

**GENERAL SPECIFICATIONS**

Instrument Type	Production oriented small aperture Fizeau interferometer with phase measuring capability
Acquisition	PZT driven PMI
Applications	Inspection of small spherical and flat optics. Quantitatively measure surface figure, transmitted wavefront quality, and radius of curvature.
Configuration	Downward looking vertical. Contact ZYGO for other configurations
Light Source	655 nm laser diode, Class I
Test Beam Dia.	25 mm
Camera Array	640 x 480 pixels
Image Focus	±250 mm manual adjustment
Part Alignment	Twin spot alignment on integrated LCD screen
Part Viewing	Live Video Display on computer
Computer Requirements	High-performance PC with hard drive, CD-ROM, floppy drive, FireWire port and 17 in. monitor; printers and other options available.
Software	ZYGO PTI 250 software running under Microsoft® Windows XP Professional
Power Requirements	100 to 240 VAC, 50/60 Hz

PHYSICAL

Dimensions (H x W x D)	33.2 x 8.1 x 14.1 in. (843 x 206 x 358 mm)
Weight	72.5 lb (33 kg)

PERFORMANCE

Measurement Uncertainty (1)	Plano testing: $\lambda/20$ Spherical testing: $\lambda/10$
RMS Repeatability (2)	$\lambda/6000$ (1σ)
RMS Precision (3)	$\lambda/500$ (1σ)

ENVIRONMENTAL REQUIREMENTS

Temperature	15 to 30°C (60 to 85°F)
Rate of Temp. Change	<1.0°C per 15 min
Humidity	10 to 95% relative, noncondensing
Vibration Isolation	Required for vibration frequencies in the range of 1 Hz to 120 Hz

SOFTWARE FEATURES

Graphics	Filled Plot, Oblique Plot, Live Fringe Display
Results	PV, RMS, Astigmatism, Coma, Spherical Aberration, Zernike Polynomial Coefficients, # of Points
Other Functions	Save and load data and control settings, auto masking (circular & rectangular), surface form removal
International Languages	English, German, Japanese, Simplified Chinese, Traditional Chinese

ACCESSORIES

Transmission Flat (4)	$\lambda/20$ 25 mm and 2 inch aperture
Transmission Spheres (4)	$\lambda/10$ 25 mm aperture: f/0.58, f/0.7, f/1.0, f/1.5, f/2.4, f/3.3, f/4.8 2 inch aperture: f/0.67, f/0.75, f/0.9, f/1.25, f/1.8, f/3.3, f/6.0
Aperture Converter	25 mm to 6 mm with integrated transmission flat 1 inch to 2 inch with receptacle and tip/tilt adjustment
Part Stage/Fixturing	Manual X-Y and Tip-Tilt mounts with a self centering element holder.
Radius of Curvature	Digital encoder with 30 mm range, 1 μ m resolution, and digital readout

- 1 Measurement uncertainty depends upon the accuracy of the transmission element, geometric distortion of the optical and video system used for imaging, and the number of fringes used in the evaluation. The PTI is designed to provide better than $\lambda/20$ performance when using 7 or fewer fringes for plano evaluation.
- 2 Quoted repeatability is for 10 measurements of the same cavity, with 16 averages per data set. The specification represents the 1σ value.
- 3 Quoted precision is the average rms of 10 data sets with a reference measurement subtracted. Each data set includes 16 averages and the reference measurement is the pixel-by-pixel average of 10 measurements.
- 4 25 mm Transmission elements are pre-aligned and attach to the instrument with a bayonet mount.

Specifications subject to change without prior notice.



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