

# SURFACE ROUGHNESS ANALYZER – SRA HEAD

SPECIFICATIONS



**KRÜSS**

Surface Roughness Analyzer

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Advancing your Surface Science

Product group specifications	SRA Head	SRA Head Basic
<b>Camera system</b>		
Connection	USB 3.0	
Performance	60 fps at 1280 × 1024 px	
<b>Optics</b>		
Lens magnification <sup>1)</sup>	2.5× up to 100× nominal magnification	2.5× up to 50× nominal magnification
Field of view	0.2 mm × 0.16 mm to 8.0 mm × 6.4 mm	0.4 mm × 0.32 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	lateral, pixel-based <sup>2)</sup> : 0.31 μm to 6.25 μm axial <sup>3)</sup> : 10 nm to 2.6 μm
<b>Illumination</b>		
Type	laser diode	
Wave length, dominant	450 nm	
<b>Height measuring system</b>		
z-positioning	automatic ultrasonic drive: 20 mm	automatic step drive: 15 mm
max. measuring speed (z-axis)	up to 30 steps per sec	up to 10 steps per sec
<b>Software</b>		
itom	surface profiles, roughness parameters	
MountainsMap® <sup>1)</sup>	imaging topography, contour analysis, advanced contour analysis, advanced surface texture, Fourier and wavelets	

Measurement specifications	SRA Head / SRA Head Basic		
Analyzed characteristics	topography	surface-related	profile-related
	<ul style="list-style-type: none"> <li>■ spike-filter</li> <li>■ median-filter</li> <li>■ Gauss-filter</li> <li>■ clip values</li> <li>■ cut boarders</li> <li>■ region of interest</li> <li>■ mirror/rotate values</li> <li>■ fill invalid pixels</li> <li>■ step height</li> </ul>	<ul style="list-style-type: none"> <li>■ waviness parameters: W<sub>a</sub>, W<sub>q</sub>, W<sub>Z10</sub>, W<sub>v</sub>, W<sub>p</sub>, W<sub>z</sub>, W<sub>ku</sub>, W<sub>sk</sub>, W<sub>dr</sub></li> <li>■ roughness parameters: S<sub>a</sub>, S<sub>q</sub>, S<sub>Z10</sub>, S<sub>v</sub>, S<sub>p</sub>, S<sub>z</sub>, S<sub>ku</sub>, S<sub>sk</sub>, S<sub>dr</sub></li> <li>■ roughness factor r</li> </ul>	<ul style="list-style-type: none"> <li>■ waviness parameters: W<sub>a</sub>, W<sub>q</sub>, W<sub>z</sub>, W<sub>p</sub>, W<sub>v</sub>, W<sub>t</sub>, W<sub>sk</sub>, W<sub>ku</sub>, W<sub>dq</sub>, W<sub>da</sub>, W<sub>dc</sub></li> <li>■ roughness parameters: R<sub>a</sub>, R<sub>q</sub>, R<sub>z</sub>, R<sub>p</sub>, R<sub>v</sub>, R<sub>t</sub>, R<sub>sk</sub>, R<sub>ku</sub>, R<sub>dq</sub>, R<sub>da</sub>, R<sub>dc</sub></li> </ul>

<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 Head****SRA Head Basic****Sample dimensions**

Maximum sample size (W × D × H) ∞ mm × 200 mm × 200 mm

**Environment**

Temperature operating: 15 to 40 °C  
Humidity 20 to 85 % rel.

**Instrument dimensions**

Footprint (W × D)	Head: 110 mm × 55 mm Electronic box: 210 mm x 210 mm	Head: 110 mm × 55 mm
Height	Head: 180 mm Electronic box: 80 mm	Head: 180 mm
Weight	Head: 2 kg Electronic box: 1 kg	Head: 2 kg

**Power supply**

Voltage	90 to 264 V
Power consumption	250 W
Frequency	47 to 440 Hz

**Interfaces**

PC	USB 3.0
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