



Product Overview

This portable, industrial-grade instrument is designed for precise measurement of surface roughness in manufacturing, laboratory, and quality inspection environments. Equipped with a high-accuracy inductive sensor and diamond stylus tip, it delivers reliable measurement performance in compliance with international quality standards.

Technical Specifications

Measurement Performance

Parameter	Specification
Measured Parameters	Ra (Roughness Average), Rz (Mean Roughness Depth)
Measurement Range (Ra)	0.05 to 10.00 μm / 1.000 to 400.0 μinch
Measurement Range (Rz)	0.020 to 100.0 μm / 0.780 to 4000 μinch
Accuracy	$\leq \pm 10\%$
Fluctuation of Display Value	$\leq 6\%$

Resolution

Measurement Range	Resolution
$< 10 \mu\text{m}$	0.001 μm
$\geq 10 \mu\text{m}$ and $< 100 \mu\text{m}$	0.01 μm
$\geq 100 \mu\text{m}$	0.1 μm

Sensor & Stylus Configuration

Parameter	Specification
Sensor Principle	Inductance Type

Note: Specifications are subject to change, Photos shown above are Indicative, Actual Product can Vary.



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Parameter	Specification
Stylus Radius	10 µm
Stylus Material	Diamond
Stylus Angle	90°
Maximum Guide Force	16.0 mN (1.6 gf)
Stylus Force Changing Rate	≤ 1.0 mN/µm
Skid Force	≤ 400 mN

Drive Mechanism

Parameter	Specification
Maximum Driving Stroke	17.5 mm (0.7 inch)
Cut-off Lengths	0.25 mm / 0.8 mm / 2.5 mm
Evaluation Length	1 to 5 cut-off lengths (selectable)

Driving Speed

Operation Mode	Speed
Measuring (0.25 mm & 0.8 mm cut-off)	0.25 mm/s
Measuring (2.5 mm cut-off)	1.0 mm/s
Return Speed	1.0 mm/s

Hardware & Connectivity

Parameter	Specification
Display	4-digit LCD with blue backlight
Data Interface	Integrated RS-232 serial interface
Standard Compliance	ISO 4287, DIN 4768, ANSI B46.1, JIS B0601

Environmental & Power Parameters

Parameter	Specification
Operating Temperature	0°C to 50°C (32°F to 122°F)
Operating Humidity	< 80% RH (non-condensing)
Power Supply	Built-in rechargeable Lithium-ion battery
Power Management	Auto shutoff after 5 minutes of inactivity

Physical Dimensions

Parameter	Specification
Main Unit Size	140 mm × 52 mm × 48 mm
Net Weight	Approx. 420 g (excluding sensor and accessories)

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Standard Packaging List

- 1 × Portable Digital Surface Roughness Tester (Main Unit)
- 1 × Standard Inductance Pickup Sensor
- 1 × Standard Calibration Test Block
- 1 × Power Adapter / Charger
- 1 × Screwdriver
- 1 × Heavy-Duty Carrying Case

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