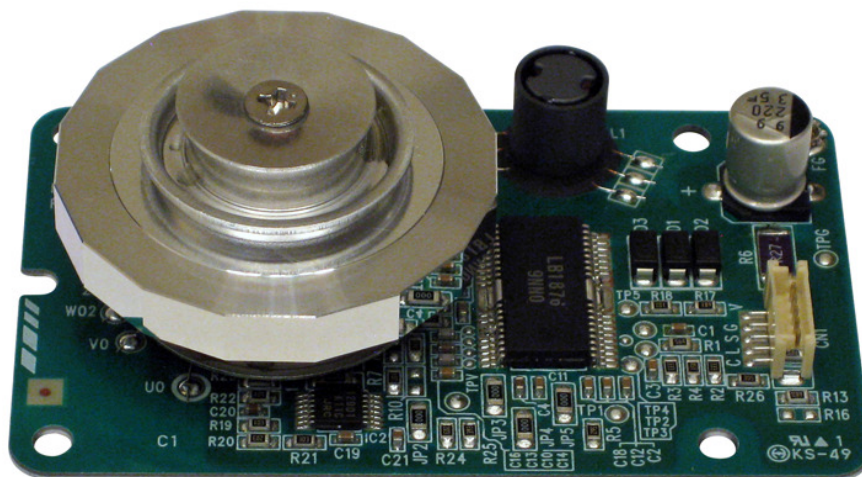


GECKKO™ High Speed Scanner – 4.5 mm aperture



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

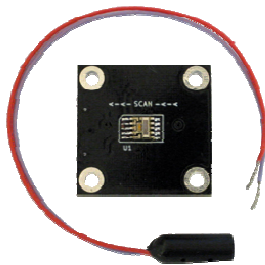
Facets: 16
Inscribed Diameter: 40 mm
Mirror thickness: 6 mm
Facet clear aperture: 7 x 4.5 mm
Coating: Protected Aluminum
Speed: 10,000 – 45,000 RPM
Scan Rate: 2.67 KHz to 12.0 KHz
Scan angle up to \approx 25 degrees (depending on spot size and beam feed angle)
Speed control: TTL Ext freq reference
Rotation: CW as viewed from polygon side
Facet Flatness: $\lambda/4$ @ 633 nm per inch
Surface Roughness: $< 50\text{\AA}$ 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 $\pm 10\%$
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 $+60\text{C}$ 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

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Specifications subject to change without notice.
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