

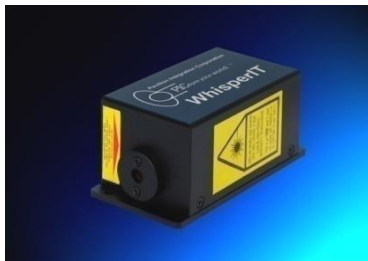


Pavilion Integration Corporation

Solid State Lasers for Demanding Applications

WhisperIT[®]

532nm Green Lasers



Features and Benefits

Compact
Efficient
Stable

Power on Demand

Small package for easy integration
Power Consumption and heat load < 4W
WhisperIT[®] technology provides low noise output under all operating conditions
Fast warm-up and turn on
Variable output power

Applications

Biotechnology

- Flow Cytometry
- DNA Sequencing
- Medical Imaging
- Confocal Microscopy
- Raman Microscopy

Semiconductor Metrology

WhisperIT[®] 532nm Lasers are laser diode based continuous-wave solid-state lasers. Unique laser architecture enables a compact and efficient (<4W) laser design. The WhisperIT[®] technology delivers highly stable laser output and the extremely low optical noise over entire output power range.



SPECIFICATIONS

Laser Wavelength	532nm ¹		
Output Power	20mW	50mW	100mW
Linewidth (with Narrow Linewidth Option)	<100MHz		
RMS noise (20 Hz to 20 MHz)	< 0.1 %		
Power Stability 24 hours over 15-45°C Temperature Range	< +/-1%		
Beam Diameter ²	0.5mm or 0.7mm		
Beam Divergence	< 1.7 mrad or < 1.2 mrad		
Spatial Mode	TEM ₀₀		
M-squared (M ²)	<1.1		
Pointing Stability	<6 μrad/°C		
Beam Static Alignment Tolerance	Position +/- 0.5mm; Angle +/- 2.5 mrad		
Warm-up Time	<1min (typical 10 sec)		
Polarization	>100:1; vertical +/- 3°, other extinction ratios and orientations available		

¹Wavelength tolerance +2/-4 nm

²Measured at 1/e², circular beam <10% ellipticity.

Environmental & Operating

Base Plate Temperature	10 to 45°C Operating; -10 to 65°C Non-operating
Shock (11ms duration)	1g Operating; 25g Non-operating
Vibration	0.3g Operating; 2g Non-operating
Humidity	5% - 95% Non-condensing
Altitude	< 3,000m Operating; < 20,000m Non-operating
Safety Certification	IEC60825-1
Compliance	ISO, CE, RoHS
DC Power Supply	5V +/- 10%, 2 Amp
Optional Interface	Remote On and Off; Power Monitoring 0 – 2.5 V; External Power Adjustment 0 – 2.5 V
ESD Protection	Level 4 (IEC 1000-4-2, 1995)
Mounting Surface Flatness	0.05mm
Dimensions	Standard: 86mm (L) x 40 mm (W) x 36 mm (H) Compact: 70mm (L) x 40 mm (W) x 45 mm (H) Mini Green: 50mm (L) x 20 mm (W) x 20 mm (H)
Laser Drive Options	CW, Analog Modulation, USB Control



Modulation Option (Typical Values)

Modulation Signal	TTL
Modulation Rate ¹	Up to 1 MHz
Modulation Depth	>1,000:1
Overshoot / Undershoot	< 1.0%
Modulated Pulse Power Variation	< 1%
Modulation Duty Cycle	10% - 90%
Rise/Fall Times (90-10%)	<200nsec/50nsec

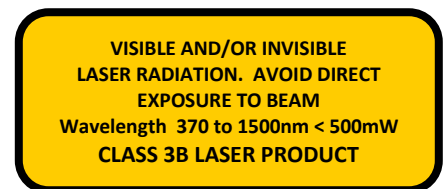
Fiber Coupled Option

Fiber Type	PM Fiber (SM and MM available)
Fiber Termination	FC/APC (Collimator available)
Fiber Length / Jacketing	2.2 m / 3 mm
Fiber N.A.	0.12 (Typical)
Warm-up Time	<1min (typical 10 sec)
M-squared (M ²) with Collimator	< 1.1

¹Tested values shown, other modulation rates available.

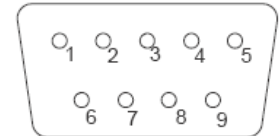
This is an OEM Product. CDRH Control box is available for samples or Laboratory use

Invisible or visible radiation is dangerous to humans and should not be viewed directly or indirectly with or without optical instruments. Please refer to IEC 825-1 "Safety of Laser Products" and 21 CFR 1040.10-1040.11 "Performance Standards for Light Emitting Products" for additional information



Pavilion Integration Corporation follows a continuous improvement program. Specifications subject to change without notice. Pavilion Integration Corporation offers a 1 year limited warranty.

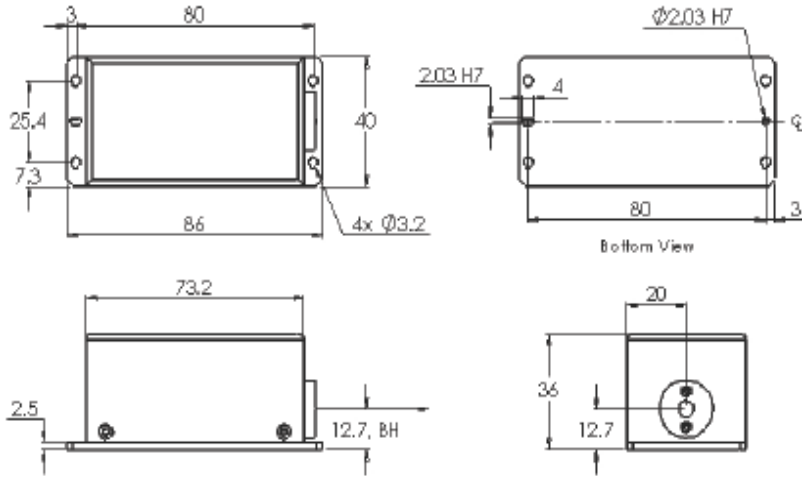
Electrical Interface



1. +5VDC to Laser
2. Power Monitor
3. +5VDC to TEC
4. Current Monitor
5. GND to TEC
6. Power Adjust
7. Laser Enable/Disable
8. N/C
9. GND to Laser

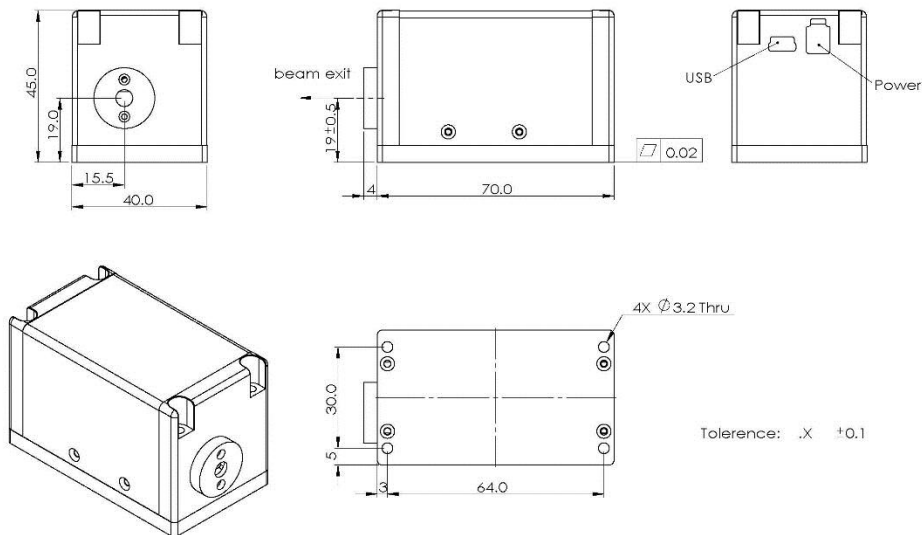


Whisper Green Dimensions (mm)*



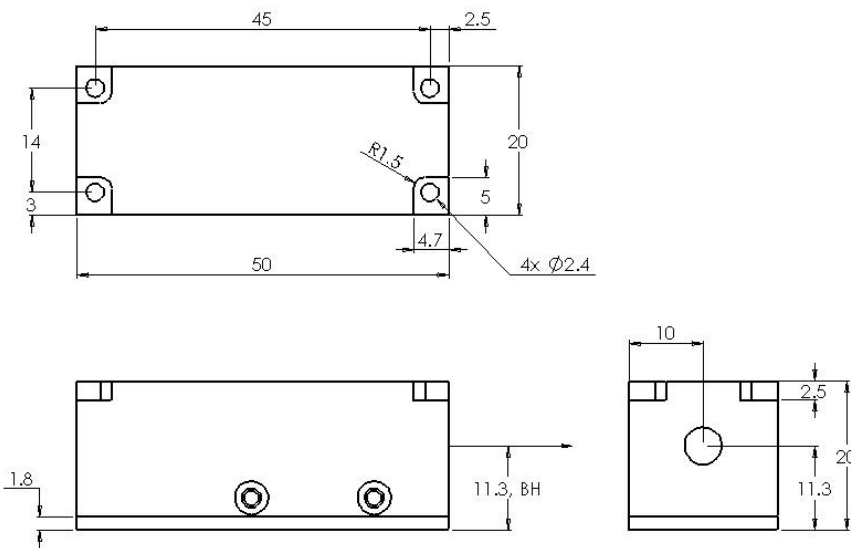
* Laser height is 43mm with Computer Control or Fiber Coupled option.

Whisper Compact Dimensions





Whisper Mini Green Dimensions



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**VISIBLE AND/OR INVISIBLE
LASER RADIATION. AVOID DIRECT
EXPOSURE TO BEAM**
Wavelength 370 to 1500nm < 500mW
CLASS 3B LASER PRODUCT

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