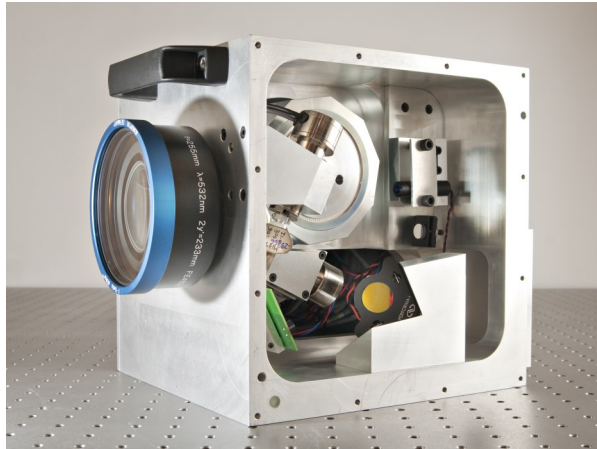




**High Speed
Polygon Scan Heads**



hyperSCAN™ from Lincoln Laser offers the accuracy of a galvo scan head at POLYGON speeds of hundreds of meters / second. Developed for ULTRAFAST PS & FS lasers as well as high power lasers used in thin film, raster scan and micromachining at high removal rates with low surface roughness. hyperSCAN™ can reduce your manufacturing lead times as well as costs while optimizing your systems performance and reliability.

APPLICATIONS

- Perfect for high speed perforations
- Superior design with high speed performance
- Excellent solution for surface texturing applications
- Ideal for 3D inspection, reverse engineering and thin film solar
- Excels as scan head for robotics, metrology and other optical applications
- Ultimate solution for Computed Tomography, Coordinate Measuring Machines or high volume inspection

FEATURES

BENEFITS

Very high scan rates up to 200 m/s	Provides scan rates for current and leading edge scanning applications
Provides line scanning and slow axis indexing	Optimal scanning efficiency while offering leading edge high speed application versatility
Raster based data input	Industry standard input format for fast & easy start up with minimal costs
Optical error correction in X and Y axis	Resolution of $<3\mu\text{m}$ and repeatability of $<\pm 10\mu\text{m}$ in the X axis and $<\pm 10\mu\text{m}$ in the Y axis for max performance
Extremely high scan positioning accuracy	Resolution of $<3\mu\text{m}$ and repeatability of $<\pm 10\mu\text{m}$ in the X axis and $<\pm 10\mu\text{m}$ in the Y axis are possible for reliable performance
Galvanometers in standard offering	Provides optimal flexibility for multiple applications in both the X and Y axis

SPECIFICATIONS	
Scanning Speed *1)	200 m/s 147 m/s 100 m/s 70 m/s
Field Size *1)	160 x 160 mm
f- Θ optics focal length	255 mm
Wavelength	355 nm, 532 nm, 1064 nm Standard
Laser requirements	Pulse on Demand, Seed Frequency \geq 50MHz, Sync Option
Entrance Beam Aperture	15 mm
Spot Size at M2=1	25 μ m
Scanning Head Dimensions	25 x 25 x 25 cm
Resolution X	< 3 μ m
Resolution Y	< 3 μ m
Repeatability in X	< +/- 10 μ m
Repeatability in Y	< +/- 10 μ m
Maximum Y deviation along X	< +/- 10 μ m
Pulse separation in X	@200m/s: > 66 μ m (*2,*4) > 100 μ m (*3,*4) @70m/s: > 23 μ m (*2,*4) > 35 μ m (*3,*4)
Known Supported Lasers	JDSU Picoblade Coherent 'Lumera Hyper Rapid 25 & 50'

*1) F-Theta f=255, Jenoptik JENar® 255-532-233

*2) Limited by controller's maximum repetition rate of 3MHz

*3) Limited by TBW PoD maximum rate of 2MHz

*4) Lower limit based on maximum repetition rate. Assumes laser can deliver desired power

