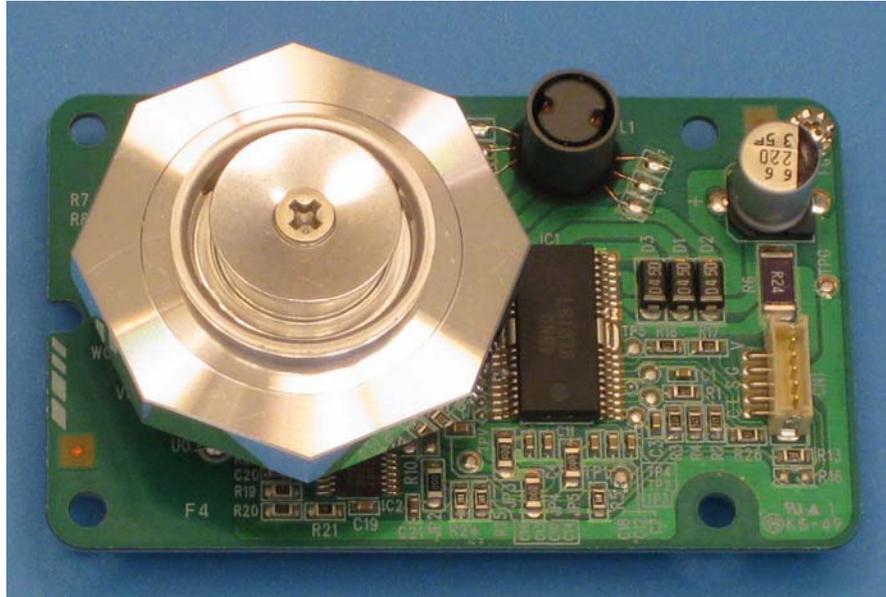


## **GECKO™** Off-The-Shelf scanner – 4.5 mm aperture



### **Gecko-33-OTS up to 33,000 RPM**

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-33-OTS** is an Off-The-Shelf model. Quick delivery and low price makes it popular for proof of concept projects as well as some OEM applications. The Gecko-33-OTS is suitable for beams as large as 4.5 mm on the eight facets. Its top speed is 33,000 RPM. (If a larger aperture is needed and a lower speed is acceptable, consider the **Gecko-5-OTS** model. The aperture is 8.5 mm with a top speed of 5,000 RPM.)

Custom Gecko facet counts, facet sizes and speeds > 55,000 RPM are available on request. Gecko polygon scanners are ideal for high volume OEM applications requiring compact size, high efficiency and low cost.

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™ 33-OTS SPECS**

Facets: 8  
Inscribed Diameter: 40 mm  
Mirror thickness: 6 mm  
Facet clear aperture: 16 x 4.5 mm  
Coating: Protected Aluminum  
Speed: 10,000 – 33,000 RPM  
Scan Rate: 1.33 KHz to 4.40 KHz  
Scan angle up to  $\approx$  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:  $\lambda/4$  @ 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 +/- 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:  $-20\text{C}$  to  $+60\text{C}$  5-95% RH  
Operating:  $10\text{C}$  to  $55\text{C}$ , 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.) 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™

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Specifications subject to change without notice.  
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