

Positioning System withNexus7Tablet-PC



A cost-effective, positioning system

- <u>Versatile</u>: Measures both Beam Position (over area up to 9mm diameter) and power (from 1µW to 2.5mW @ 633nm without filters)
- Precise: Available with dual axis Lateral Effect detector (down to 1μm resolution @ 50Hz digital filter, ±6μm absolute accuracy)
- **Convenient**: Stand Alone unit including detector head and Tablet-PC
- Easy to use: User friendly software, with touch screen interface
- <u>Compact</u>: Built-in electronics within sensor head

Key Features

- Convenient automatic Gain setting
- New hardware having 24 bit A/D
- Real time display of Position and Power measurements
- Direct data logging to Excel format files
- Up to 5 hours operation on device battery only
- High power version available (with SAM3-HP)
- Software Main functions:

Main Applications

- Specially adapted for field service of laser measurements.
- Measure CW 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

Average Digital filter, Null, Track-Log file, Trace On / Off, Filter selection, SAM3 setting.

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Measurement Specifications

Detector	L – Lateral Effect
Size	9mmx9mm
Туре	Dual-axis Si resin No glass cover
Usable beam size	50µm to Ø9mm
Position measurement range	⊠9mm
Position resolution	Down to 1µm at 50Hz digital filter plus averaging
Position accuracy	$\pm 12.5 \ \mu m \text{ over } 9 \ mm \text{ dia.}$
Update rate	Max 80Hz at 1000Hz digital filter
Operational spectral range	350-1100nm
Power range	1µW to 10 mW with attenuating ND filters
Power accuracy(*)	±5%



* To maintain full calibration accuracy, attenuating optical filters may be necessary for operation with beams greater than 1 mW. Saturating "non-linear" effects depend on the beam size, type and wavelength, but caution should be exercised when using the PSD above 1-3mW.



Controls the bandwidth of detector's response, where lower digital Filter attenuates the system noise and increases system's resolution

Ordering information

SPOTMOB-N - Complete system including a sensor head, a Nexus7 Tablet PC, Micro USB OTG cable w/Power port, Tablet PC power supply, carrying case.

SPOTMOB-A - System for Android 4.1 and up including a sensor head, Micro USB OTG cable, software on DiskOnKey, carrying case. **SAM3-HP** - Beam sampler for high power lasers







Sensor head dimensions



Weight: 60 g

Optional accessories

NG4/NG9/NG10 – ND filter in housing (3/4" –32 thread) **Hood** – 55mm long, for ambient light suppression

