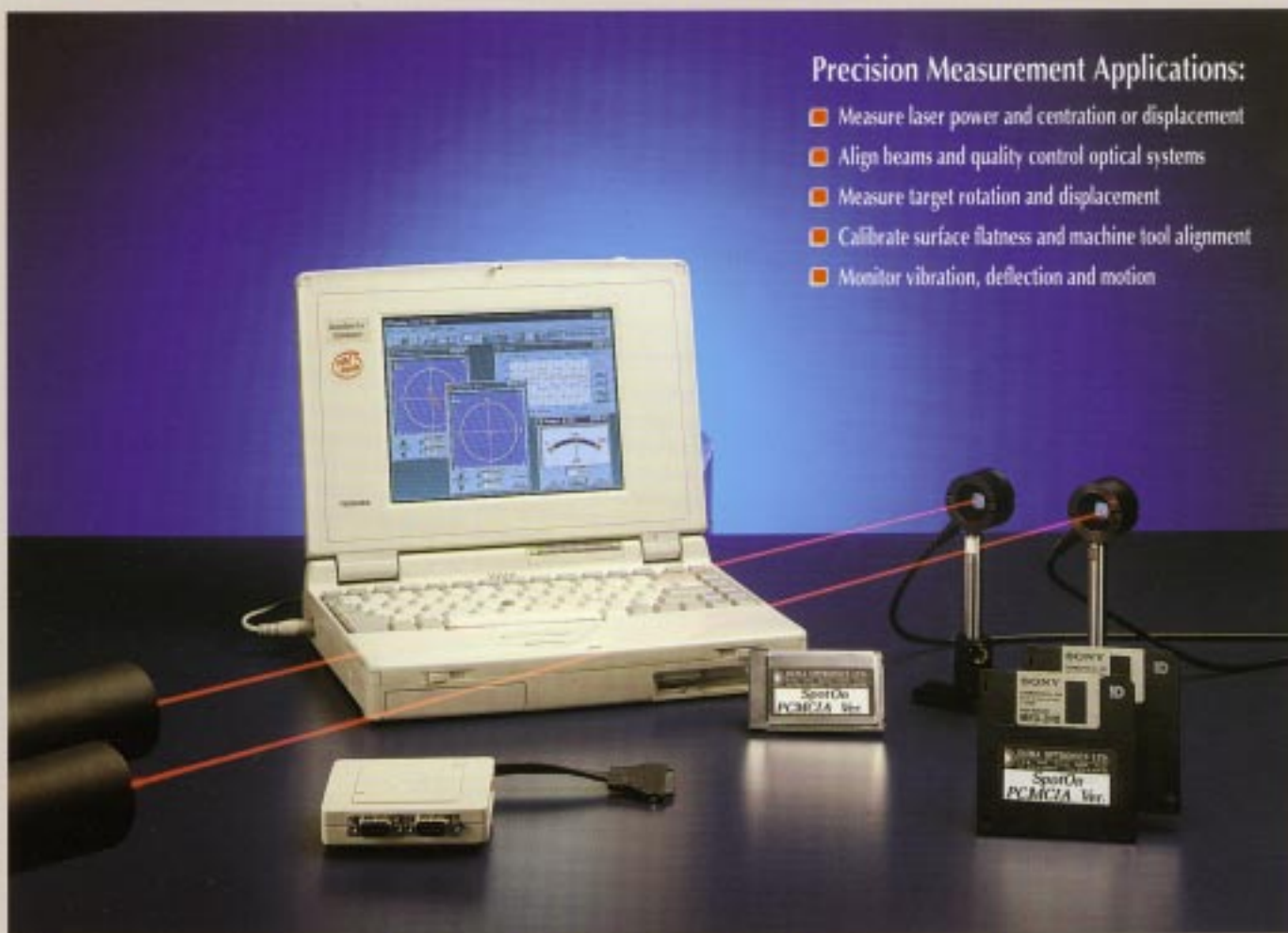


# SpotOn

Optical Beam Position and Power Measurement System  
P C M C I A V e r s i o n

## Precision Measurement Applications:

- Measure laser power and centration or displacement
- Align beams and quality control optical systems
- Measure target rotation and displacement
- Calibrate surface flatness and machine tool alignment
- Monitor vibration, deflection and motion



## A compact and powerful solution for laboratory or field measurements

- **Versatile:** Measures both Beam Position (over area up to 8 mm diameter) and power (from 10  $\mu$ W to 10 mW).
- **Precise:** Available with Quadrant detector (1  $\mu$ m position accuracy, down to 0.1  $\mu$ m position resolution) or dual-axis Lateral Effect detector (50  $\mu$ m position accuracy, 3  $\mu$ m position resolution).
- **Convenient:** PCMCIA type II board, detectors and software work with any Notebook/Laptop under Windows 95.
- **Easy to use:** User-friendly software using mouse/keyboard control, complete on-line help routine.

**NEW**

This new hardware & software configuration enables *simultaneous operation of either One or Two PSD's using one PCMCIA board and one software package!*

**NEW**

DLL Drivers for user-defined applications based on SpotOn PCMCIA hardware!



## DUMA OPTRONICS LTD.

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## Measurement specifications

Use one or two PSD's at a time, either a 4-Quadrant detector, or a Lateral Effect detector, or both types

	<i>4-Quadrant Detector</i>	<i>Lateral Effect Detector</i>
Photodetector	10mm X 10mm silicon 4 sectors separated by 30µm gap (Optional:10µm gap separation)	10mm X 10mm dual axis silicon 8mm calibrated diameter
Usable Beam size range	50µm < diameter < 8mm	
Position Measurement range	4mm diameter circle maximum centered on the detector center The beam must overlap all 4 sectors	8 mm diameter circle maximum centered on the detector center
Position Resolution	Better than 0.5µm	Better than ±1µm
Position accuracy	±1µm or ±0.25% of beam diameter whichever is greater	±50µm over 8mm diameter calibrated area (software linearization)
Operational Spectral range:	350-1100nm	
Power Range: (*)	10µW to 10mW	
Power Accuracy: (*)	±5%	

\* To maintain the full calibration accuracy, attenuating optical ("neutral-density") filters may be necessary for operation with beams greater than 1mW. Saturating "non-linear" effects depend on the beam size, type and wavelength, but caution should be exercised when using the quadrant detector above 3-6mW or the lateral effect detector above 1-3mW.

## Dimensions

**Sensor Heads:** 38mm diameter, 25.5mm long, M4 tapped post-mounting hole, aligned to detector axes to <math>\pm 0.5^\circ</math>, Optical aperture threaded 1"-32 TPI ("C") for mounting filters

**Cable:** 3m long, attached to sensor head

**PCMCIA board:** Standard Type II board

**Weights:** Sensor Head: 175g with cable

**Environmental:** Operating Temperature Range: 0° to +35°C

## Hardware Requirements

**CPU:** 486 DX4 or higher

**RAM:** 16MB

**FDD:** 3.5" 1.44MB

**HD:** 20MB free

**Operating System:** Windows 95

**VGA:** 1MB 256 color

**PC Card socket:** PCMCIA type II, + 5V

## Ordering Information

The SpotOn-PC system includes the Basic Configuration Plus a set of detector heads which can be ordered separately. The user chooses the required sensors and these are automatically configured by the software.

**SPOTPC** - Basic Configuration system, including: PCMCIA card, manifold box and software on 3 \* 3.5" diskettes.

**L** - Lateral Effect PnP detector head (10mm\*10mm) and calibration disk.

**Q** - Four Quadrant PnP detector head (30µm gap) and calibration disk.

**U** - Four Quadrant PnP detector head (10µm gap) and calibration disk.

Ordering example:

**SPOTPC-LQ:** A SpotOn PCMCIA system with one Lateral Effect detector and one Four Quadrant detector (30 um gap).

**Optionals:** C-Mount optical ND filters. Other detectors are available by special order.

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