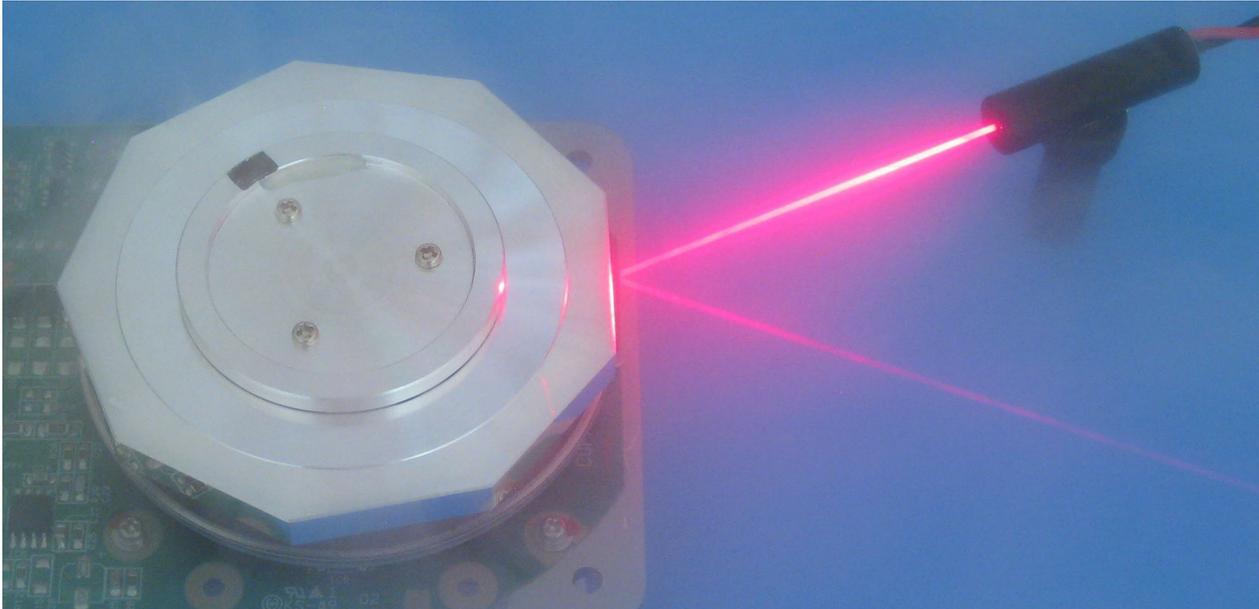


Precision Start-Of-Scan (SOS) LASER for Polygon Scan Heads



It is common practice in low power polygon scanner systems to use the working beam to trigger a Start-Of-Scan (SOS) detector. The SOS trigger is essential for accurate laser scanning.

Polygon Scan Heads, used for material processing, employ high power and ultra-fast lasers. SOS detectors require a low power CW beam so SOS triggering becomes problematic with a high power or pulsing beam.

Precision Laser Scanning offers a custom CW laser diode module designed specifically for Start-Of-Scan (SOS) trigger in high power and ultra-fast Polygon Scan Heads. The **Precision SOS Laser Diode Module™** has a tight 0.7 mm spot so there is no need for manual focusing or external focusing optics. The beam is visible red and eye safe which makes for easy scan head alignment. The Precision SOS Laser Diode Module is only 8mm in diameter and 30 mm long. The small size allows integration into a compact Polygon Scan Head. The SOS laser in high power and ultra-fast polygon scan heads is typically used out of plane from the working beam to avoid interference. By using a red SOS laser when the working beam is IR, Green or UV makes it possible to filter out interference from the bright working beam. An SOS detection system is far more accurate than a shaft mounted encoder on a polygon scanner. The Precision SOS Laser Diode Module does not need an expensive laser diode power supply. It runs off a regulated 5 VDC supply and lifetime is over 10,000 hours.

Precision SOS Laser Diode Module™

SPECIFICATIONS

SIZE

8mm diameter

30mm length

(Clamp only to aft 20mm of tube)

BEAM

Wavelength 655 nm

Beam diameter ≤ 0.7 mm $1/e^2$

(Within 500 mm)

< 1 mW Class 2

POWER

5 VDC +/- 5%

Power leads 500 mm length

OPERATING

Temperature -10C to +50C

Humidity 20 to 85% non-condensing

Life > 10,000 Hours



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Specifications subject to change without notice.
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