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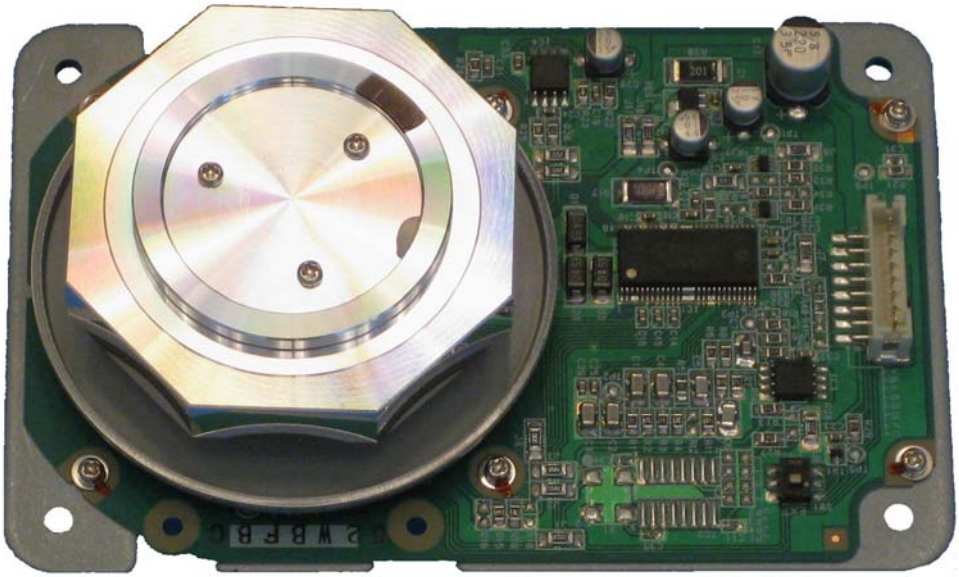
PRECISION LASER SCANNING

GECKO™ Compact polygon scanner for laser cleaning



Gecko-5-HP1 for up to 1 KW class laser power

Polygon scanners can scan at hundreds of meters / second and have a high laser damage threshold which makes them ideal for high speed laser cleaning.

The new **Gecko-5-HP1** is the first compact polygon scanner designed for high power laser cleaning. Its solid aluminum polygon has excellent heat dissipation and its dielectric coating is highly reflective at 1064 nm. It is ideal for laser cleaning with hand held and robotic arm systems. It will also find use in high speed assembly line laser cleaning.

Gecko-5-HP1 has an 8.5 mm aperture, an 80 x 120 mm footprint and can scan a KW class laser at hundreds of meters per second.

Precision Laser Scanning offers support electronics to make it easy for OEMs and System Integrators to implement polygon scanners in all types of material processing, inspection and LIDAR applications.

Need polygon speed but not familiar with how to implement polygon scanning technology? See the Laser Scanning News section of our website for educational information.
http://precisionlaserscanning.com/laser-scanning-news/

Feel free to contact us with questions.

GECKO™ 5-HP1 SPECS

Facets: 8
Inscribed Diameter: 55 mm
Mirror thickness: 10 mm
Facet clear aperture: 20 x 8.5 mm
Coating: Dielectric 1064 nm
Speed: 1,000 – 5,000 RPM
Scan Rate: 133 to 667 Hz
Scan angle up to ≈ 50 degrees (depending on spot size and beam feed angle)
Speed control: TTL Ext freq reference
Rotation: CW as viewed from polygon side
Facet Flatness: λ/4 @ 633nm per inch
Surface Roughness: < 70Å RMS
Surface quality: 60/40

Dynamic track: < 60 arc sec
Facet-Facet: < 30 arc sec
Jitter: < 0.03%
Speed stability: < 0.03%
Bearing: Ball bearing
Operating attitude: Variable
Supply Voltage: 24 VDC +/- 10%
Max Current: 2.0A Start (1.0A Run)
Time to speed: < 30 sec
Controller Power-I/O cable: 500 mm
Start/Stop control: TTL
Speed sync signal: TTL open collector
Ship/Storage: -20C to +60C 10-90% RH
Operating: 15C to 40C, 15-85% RH

OPTIONAL START OF SCAN DETECTION

An SOS detector is required to achieve accurate line to line registration with any polygon scanner. It is used to synchronize a CW or pulsed laser to the scanner. (Galvo scanners need absolute encoders, polygon scanners need Start-Of-Scan detection.) Read more about it here: http://precisionlaserscanning.com/start-of-scan-sos-detection-for-polygon-scan-heads/

The PRECISION SOS DETECTOR™ is the first commercially available Start-Of-Scan detector made for the challenging environment inside a high power Polygon Scan Head. It operates equally as well in low powered imaging systems. It is designed to work with the PRECISION SOS LASER DIODE MODULE™