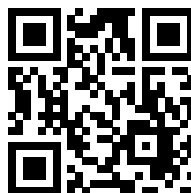
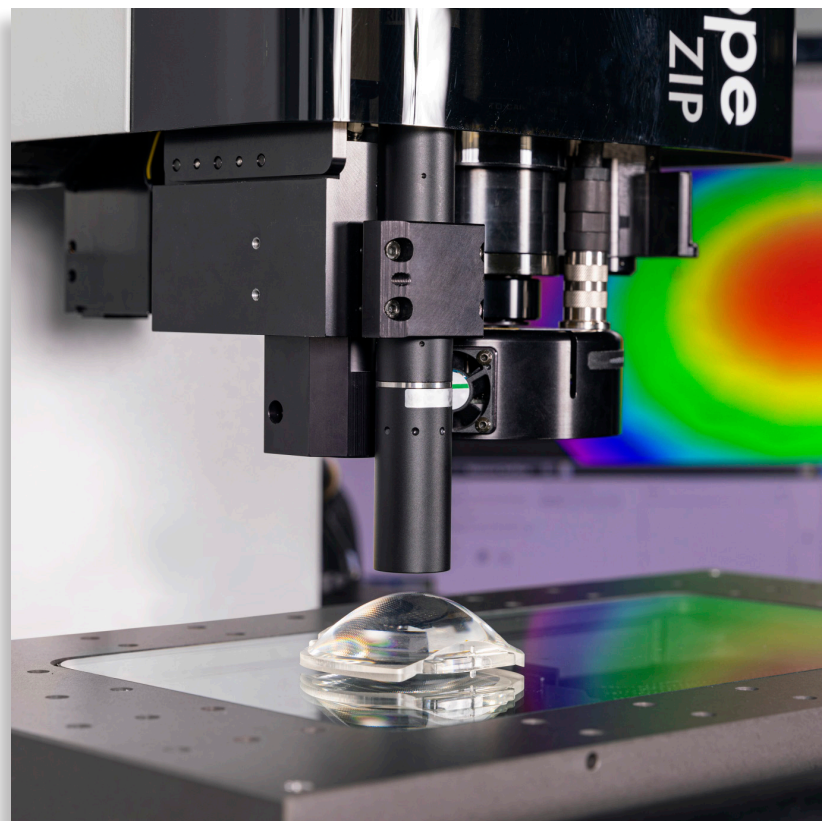
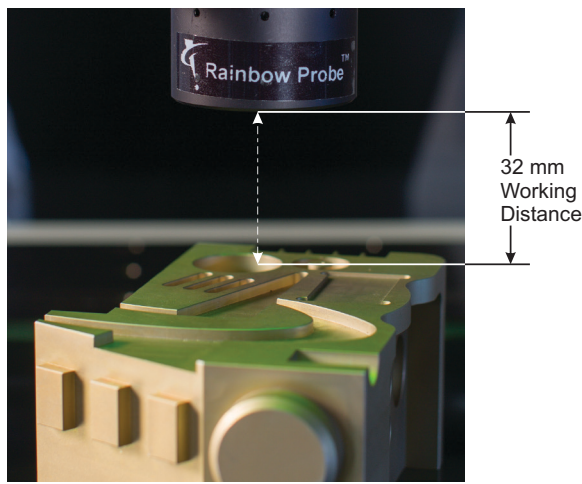


Rainbow Probe is a non-contact chromatic confocal sensor that measures surfaces by analyzing changes in the optical spectrum as a function of part to probe spacing. Additional capabilities include:

- **Measurement Advantages –** Rainbow Probe easily measures transparent, translucent, fragile, liquid, or easily deformable surfaces. The Rainbow Probe also has dual measuring modes for select distance or thickness measuring mode.
- **Right Probe - Right Application –** A range of CL-series and RP1500 probes are available, each with a unique measuring range, working distance, axial resolution, accuracy, and spot size.
- **Multisensor Integration –** Integrates into automatic measurements with other sensors on measurement systems.

High Resolution, Non-Contact Optical Sensor for Surface Measurements





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

Technical Specifications – RP1500¹

Available for	Fusion™, SmartScope ZIP® and most SmartScope® Flash™, and Quest™ systems	OGP® Benchmark™, Pinnacle™, and Summit™ systems
Required Metrology Software	ZONE3®	VMS™ or ZONE3
Working Distance (mm)	32	
Measuring Range (mm)	1.5	
Accuracy² (µm)	0.3	
Numerical Aperture	0.42	
Probe Barrel Diameter (mm)	50	
Max Data Rate (samples/sec)	1000	
Max Object Slope³ (deg)	± 24	
Spot Size Diameter (µm)	10	
Axial Resolution⁴ (µm)	0.04	
Lateral Resolution (µm)	5	
Min Measurable Thickness (µm)	180	

Technical Specifications – CL Series¹

Available for	SmartScope ZIP and most SmartScope Flash and Quest systems	OGP Benchmark, Pinnacle, and Summit systems
Required Metrology Software	ZONE3	VMS or ZONE3

Probe Model	CL1	CL2	CL3	CL4	CL5	CL6
Working Distance (mm)	3.3	10.8	12.2	16.5	26.6	20
Measuring Range	150 µm	400 µm	1.4 mm	4 mm	12 mm	24 mm
Accuracy² (µm)	0.02	0.06	0.2	0.4	0.9	3
Numerical Aperture	0.71	0.46	0.41	0.32	0.20	0.12
Probe Barrel Diameter (mm)	27					
Max Data Rate (samples/sec)	1000					
Max Object Slope³ (deg)	± 42	± 28	± 25	± 21	± 14	± 8.5
Magnifier Model	MG210	MG420	MG140	MG70	MG35	MG20
Spot Size Diameter (µm)	2.7	1.8	5.2	11.9	12.3	43
Axial Resolution⁴ (µm)	0.042	0.036	0.1	0.36	0.66	4.8
Lateral Resolution (µm)	1.1	0.8	1.8	4.5	4.6	18
Min Measurable Thickness (µm)	7.5	5	14	40	110	725

¹Includes CCS PRIMA control box.

²In distance measuring mode. In thickness measuring mode, the accuracy depends on sample characteristics (material, thickness). System performance varies depending on machine type. Rainbow Probe calibration certificate included for each sensor, with test protocol.

³For specular (perfectly reflecting) samples. For diffuse objects, the maximum object slope can reach 87°.

⁴In distance measuring mode. In 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).