

# SURFCOM CREST Lp

Dedicated catalog is available.

**Autofocusing model sensor enables measuring tiny or easily scratched workpieces being hard to measure by the contact-type instruments, in comparable accuracy with the contact-type instruments**

## Non-contact measuring machine

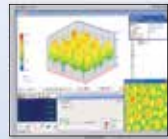
It enables to measure the work which can not be contacted or stylus can not be reached.

## ISO compliance

ISO25178-605-compliant autofocusing surface texture and contour measuring instrument.

## High data consistency with stylus-based instrument

It adopts auto-focusing, also provide the functionality of high-data consistency and stylus type measuring machine which unsusceptible to reflection ratio and color of the work.



## Achieved fast measurement by newly-developed scanning mode

It is able to switch index mode and scan mode, depending on the intended use, applicable to wide work.

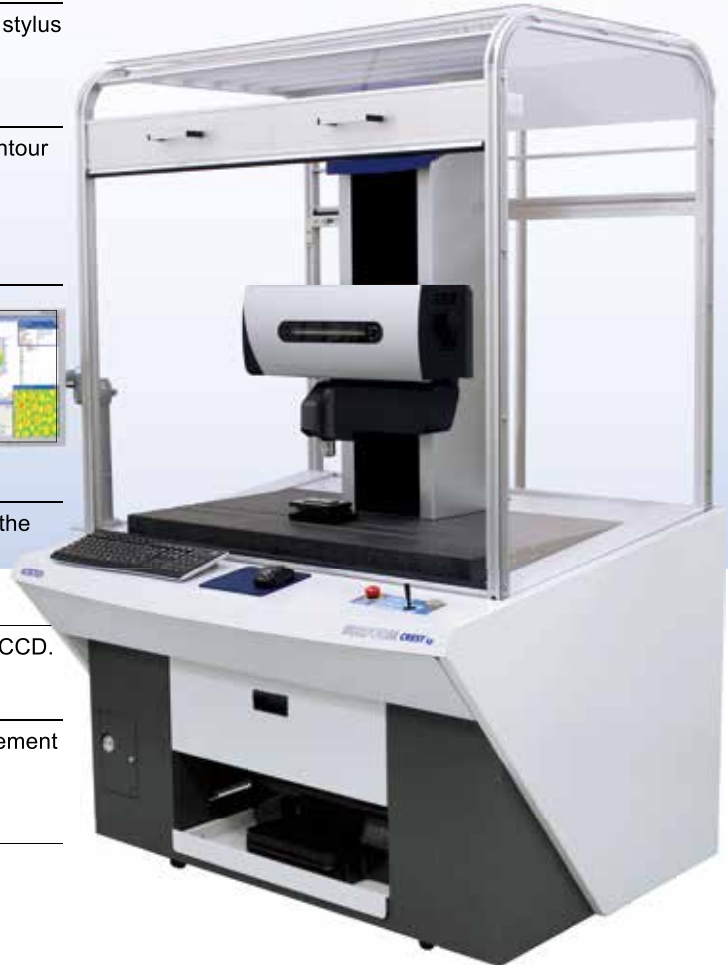
## Measuring position monitoring function

Realtime display of lazer-spot and measuring point by built-in CCD.

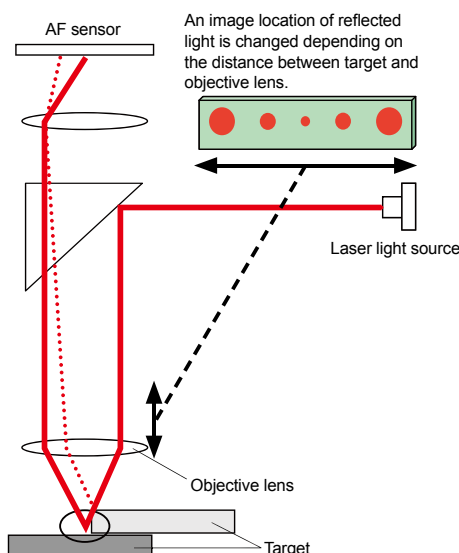
## Wide Measurement

Wide measuring range of Z : 10 mm and X : 200 mm. Measurement of large work is also available.

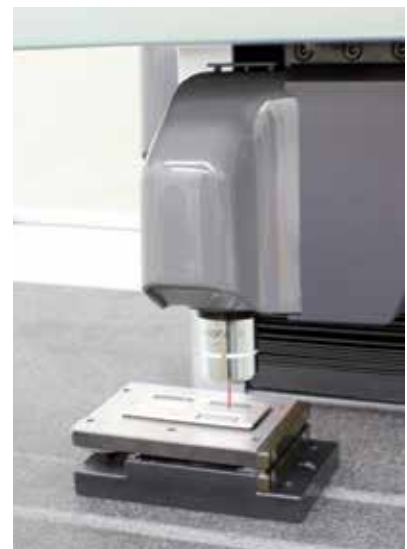
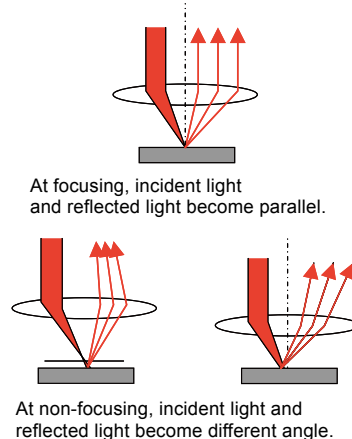
## Adopted advanced software ACCTee



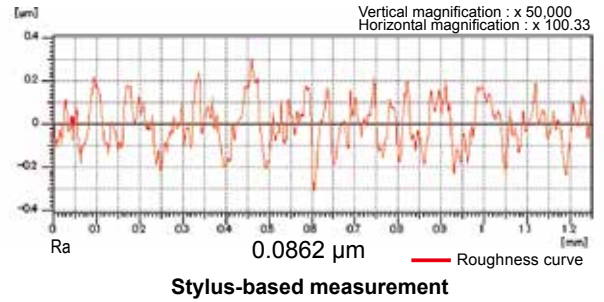
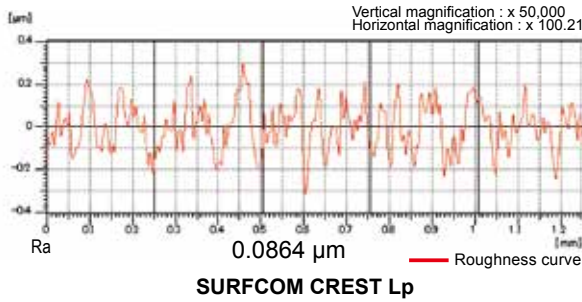
## Autofocusing principle



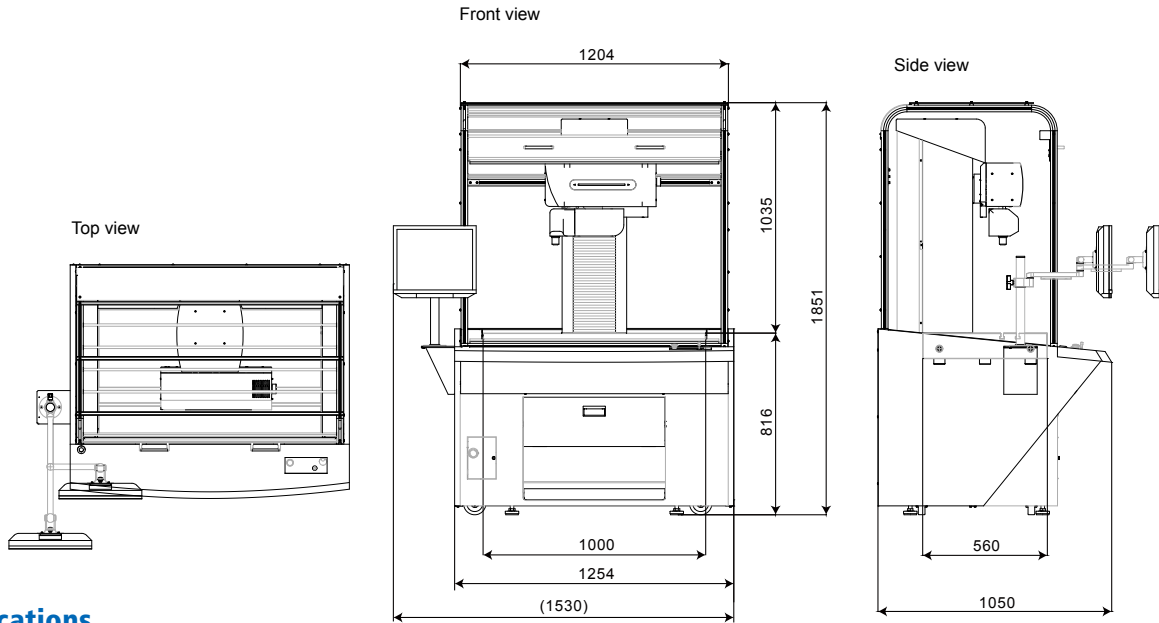
- (1) Focus on with image location on AF sensor.
- (2) Read the position of objective lens at focusing with scale.



**Example of Standard sample measurement (Halle SN6349 : Ra = 0.0860 μm)**



**External View**



**Specifications**

Model		SURFCOM CREST Lp		
Detection method		Z-axis (vertical)	Point autofocusing	
		X-axis (horizontal)	Optical diffraction scale	
Detector	Measurement range	10 mm		
	Resolution	1 nm		
	Indication accuracy (vertical)	$\pm(0.1 + 0.4 H/10) \mu\text{m}$ , *H: Measuring height mm ( $\pm 0.3 \mu\text{m}/5 \text{ mm}$ )		
	measuring position	Downward		
	Laser spot diameter	1.3 μm (x100 objective lens)*1		
	Laser light output	Below 1 mW (Class 2)		
	Working distance	10 mm (x100 objective lens)*1		
	Safety function	Auto stop function, Safety stop function by contact, Detecting both ends of stroke limit function		
Tracing driver	Measurement range	200 mm		
	Resolution	0.54 nm		
	Measurement point sampling interval	0.5 to 100 μm *0.1 μm unit		
	Indication accuracy	$\pm(0.3 + L/1000) \mu\text{m}$ *L: Measuring length ( $\pm 0.5 \mu\text{m}/200 \text{ mm}$ )		
	Straightness accuracy	$0.12 + 1.5 L/1000 \mu\text{m}$ *L: Measuring length ( $0.42 \mu\text{m}/200 \text{ mm}$ )		
	Measurement speed	INDEX	Dependent on index pitch and work profile.	
		SCAN	0.03 to 0.15 mm/s	
Tracing driver moving speed	0.02 to 20 mm/s			
Column	Stroke	360 mm		
	Column moving speed	to 50 mm/s (Max.10 mm/s at full time)		
Other	Power supply	Single-phase AC 100 V to 240 V $\pm 10\%$ , 50/60 Hz		
	Air supply	0.4 MPa		
	Installation dimensions (W × D × H)	1530 mm × 1050 mm × 1851 mm		
	Total Weight	680 kg		

\*1 In the case of numerical aperture (NA) 0.6 of the objective lens.

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