

MIRAGE®

PRECISION AND ACCURACY

The Mirage® automatic vision and laser measurement system provides high accuracy measurement in a compact tabletop model. A typical configuration may include microscope optics using a two-position precision automatic lens shuttle. Laser auto focus can be added for high speed, on-the-fly focusing of the video image. An optional laser probe is available for ultra-precise Z-axis profiling.

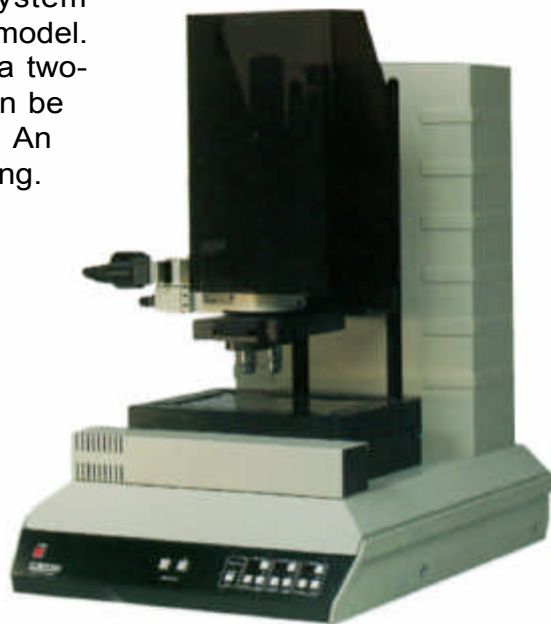
FEATURES

- ⊕ Micron-Scale Accuracy, Submicron Resolution
- ⊕ JMAR VideoCMM® Software for Windows XP*
- ⊕ Supports High Magnification Microscope Optics
- ⊕ Automatic Two-Position Lens Shuttle (Optional)
- ⊕ Three Channel Computer-Controlled Light Source
- ⊕ Laser Auto Focus (Optional)
- ⊕ Z-Axis Laser Probes (Optional)
- ⊕ Integrated Active Air Isolation (Optional)

OPTIONS

- Dual position automatic lens shuttle
 - Lens change speed: < 1 second
 - Lens repeatability: < 1µm
- Dynamic laser auto focus
- High precision scanning laser probes
 - Working distance: 5 to 30 mm
 - Spot size: 1 to 15µm
 - Resolution: .03 to 1µm
- Active air vibration isolation
- Fiber optic ring light
- Brightfield / Darkfield
- Differential Interface Contrast (D.I.C.)

Non-Contact Automatic 3-Axis
Vision and Laser Based Tabletop
Measurement System



APPLICATIONS

High magnification platform stability, stage accuracy, and high resolution make the Mirage® the perfect choice for measurement and process control. This system is ideal for inspection of such parts and components as:

- ⊕ TAB-tape
- ⊕ Ball grid arrays (BGA)
- ⊕ Flex circuits
- ⊕ Head gimbal assemblies (HGA)
- ⊕ Lead frames
- ⊕ Sliders (pole tip and gap measurement)
- ⊕ Wire bonding (weld bonds or ball bonds)
- ⊕ Wire loop height
- ⊕ Wafer critical dimensions (CD)



Formerly J-MAR Precision Systems

ISO 9001 Certified

www.ppli.com

Measurement & Inspection Solutions for High-Precision Applications

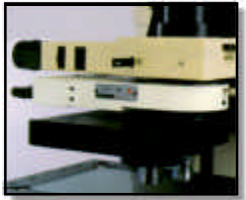


Optical Flexibility

- Micro or macro lenses
- Brightfield / Darkfield (Optional)
- Up to 100x objectives
- Effective magnification to 3000x

Laser Probe Mounted Next to Video (Optional)

- High resolution Z-axis profiling
- Single point and scanning applications
- Triangulation or active focus laser probes



Laser Auto Focus (Optional)

- High speed auto focus
- Manual or computer controlled
- Computer programmable offsets

3-Light Lamp Source

- Digital computer control
- Independently controlled channels



Automatic Two-Position Lens Shuttle (Optional)

- Manual or computer controlled
- Supports micro or macro optics
- Supports ring light

Mechanical Specifications:

X-Y stage travel: 10" x 4"
Fine focus Z-axis travel: 2"
Manual Z-height adjust: 8"

Size: 22" x 30" x 33" LWH

Weight: 250 lbs (114 kg)

Electrical Specifications:

120vac/220VAC compatibility
Max. Current: 20A

Optical: Supports major brands of optical systems

Micro or macro optics
Up to 3000x total magnification.

Passive Vibration Isolation

Illumination Sources:

3 Channel digital light control
Transmitted, incident and optional oblique lighting

Computer Hardware:

IBM Pentium class compatible PC
SVGA color monitor

Stage Resolution and Accuracy:

Resolution: .1µm
Repeatability: < 1µm
Accuracy: 3µm (see detailed specification)

Accuracy: - in µm

$U1 = (2.0 + L/100)$ (XY PLane) $U2$ (Z Axis) = $(2.0 + L/200)$
Where L is the Length in mm.

Pacific Precision Laboratories, Inc. Main Office

9207 Eton Avenue
Chatsworth, CA 91311 USA
800-793-0179 or
818-700-8977
818-700-8984 (fax)
E-Mail: sales@ppli.com

Contact PPL Main Office for USA and
international locations and phone
numbers.



ISO 9001 Certified

www.ppli.com

Specifications subject to change without notice

© 2004 Pacific Precision Laboratories, Inc.
Mirage 12/04
Printed in USA