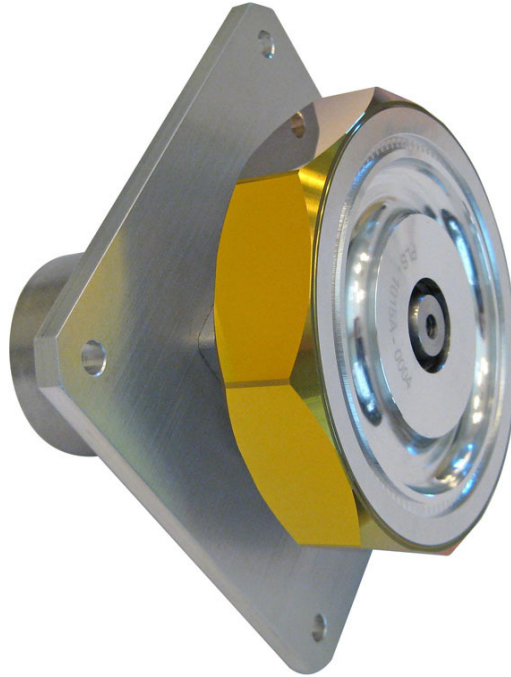


## **DOVE™ Polygon Scanner - 15mm Aperture @ 8K RPM**



### **Multi-Kilowatt Laser Damage Threshold!**

**DOVE™** is an intermediate size polygon laser scanner with a top speed of 8,000 RPM. Polygon scanners produce a linear scan speed of up to hundreds of meters per second which can be >10x galvanometer speed. The 15 mm aperture is suitable for material processing as well as LIDAR, inspection, imaging and other high-speed raster scanning applications. The Sapphire protected gold coating is especially durable.

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.

## **DOVE™ SPECIFICATIONS**

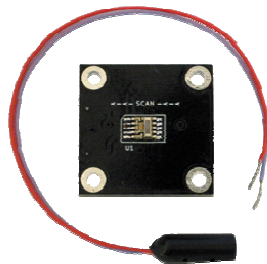
Speed: 1,000 – 8,000 RPM  
Speed control: TTL Ext freq reference  
& internal reference (not infinitely variable)  
Rotation: CW standard  
Facet Flatness:  $\lambda/6$  @ 633 nm per inch  
Surface Roughness: < 70Å RMS  
Surface quality: 60/40  
Dynamic track: < 45 arc sec  
Facet-Facet: < 5 arc sec total  
Facet-Datum < 10 arc sec total  
Jitter: < 0.02%  
Speed stability: < 0.02%  
Bearing: Ball bearing  
Operating attitude: Any  
Supply Voltage: 24 VDC  
Max Current: < 3.0 A  
Time to speed: < 60 sec  
Motor-Controller cable: 300 mm

Controller Power-I/O cable: 500 mm  
Controller: 80 W x 130 L x 40 H mm  
Start/Stop control: TTL  
Speed sync signal: TTL  
Shipping & Storage: -20C to +70C  
Operating: 15C to 45C, 10-80% RH  
Facets: 8  
Coating: Sapphire protected AU for IR  
Scan angle: up to  $\approx$  50 degrees  
(depending on spot size and beam feed angle)  
Scan Rate: 133 to 1067 Hz  
Inscribed Diameter: 4.00" (101.6 mm)  
Mirror thickness: 0.90" (22.86 mm) at center  
Facet clear aperture: 1.57" x 0.59"  
(39.9 x 15.0 mm)

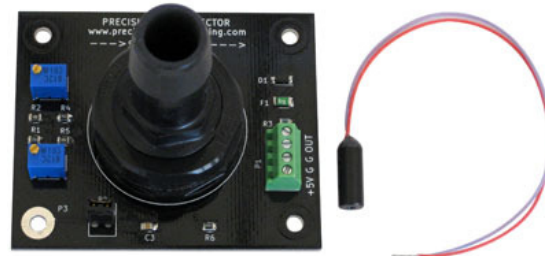
## **OPTIONAL START OF SCAN DETECTION**

SOS detection 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/>



Mini-SOS Detection Kit



Universal SOS Detection Kit

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Specifications subject to change without notice.  
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