GPI LC™ Specifications

Downward-Looking
Vertical Configuration

MODEL

GPI LC	Low cost, entry-level model for visual inspection. Requires operator fringe pattern interpretation.

SYSTEM

Measurement Technique	Laser-based visual interferometry
Measurement Capability	Measure form and flatness characteristics of super finished, highly reflective surfaces and optics
Test Beam Diameter Options	4 inch: 4 in. (102 mm) 6 inch: 6 in. (152 mm)
Configuration Options	Horizontal Vertical, 3-rod, downward looking Vertical, 3-rod, upward looking
Optical Centerline	4.25 in. (108 mm)
Alignment System	Quick Fringe Acquisition System (QFAS) with twin spot reticle
Alignment Field of View	4 inch: ±3 degrees 6 inch: ±2 degrees
Focus	Fixed, ±1 m depth of field
Part Viewing	9-inch monitor
Video Output	525 lines/60 Hz (2:1 interlace) RS-170, or 625 lines/60 Hz
System Quality (1)	Plano testing: λ/20 Spherical testing: λ/10

PHYSICAL

Dimensions (H x W x D)	Horizontal, 4 inch: 12.1 x 23.6 x 12.1 in. (308 x 600 x 308 mm) Horizontal, 6 inch: 12.1 x 32.6 x 12.1 in. (308 x 828 x 308 mm) Vertical: H x 27 x 27 in. (H x 686 x 686 mm) 1 meter H = 39.4 in (1000 mm) 1.5 meter H = 59 in. (1500 mm) 2 meter H = 78.7 in. (2000 mm)
Weight (approximate)	Horizontal, 4 inch: 70 lb (32 kg) Horizontal, 6 inch: 90 lb (41 kg) Vertical, 4-inch: 160 lb (73 kg) Vertical, 6-inch: 180 lb (82 kg)

LASER SPECIFICATIONS

Type	Helium-Neon, Class II
Wavelength	632.8 nm
Output Power at Aperture	≤1 milliwatt
Beam Polarization	Circular
Coherence Length	Greater than 328 ft (100 m)

UTILITY REQUIREMENTS

Input Voltage	100 to 240 VAC, 50/60 Hz
Compressed Air	80 psi (5.5 bar); dry and filtered source (required for optional vibration isolation system)

ENVIRONMENTAL REQUIREMENTS

Temperature	15 to 30°C (59 to 86°F)
Rate of Temp. Change	<1.0°C per 15 min
Humidity	5 to 95% relative, noncondensing
Vibration Isolation	Required for vibration frequencies in the range of 1 Hz to 120 Hz

TEST PART CHARACTERISTICS

Material	Various; glass, super-finished metals, ceramics, and plastics
Preparation	None (typically); measurements are noncontact and nondestructive and performed under ambient conditions
Size (H x W x D)	10 x 8 x 8 in. (254 x 203 x 203 mm) with 2-axis Adjustable Mount
Reflectivity	0.1% to 100% (based on transmission element)

ZYGO offers a wide variety of accessories, including optical elements and part mounting options. For information on available accessories, refer to the GPI and VeriFire Accessories booklet, OMP-0463.

1 System quality 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 GPI is designed to provide better than λ/20 performance when using 7 or fewer fringes for plano evaluation.

zygo®

Zygo Corporation
Laurel Brook Road
Middlefield, CT 06455

Phone: 860-347-8506
Email: inquire@zygo.com
Website: www.zygo.com

SS-0006 03/05