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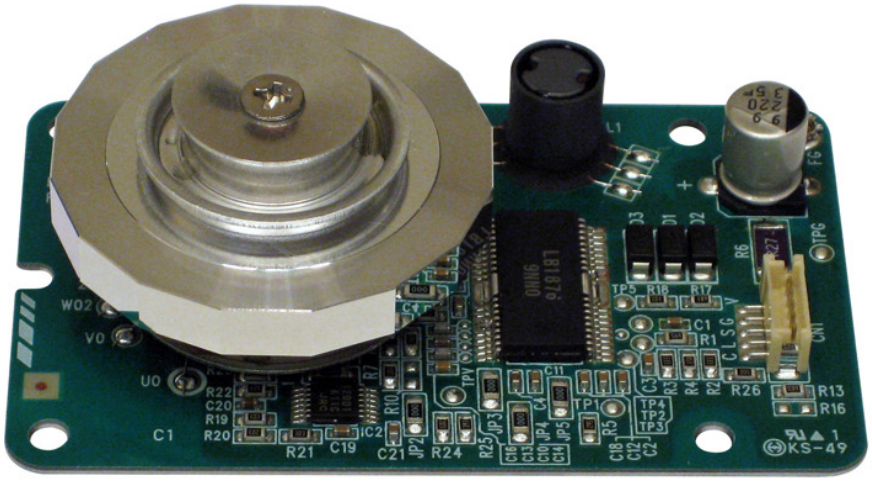
PRECISION LASER SCANNING

GECKO™ High Speed Scanner – 4.5 mm aperture



Gecko-45-HSS up to 45,000 RPM – 12KHz scan rate!

The Gecko series of polygon scanners are very compact and efficient by way of integrating the high accuracy polygon on a precision scanning motor directly to a miniaturized controller.

Gecko-45-HSS is a standard model. The small size, high scan rate, with 16 facets for a narrow scan angle, make it ideal for microscopy, biomedical and other high-speed raster scanning applications. Polygon scanners produce a fast, linear scan which can be >10x galvanometer speed.

Need polygon speed but not familiar with how to implement polygon scanning technology? Precision Laser Scanning provides the tools to help you quickly implement a polygon scanner. That includes:

- Start Of Scan detection.
- Synchronize laser to polygon.
- Synchronize galvo or stage and laser to polygon.

Learn more about these products and implementation at http://precisionlaserscanning.com

Standard models have short lead time and low prices! Custom facet counts and coatings will be considered for volume requirements.

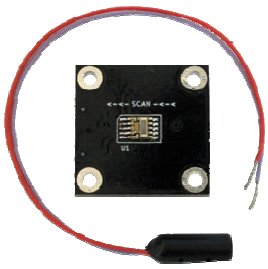
Feel free to contact us with questions.

GECKO™ 45-HSS SPECS

Facets: 16
Inscribed Diameter: 40 mm
Mirror thickness: 6 mm
Facet clear aperture: 7 x 4.5 mm
Coating: Protected Aluminum
Speed: 10,000 – 45,000 RPM
Scan Rate: 2.67 KHz to 12.0 KHz
Scan angle up to ≈ 25 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 @ 633 nm per inch
Surface Roughness: < 50Å RMS
Surface quality: 60/40
Dynamic track: < 60 arc sec
Facet-Facet: < 30 arc sec
Jitter: < 0.03%
Speed stability: < 0.03%
Bearing: Air bearing
Operating attitude: Shaft vertical, mirror up
Supply Voltage: 24 VDC +/- 10%
Max Current: 2.0 A 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 5-95% RH
Operating: 10C to 55C, 10-90% 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.) The mini-SOS detection kit and the Universal SOS detector are shown below. Read more about it here: http://precisionlaserscanning.com/start-of-scan-sos-detection-for-polygon-scan-heads/



Mini-SOS Detection Kit

Universal SOS Detection Kit