

Lapis®

Integrated Multi-laser Engine

The Lapis 3 or 4-laser integrated engine features an advanced optical plate with 3 or 4 laser channels that focused precisely at the same focal plane. It offers up to four selectable output laser wavelengths, including the common options of 405nm, 488nm, 561nm, and 638nm, as well as other customizable wavelengths.

The module provides independently adjustable beam positions for each wavelength. Users have the flexibility to adjust the focal plane to their specific requirements, while the beam spot position can be controlled with high precision.

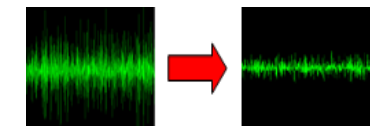
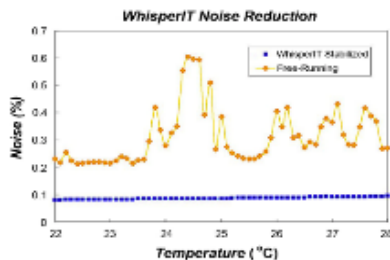
Incorporates up to four PIC lasers. Lapis 4-laser module reduces cost, space and complexity by eliminating electronic redundancy. Minimizes setup time for researchers and time/cost to market for instrument OEMs. Ideal for flow cytometry with co-linear or separated beams.

FEATURES

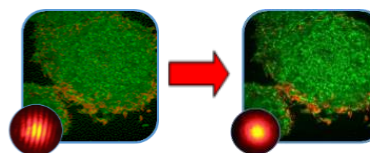
- Custom focus beam
- Highly integrated
- Co-linear or separated beams
- User-adjustable
- Minimizes setup time
- Minimizes time/cost to market
- Custom wavelengths available

APPLICATIONS

- Flow Cytometry
- Cell Sorting
- Diagnostics
- Medical Imaging
- Confocal Microscopy



Low Noise



Low Coherence

Product Specifications

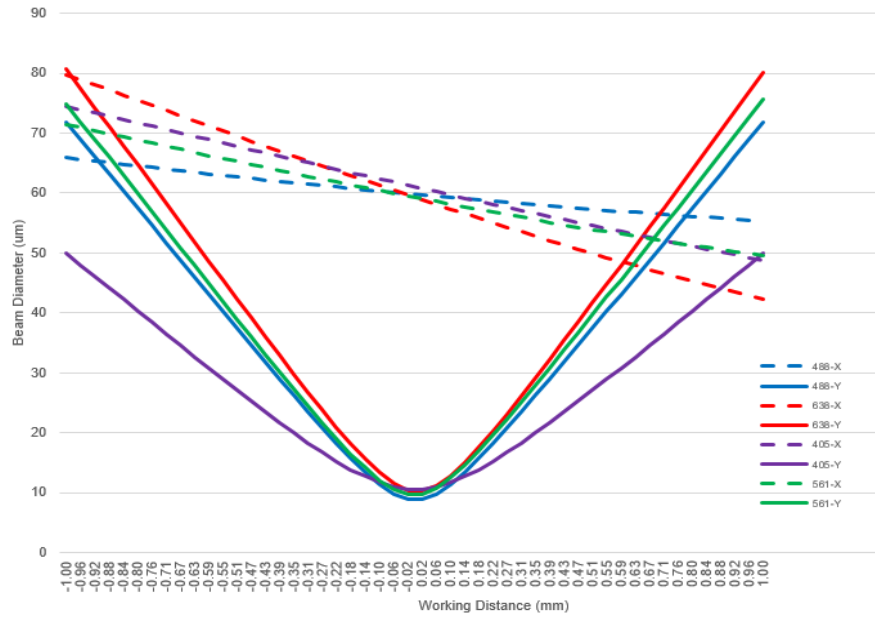
SPECIFICATIONS	Lapis 405	Lapis 488	Lapis553/561	Lapis 638
Wavelength (nm)*	405	488	553/561	638
Min. Output Power (mW)		100		
Max. Output Power (mW)		110		
RMS Noise (20Hz to 20 MHz) (%)		<0.25		
Peak to Peak Noise (20Hz to 20kHz) (%)		<1		
Long-Term Power Stability (8hrs, ±3°C) (%)		<2		
Collimated Beam Diameter	0.5~3mm Circular or elliptical			
Focus Beam Size in Vertical (µm) (1/e ²)	10±2			
Focus Beam Size in Horizontal (µm) (1/e ²)	75±10			
Focus Side-lobes Vertical (% of peak)	<3			
Laser Out Height From Base Plate (mm)	25.4			
Beam Position Adjustment @V-focal plane (µm)	±100 in V, H			
Beam Waist Position Adjustment (mm)	±3			
Pointing Stability Over Temperature (µrad/°C)	<5			
Warm-up Time (From cold start) (minutes)	<5			
Polarization Extinction Ratio	>100:1			
Polarization Orientation (Reference to baseplate)	Vertical ±5°			

*Wavelength tolerance: 405nm±3nm; 488nm±3nm; 553nm/561nm±3nm; 638nm±5nm

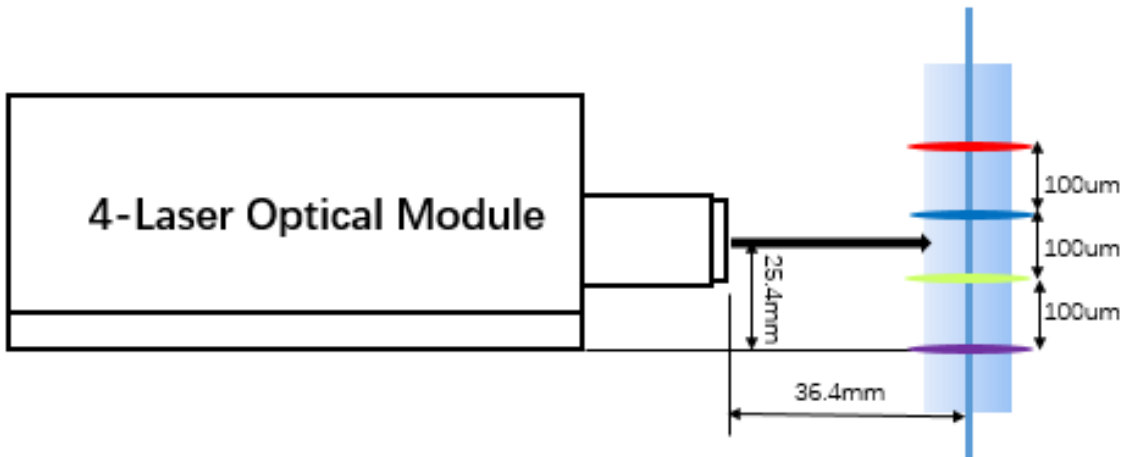
ELECTRICAL SPECIFICATIONS	Conditions	Min.	Specifications Typ.	Max.	Units
DC Supply Voltage		11.5	12	12.5	VDC
Voltage Ripple				5	%
Current Consumption				14	A
Total Power Consumption				87.4	W

MECHANICAL SPECIFICATIONS	Conditions	Specifications Typ.	Units
Laser Module Dimension	L x W x H	155 x 180 x 52.2	mm

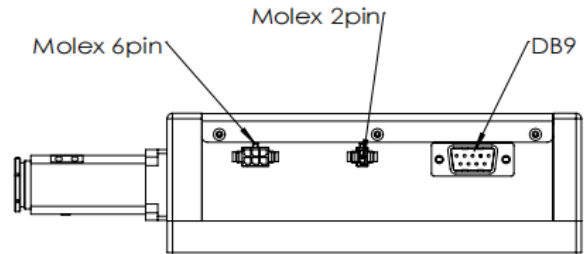
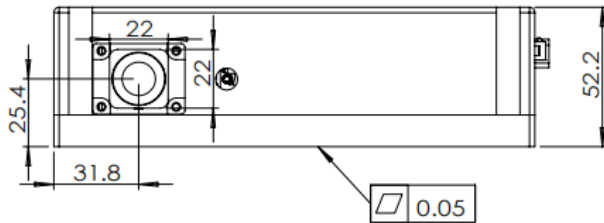
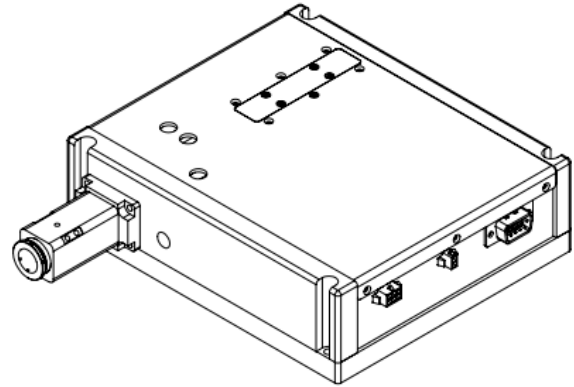
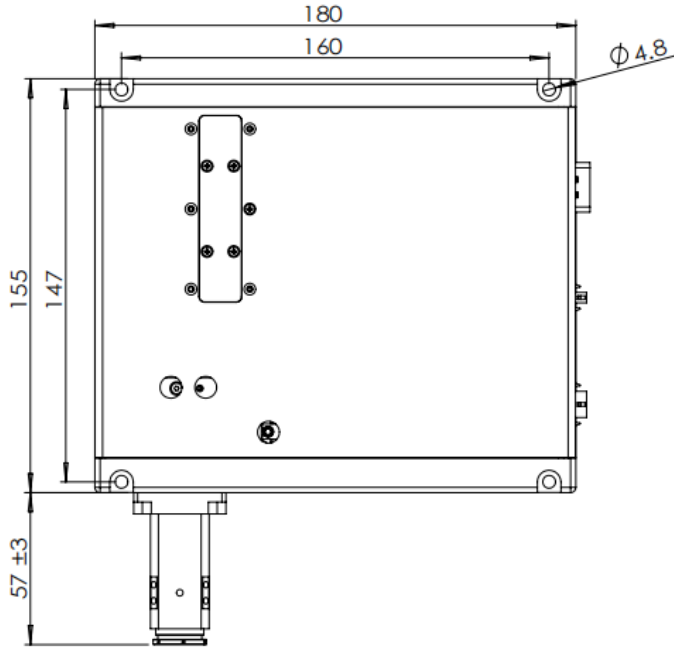
Nominal Optical Performance



4 lasers focus with separated positions, 0~150um spacing is available to offer upon request.



Mechanical Specifications



This OEM laser does not comply with 21 CFR 1040.10 and 1040.11 without appropriate integration. Please contact Pavilion Integration Corp. for additional support or questions.

ISO9001 & ISO13485 Registered

