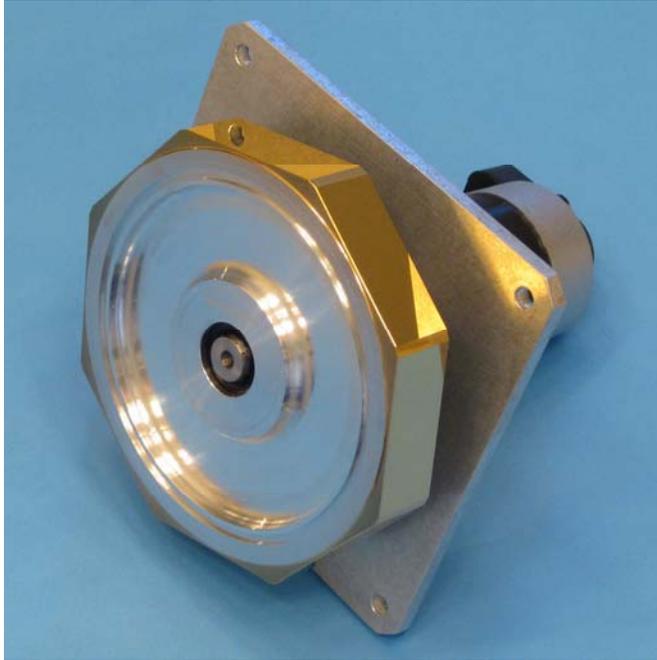


EAGLE EYE™ Large Facet Polygon Scanners



High Speed Imaging & Material Processing!

EAGLE EYE™ large facet polygon scanners are suitable for high speed imaging and material processing applications. The polygon mirror can accommodate beams of over 20 mm on the facets. The large facets are needed for focusing a large beam to a small spot on a target for material processing. Large facets can also serve as a light collecting optic for light reflected from the target. This is useful for applications including inspection, LIDAR, collision avoidance and other laser imaging. The high torque motor is capable of spinning large polygon mirrors up to 10,000 RPM.

Standard models have short lead time and low prices! Custom facet counts and facet sizes are available on request.

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.

EAGLE EYE™ SPECS

(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

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™



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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