SURFACE ROUGHNESS ANALYZER – SRA

SPECIFICATIONS

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Product group specifications	SRA	SRA Basic
Camera system		
Connection	USB 3.0	
Performance	60 fps at 1280 × 1024 px	
Optics		
Lens magnification [1]	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 [2]: 0.16 µm to 6.25 µm axial [3]: 10 nm to 2.6 µm	lateral, pixel-based [2]: 0.31 µm to 6.25 µm axial [3]: 10 nm to 2.6 µm
Illumination		
Type	laser diode	
Wave length, dominant	450 nm	
Stages		
x-positioning	automatic: 25 mm up to 100 mm[1]	
x-y-positioning	automatic: 75 mm × 75 mm[1]	
Height measuring system		
z-positioning	automatic ultrasonic drive: 20 mm manual: 250 mm	automatic step drive: 15 mm manual: 250 mm
max. measuring speed (z-axis)	up to 30 steps per sec	up to 10 steps per sec
Software		
itom	surface profiles, roughness parameters	
MountainsMap® [1]	imaging topography, contour analysis, advanced contour analysis, advanced surface texture, Fourier and wavelets	

Measurement specifications	SRA / SRA Basic		
Analyzed characteristics	topography	surface-related	profile-related
	■ spike-filter ■ median-filter ■ Gauss-filter ■ clip values ■ cut boarders ■ region of interest ■ mirror/rotate values ■ fill invalid pixels ■ step height	■ waviness parameters: W_a, W_q, W_{Z10}, W_v, W_p, W_z, W_{ku}, W_{sk}, W_{dr} ■ roughness parameters: S_a, S_q, S_{Z10}, S_v, S_p, S_z, S_{ku}, S_{sk}, S_{dr} ■ roughness factor r	■ waviness parameters: W_a, W_q, W_z, W_p, W_v, W_t, W_{sk}, W_{ku}, W_{dq}, W_{da}, W_{dc} ■ roughness parameters: R_a, R_q, R_z, R_p, R_v, R_t, R_{sk}, R_{ku}, R_{dq}, R_{da}, R_{dc}

[1] optional
[2] The lateral pixel-based resolution is the pixel size at the measurement object.
[3] The axial resolution is given due to the Sq value of the difference of two measurements of a mirror.

General specifications	SRA / SRA 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)	420 mm × 330 mm
Height	660 mm
Weight	30 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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