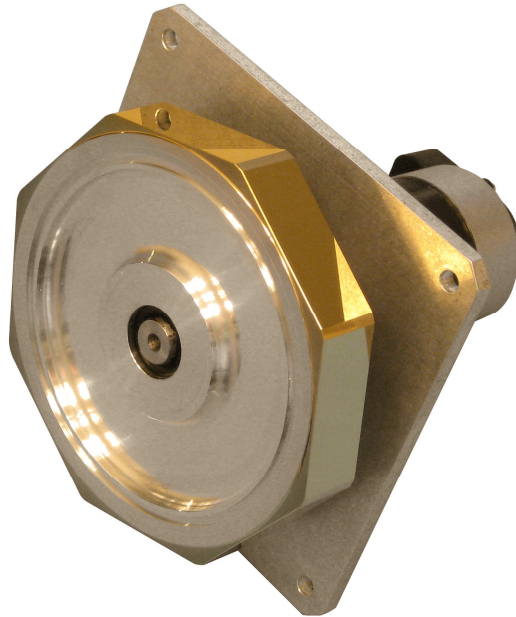


EAGLE EYE[™] – 21mm Aperture @ 10K RPM



Multi-Kilowatt Laser Damage Threshold!

EAGLE EYE[™] is a large size polygon laser scanner with a top speed of 10,000 RPM. Polygon scanners produce a linear scan speed of up to hundreds of meters per second which can be >10x galvanometer speed. The 21 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.

EAGLE EYE™ SPECIFICATIONS

(General specs for typical mirror sizes.)

Speed: 1,000 – 10,000 RPM

Speed control: TTL Ext freq reference
and USB (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: 48 VDC

Max Current: < 5.0 A

Time to speed: < 60 sec

Motor-Controller cable: 300 mm

Controller Power-I/O cable: 500 mm

Controller: 100 W x 150 L x 40 H mm

Start/Stop control: TTL or USB

Speed sync signal: TTL or USB

Shipping & Storage: -20C to +70C

Operating: 15C to 45C, 10-80% RH

STANDARD MIRRORS 8 or 10 facets

have protected AU facets for IR

8 Facets: Model PLS-08-525-090-AU

Scan angle up to \approx 50 degrees (depending
on spot size and beam feed angle)

Scan Rate: 133 to 1333 Hz

Inscribed Diameter: 5.250" (133.35 mm)

Mirror thickness: 0.90" (22.86 mm)

Facet clear aperture: 1.96" x 0.84"

(49.8 x 21.3 mm)

10 Facets: Model PLS-10-525-090-AU

Scan angle up to \approx 40 degrees (depending
on spot size and beam feed angle)

Scan Rate: 167 to 1667 Hz

Inscribed Diameter: 5.250" (133.35 mm)

Mirror thickness: 0.90" (22.86 mm)

Facet clear aperture: 1.64" x 0.84"

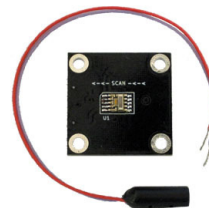
(41.7 x 21.3 mm)

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/>

Our Precision Universal SOS Detection Kit is made for the challenging environment inside a high power Polygon Scan Head. Our Precision mini-SOS Detection Kit is for excellent for AV LIDAR and compact OEM applications. Our Precision SOS laser is visible, eye safe and requires no focusing so setup is easy.



Precision Laser Scanning, LLC
25750 North 82nd Street
Scottsdale, Arizona 85255 USA
TEL 1-480-515-1643
info@precisionlaserscanning.com
www.precisionlaserscanning.com

Specifications subject to change without notice.
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