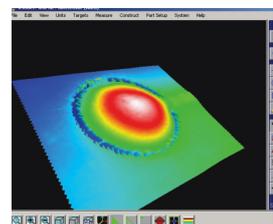
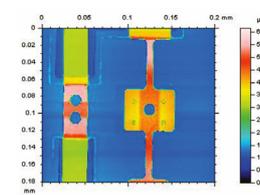
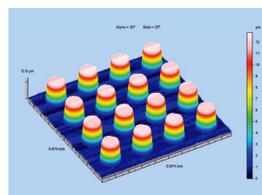
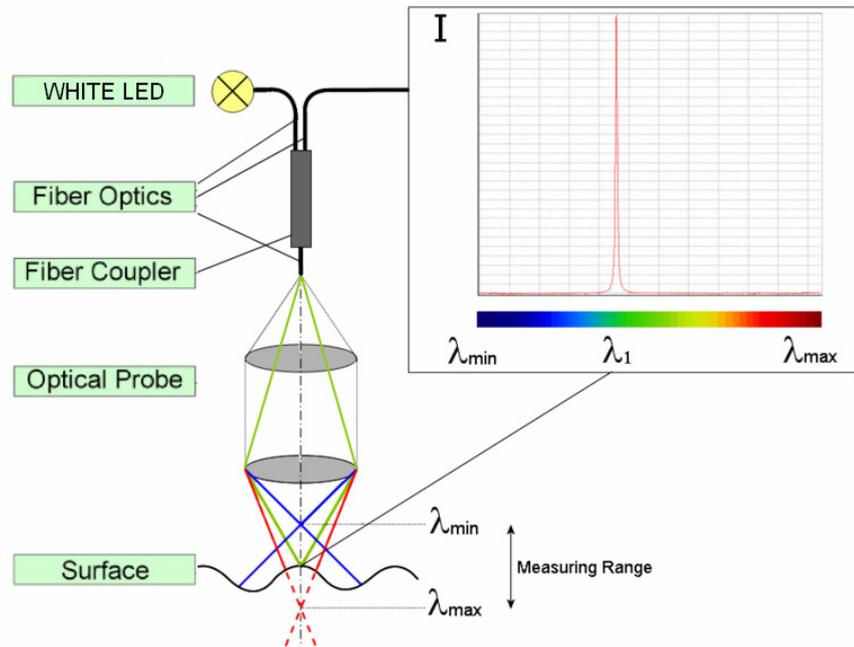


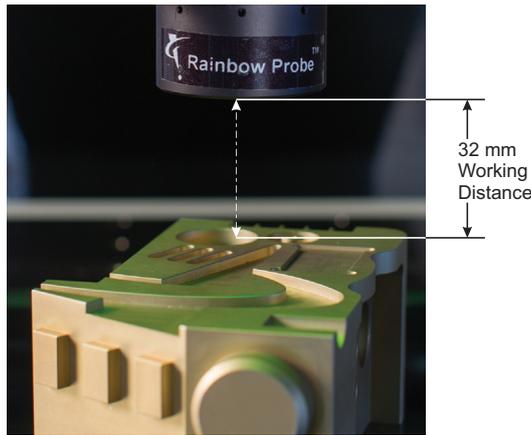
Rainbow Probe

- **High resolution non-contact measurement –**
Innovative Rainbow Probe analyzes the optical spectrum of reflected light to measure surface height changes
- **Measures where other sensors cannot –**
Rainbow Probe easily measures transparent, translucent, fragile, liquid or easily deformable surfaces
- **Dual measuring modes –**
Select distance or thickness measuring mode
- **The right probe for your application –**
A range of CL-series and RP-series probes are available, each with a unique measuring range, working distance, axial resolution, accuracy, and spot size

High Resolution Optical Sensor for Surface Measurements



The new RP1500's 32 mm working distance and 40 nm resolution make it the probe of choice for many applications.



Technical Specifications - RP1500¹

Required metrology software	ZONE3 [®] or MeasureMind [®] 3D
Measuring range (mm)	1.5
Working distance (mm)	32
Numerical aperture	0.42
Probe barrel diameter (mm)	50
Max data rate (samples/sec)	1000
Axial resolution ^{2,3} (µm)	0.04
Accuracy ^{4,5} (µm)	0.3
Max object slope ⁶ (deg)	± 24
Spot size diameter (µm)	10
Lateral resolution (µm)	5
Min measurable thickness (µm)	180

Technical Specifications - CL Series¹

Required metrology software	ZONE3 or MeasureMind 3D													
	CL1		CL2		CL3		CL4		CL5		CL6			
Probe model	CL1		CL2		CL3		CL4		CL5		CL6			
Measuring range	150 µm		400 µm		1.4 mm		4 mm		12 mm		24 mm			
Working distance (mm)	3.3		11		12		16		26		21			
Numerical aperture	0.71		0.46		0.41		0.32		0.20		0.12			
Probe barrel diameter (mm)	27		27		27		27		27		27			
Max data rate (samples/sec)	1000		1000		1000		1000		1000		1000			
Axial resolution ^{2,3} (µm)	0.005		0.012		0.025		0.075		0.280		0.600			
Accuracy ^{4,5} (µm)	0.02		0.06		0.2		0.4		0.9		3			
Max object slope ⁶ (deg)	± 43		± 28		± 25		± 21		± 14		± 8.5			
Magnifier model	MG210	MG140	MG210	MG140	MG70	MG140	MG70	MG35	MG20	MG35	MG20	MG35	MG20	
Spot size diameter (µm)	2.4	3.2	3.5	4.6	8.1	6	10.8	10.7	17.6	19.6	32.8	18.6	30.5	
Lateral resolution (µm)	1.1	1.3	1.7	1.8	3.7	2.6	4.5	4.6	7	11	14	11	18	
Min measurable thickness (µm)	7	9	14	14	22	38	40	110	120	350	550	590	725	

¹Includes CCS PRIMA control box.

²In distance measuring mode.

³In thickness measuring mode; the axial resolution is given by: $R_{th} = n \cdot R_d$ (R_d = axial resolution in distance mode, R_{th} = axial resolution in thickness mode, n = refractive index of the sample).

⁴In distance measuring mode. In thickness measuring mode, the accuracy depends on sample characteristics (material, thickness). System performance varies depending on machine type.

⁵Rainbow Probe calibration certificate included for each sensor, with test protocol.

⁶For specular (perfectly reflecting) samples. For diffuse objects the maximum object slope can reach 87°.



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