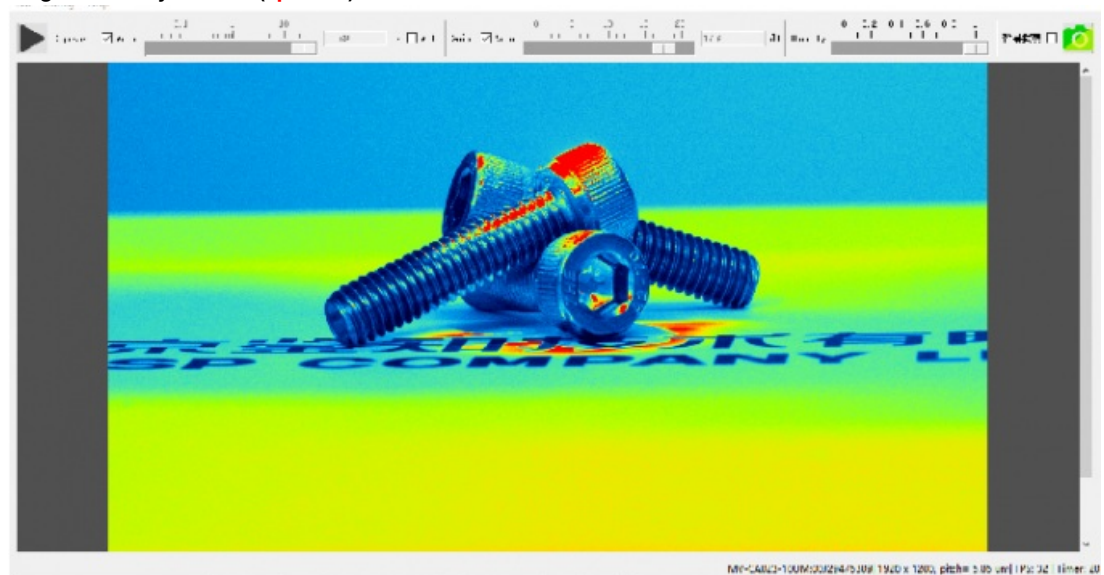


### Background Shear

### Dual-beam real-time comparison (Location, light intensity distribution)

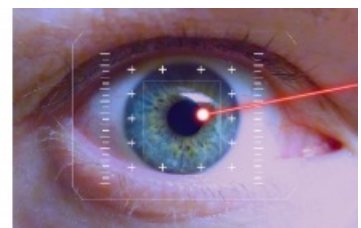
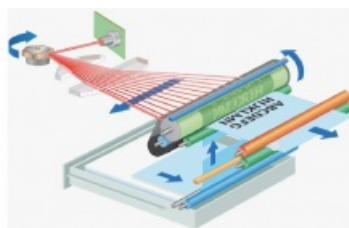


Light intensity camera (optional)



## Applications:

- Beam quality measurement (a critical parameter of lasers, essential in various optical fields including scientific research and industry).
- Used for optical research, laser system research, laser detection research, and other scientific research areas for light energy distribution detection (for researchers in research institutions).
- Real-time monitoring of light spots during the processing process (for laser equipment manufacturers).
- Light intensity distribution monitoring (with imaging lenses), equivalent to a light intensity camera (used in scientific research and industrial fields).
- Other specific applications (corresponding to instrument manufacturing enterprises, detailed introduction in the following text).



**For example:** The laser printing industry first utilized beam profilers to design and manufacture the core component of laser printers - the Laser Scanning Unit (LSU). This requires an understanding of the system's beam size, array, and the impact of beam swing on the laser printer, with further improvements made accordingly.

## FAQ:

**Q1:** This is the first time I use it, is it easy to operate?

A1: We will send you a manual and guide video in English, it can teach you how to operate the spectrometer. Also, our technicians will offer professional technical operation meetings.

**Q2: Can you offer an operation training?**

A2: Your technicians can come to our factory for training. Jinsp engineers can go to your place for local support ( installation, training, debugging, maintenance ).

**Q3: How to receive the best price in the shortest time?**

A3: When you send us an inquiry, please kindly offer details with wavelength, detector, effective pixels, focal length, and so on. We will send you a quotation with details soon to your email.

**Q4: If the spectrometer has a problem in my place, what could I do?**

A4: The spectrometer has a one-year warranty. If it breaks down, our technician will figure out what the problem may be, according to the client's feedback. We can repair for free within one year warranty.

**Q5: What about quality assurance?**

A5: We have a quality inspection team. All goods will go through quality inspection before shipment. We can send you pictures for inspection.



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