

# Model 4HP 4-inch aperture Phase Plano Interferometer



Model 4HP Interferometer

The Model 4HP features a fused silica collimator and reference surface flat to  $\lambda/20$ . The Single Mode Diode Laser source operating at 635 nm is dithered to produce speckle-free live images with no Bull's eye aliases. A two-spot alignment system is provided to facilitate quick test piece alignment.

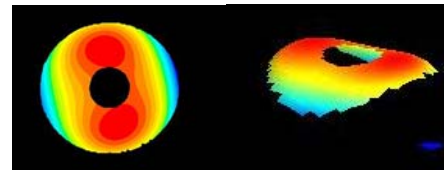
This Phase-shifting Plano Fizeau interferometer utilizes Graham's EndoPhase™ for smooth phase shifting with no hysteresis. Under control of Durango Software the operator easily achieves highly accurate and repeatable measurements.

The Model 4HP interferometer is provided complete with Durango Universal Interferometry Software installed in a fully configured 2.2 GHz Computer with Intel Dual Core Processor and includes a 19-inch TFT flat screen monitor.

## System Specifications

Aperture	4 inches (101.6 mm)
Imaging Lens	Standard Model 4x ZOOM with Remote Control
Operating Wavelength	635 nm
Collimator / Ref. Surface	Fused Silica
Accuracy (uncalibrated)	$\lambda/20$
Accuracy (calibrated)	$\lambda/100$
Repeatability	$\lambda/300$ PV, $\lambda/1000$ rms
Laser	Single Mode Diode Laser
Dimensions (L x W x H)	19 x 14 x 7.9 inches
Weight	60 pounds (27 kg) approx.
Software	Durango Phase Software
Phase Shifter	EndoPhase™
Data Acquisition Time	30 milliseconds (typical)
Data Reduction Time	< 3 seconds (typical)
Computer	2.2 GHz Intel Dual Core Processor
Monitor	19 inch TFT Flat Screen
Power	117/240 volts 50/60 Hz

Typical High Contrast Fringes



Typical Durango Plots



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FEATURES	BENEFITS
4-inch aperture (101.6 mm)	4-inch aperture (101.6 mm)
1/20 wave fused silica reference surface	High Accuracy
Proprietary Optics for superior performance	Highest contrast and cleanest interferogram of any interferometer available today
Rugged Construction	High mechanical stability
A Turnkey System	User-friendly and ready to go
Horizontal Orientation	Easy to use for Plano or Spherical work
Two spot alignment	For quick setup on each new part tested
Dithered 1.0 mW HeNe Laser source (632.8 nm)	For sharp, speckle-free images
Zoom Optics (4X)	Readily accommodates test pieces from ½ inch to 4 inches diameter
Zoom, Focus, Iris, Intensity and Mode Select <ALIGN> <VIEW>	Remote Control for quick adjustments
EndoPhaze™ Phase Shifter	For smooth hysteresis-free phase shifting
CCD camera 768(H) x 494(V) pixels	High Resolution
3 GHz computer	For high speed data reduction and phase shift control
19-inch TFT Flat Screen Monitor	For easy viewing
Live interferogram on computer monitor	For quick inspection with no extra video monitor
Reference surface is an integral part of the interferometer and always aligned to collimated beam	For simplicity of operation
Optimized for measurement of Plano Surfaces	No need to adjust Tip / Tilt of a Transmission flat
High Accuracy	$\lambda / 20$ (uncalibrated) $\lambda / 100$ (calibrated)
Repeatability	1/300 wave PV    1/1000 wave rms
Reproducibility	Excellent
Data Acquisition Time 30 milliseconds (typical)	Fast
Data reduction time <3 seconds (typical)	Fast
Dimensions (L x W x H) 19 x 14 x 7.9 inches	Small footprint
Weight 60 pounds	Solidly built
Power 117 V 60 Hz 2 A (or 250 V 50 Hz 2 A)	Wired with plug to suit user's power source
Manual	Illustrated Operator's Manual
Warranty	Standard on-year limited warranty against defective Components or workmanship

***We sell metrology solutions!***