**EagleEye™ Large Facet Polygon Scanners**

**High Speed Imaging & Material Processing!**

_EagleEye™_ 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.


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
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

8 Facets: Model PLS-08-525-090-AU
Scan angle up to ≈ 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 ≈ 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:

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™

Specifications subject to change without notice.
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