

# SURFACE ROUGHNESS ANALYZER – SRA

## SPECIFICATIONS



## Product group specifications

SRA

### Camera system

Connection	USB 3.0
Performance	60 fps at 1280 × 1024 px

### Optics

Focus	software-controlled
Lens magnification <sup>1)</sup>	2.5× up to 100× nominal magnification
Field of view	0.2 mm × 0.16 mm to 8.0 mm × 6.4 mm
Resolution	lateral, pixel-based <sup>2)</sup> : 0.16 μm to 6.25 μm axial <sup>3)</sup> : 10 nm to 2.6 μm

### Illumination

Type	laser diode
Wave length, dominant	450 nm

### Scanning table

x-y-positioning <sup>1)</sup>

z-positioning

Length	manual: 100 mm × 100 mm automatic: 75 mm × 75 mm	ultrasonic drive: 20 mm
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### Software

itom	surface profiles, roughness parameters
MountainsMap® <sup>1)</sup>	imaging topography, contour analysis, advanced contour analysis, 3D advanced surface texture, 3D Fourier and wavelets

## Measurement specifications

SRA

### Analyzed characteristics

#### topography

- spike-filter
- median-filter
- Gauss-filter
- clip values
- cut boarders
- region of interest
- mirror/rotate values
- fill invalid pixels
- step height

#### area roughness

- waviness parameters:  
W<sub>a</sub>, W<sub>q</sub>, W<sub>Z10r</sub>, W<sub>v</sub>, W<sub>p</sub>, W<sub>z</sub>
- roughness parameters:  
S<sub>a</sub>, S<sub>q</sub>, S<sub>Z10r</sub>, S<sub>v</sub>, S<sub>p</sub>, S<sub>z</sub>

#### likewise roughness

- waviness parameters: W<sub>a</sub>, W<sub>q</sub>, W<sub>z</sub>, W<sub>max</sub>
- roughness parameters: R<sub>a</sub>, R<sub>q</sub>, R<sub>z</sub>, R<sub>max</sub>

<sup>1)</sup> optional

<sup>2)</sup> The lateral pixel-based resolution is the pixel size at the measurement object.

<sup>3)</sup> The axial resolution is given due to the Sq value of the difference of two measurements of a mirror.

**General specifications****SRA****Sample dimensions**

Maximum sample size (W × D × H) ∞ mm × 120 mm × 100 mm

**Environment**

Temperature operating: 15 to 35 °C

Humidity 20 to 60 %

**Instrument dimensions**

Footprint (W × D) Head: 110 mm × 86 mm  
Stand: 300 mm × 470 mm  
Electronic box: 210 mm x 210 mm

Height Head: 180 mm  
Stand: 450 mm

Weight Electronic box: 80 mm  
Head: 2 kg  
Stand: 28 kg  
Electronic box: 2.5 kg

**Power supply**

Voltage 100 to 250 V

Power consumption 250 W

Frequency 50 to 60 Hz

**Interfaces**

PC USB 3.0

