



TeleStar TTL **LASER**



High Resolution Surface Contours for SmartScope Systems

Long working distance
and high resolution
for unparalleled
performance

The innovative TeleStar® through-the-lens (TTL) laser is available exclusively for the TeleStar metrology zoom lens in the OGP® SmartScope® Vantage™ family of systems. Its unique interferometric sensing technology yields high measurement resolution and accuracy to 2 μm. Its through-the-lens, coincident optical path design eliminates the potential for blocking a light beam as is possible with triangulation lasers. A long working distance allows it to measure surfaces not accessible to other sensors and with less risk of contacting the part or fixture when scanning.

- The TeleStar TTL laser is co-axial with system video measurement optics
- The TeleStar TTL laser allows video imaging of the part where the laser will operate
- Optional 0.45X lens yields a 200 mm measuring distance. Its large working distance allows users to focus on or scan parts without fear of striking the part being measured.
- The TeleStar TTL laser utilizes complete system XY travel capability during laser measurements
- Its interferometric range sensor converts the light from the reflected laser beam into positioning data as its beam is scanned across the contours of a part
- The TeleStar TTL laser is ideal for measuring diffuse "light scattering" surfaces and machined metal parts
- Projected red light shows where the laser will measure



Available for	Any new OGP® SmartScope® Vantage™ system				
Required Metrology Software	MeasureMind®3D MultiSensor				
Laser Lens	4X (Opt.)	2X (Opt.)	1X (Std.)	0.5X (Opt.)	0.45X (Opt.)
Working Distance	19 mm (nominal)	34 mm (nominal)	68 mm (nominal)	120 mm (nominal)	200 mm (nominal)
Measuring Range*†	400 µm	600 µm	800 µm	1400 µm	2000 µm
Capture Range**	400 µm	600 µm	800 µm	1400 µm	2000 µm
Spot Size	1.3x2 µm	2.5x4 µm	5x8 µm	7x13 µm	9x18 µm
Resolution***	0.2 µm	0.2 µm	0.2 µm	0.3 µm	0.5 µm
Accuracy****	3.0 µm	2.5 µm	2.0 µm	3.0 µm	5.0 µm

*Measuring Range tracks within system's Z-axis travel.

**Capture Range is surface dependent.

***Using high quality, specular surface, 1σ

****Accuracy on specular surfaces within the measuring range; laser is optimized for 1X color lens

†For all models, Measuring Range = Capture Range

Note: Specifications are nominal for TTL lasers installed in OGP systems when used in the specified operating environment.

Note: The spot sizes for this particular laser are the full width of the spot at half maximum value, or FWHM.

Definitions:

Measuring Range - The Z-range over which the performance of the sensor is linear and calibrated. The measuring range lies within the capture range.

Capture Range - The Z-range over which there is no uncertainty about which direction the surface lies.



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