PPL's
Nano 3000

**Non-Contact Automatic 3-Axis
Vision and Laser
Measurement System**

The **Nano 3000** is a fully integrated model, designed to handle virtually any video application with a high degree of precision. The **VideoCMM II** standard software allows the operator to program the system easily to repeat even the most complex measurements. VideoCMM II software reports X-Y and/or Z measurements & compare to nominal values for pass/fail determination as well as statistics. It features a flat granite base for rigidity and stability.

FEATURES

⊕ Fully automatic non-contact measurement system

⊕ X-Y stage travel 8" x 8" with 6" Z-axis travel with .05 μm resolution

⊕ 2D non-linear error correction mapping

⊕ High resolution microscope optics

⊕ Easy to use VideoCMM II software for Windows XP

⊕ 3-channel computer controlled halogen lighting

⊕ Custom fixtures with robotic load/unload available

⊕ Built-in Ethernet/Network compatibility

⊕ Optional Automated light calibration (closed loop)

⊕ Optional Laser Auto Focus

⊕ Wide selection of laser probes for dynamic scanning of flatness, thickness, Z height, and profilometry

⊕ Granite Z-column for high accuracy measurement

⊕ Optional QC-Calc software provides run-time statistics

⊕ Optional IQ-Metrology software for Form-Fit Analysis

⊕ Closed loop position feedback with .05 μm resolution.

⊕ Powerful image processor for automatic edge detection & autofocus

⊕ Ergonomic operator console

⊕ Graphics based VideoCMM II software for pass/fail detection or storing data for external processing using spread sheet, statistics & graphical data processing programs

⊕ Optional calibrated lighting for highest correlation part to part, system to system

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Formerly J•MAR Precision Systems

800-793-0179
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ISO 9001 TÜV Certified

Nano 3000

Technical Specifications

(Preliminary)

Measuring range	200X200X150 mm (8"x8"x6")
Stage drive system	Micro Steppers
Stage resolution	0.05 μm
Stage velocity	25 mm/second
Stage acceleration	Up to 250 mm/second^2
Stage error Mapping	Non-linear 2D error correction in xy plane
Load Capacity	25Kg (55 lbs.)
Optical System	Fixed, flat field objectives Optional- 2- position lens slider or 4 or 5- position lens turret
Optical Magnification	Standard 1X- 150X (Up to 4200X on-screen magnification)
Illumination	3- Channel computer-controlled halogen light source Standard: Backlight and coaxial surface illumination Optional: ringlights
Camera	CCD 640X480 pixel array
Image processing	256,8-bit grayscale gradient processing with 5:1- 50:1 subpixeling (application specific). Continuous point edge finders, circle, arc, point, plane, area centroid, and autofocus tools.
Software	PPL VideoCMM II
Computer	Intel high –speed processor 18" LCD monitor, Windows XP Operating System, built –in Ethernet Networking capability
Electrical	Switch selectable 120 @ 15A/240 @ 10A VAC, Single Phase (Factory Set)
Environmental	17-23 degrees C, Max 80% Humidity (non-condensing)
Weight	Crated weight: 1500 Lbs
Dimensions	Stage unit: 32"x36" Height:68" Operator station: 39" wide
Options	Variety of macro and micro lenses Shop floor interfaces SPC packages 5 position programmable turret
Accuracy	U2 (XY Plane): (1.5+ 0.6L/100) -in μm U1 (Z Axis): (1.5 + 3L/100) μm Where L is the Length in mm.