Pavilion Integration Corporation
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WhisperIT Pullman®
CW UV 349nm and 360nm Laser Modules

The Pullman® UV lasers offer a high reliability & consistent performance laser product which enables demanding biomedical and scientific instrumentation applications.

The WSL349 and WSL360 lasers come with a flexible interface: Analog or digital

With UV wavelengths of 349 nm and 360 nm, with round 0.7mm beam and power up to 150 mW, the WSL UV lasers are tailored to more demanding applications in life sciences, biotechnology, metrology, and inspections.

FEATURES

- **Ultra-low noise**
- **Superior beam quality TEM_{00}**
- **Low heat dissipation**
- **Reliable and Robust**
- **Easy and flexible interface configuration**

APPLICATIONS

- **Flow Cytometry**
- **Microfluidics**
- **Confocal Imaging**
- **DNA Sequencing**
- **Spatial Genomics**
- **Protein Detection**
- **Metrology**
- **Inspection**

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Table 1. Optical Specification

FREE SPACE SPECIFICATIONS	349	360
Wavelength (nm)	348.8	360.4
Wavelength Accuracy (nm)	±0.1	
Spatial Mode	TEM_{00}	
Output Power (mW)*	20, 40, 60, 100, 150	
RMS Noise (20Hz to 20MHz) (%)	≤0.25	
Peak to Peak Noise (20Hz to 20kHz) (%)	<1	
Long-Term Power Stability (8Hrs after Warm up, 25±3 ºC)	<2	
Beam Quality (M^2)	≤1.1	
Beam Symmetry	≤1:1.1	
Beam Diameter at $1/e^2$ (mm)	0.7±0.05	
Beam Divergence Angle (mrad, full angle)	<0.8	
Pointing Stability (µrad) (Over 2 hours after warm up and ±3°C) (µrad/°C)	<30	
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 ±5º	

*Output power is variable in CW mode from 10% to 100% of rated power. Specifications are valid for 100% power.

Table 2. Mechanical & Environmental Specification

Static Alignment Tolerances	All Wavelengths
Beam Position from Reference (mm)	<0.5
Beam Angle (mrad)	<2.5
Beam Waist Position from Exit Window (mm)	±250
Dimensions (L x W x H) (mm)	125 x 70 x 36.5
Power Consumption (W)	Typ. 18, Max. 42
Laser Head Baseplate Temperature (Max. ºC)	45
Operating Temperature (ºC)	10 to 35
Storage Temperature (ºC)	-20 to 60
Humidity (%)	10 to 90
Shock (11ms duration) (Operating) (g)	1
Shock (11ms duration) (Non-operating) (g)	30
Vibration (5Hz – 500Hz) (Operating) (g)	0.3
Vibration (5Hz – 500Hz) (Non-operating) (g)	3
Laser Safety Classification	3b/4

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Table 3: Electrical Specification

DB9 Connector PIN Assignment	Digital Interface	Analog Interface
1	LD_12V	LD_12V
2	Rx for RS232	NC
3	TEC_5V	TEC_5V
4	Tx for RS232	NC
5	TEC_GND	TEC_GND
6	NC	Power Adj
7	NC	Enable
8	GND for RS232	NC
9	LD_GND	LD_GND

MECHANICAL SPECIFICATIONS

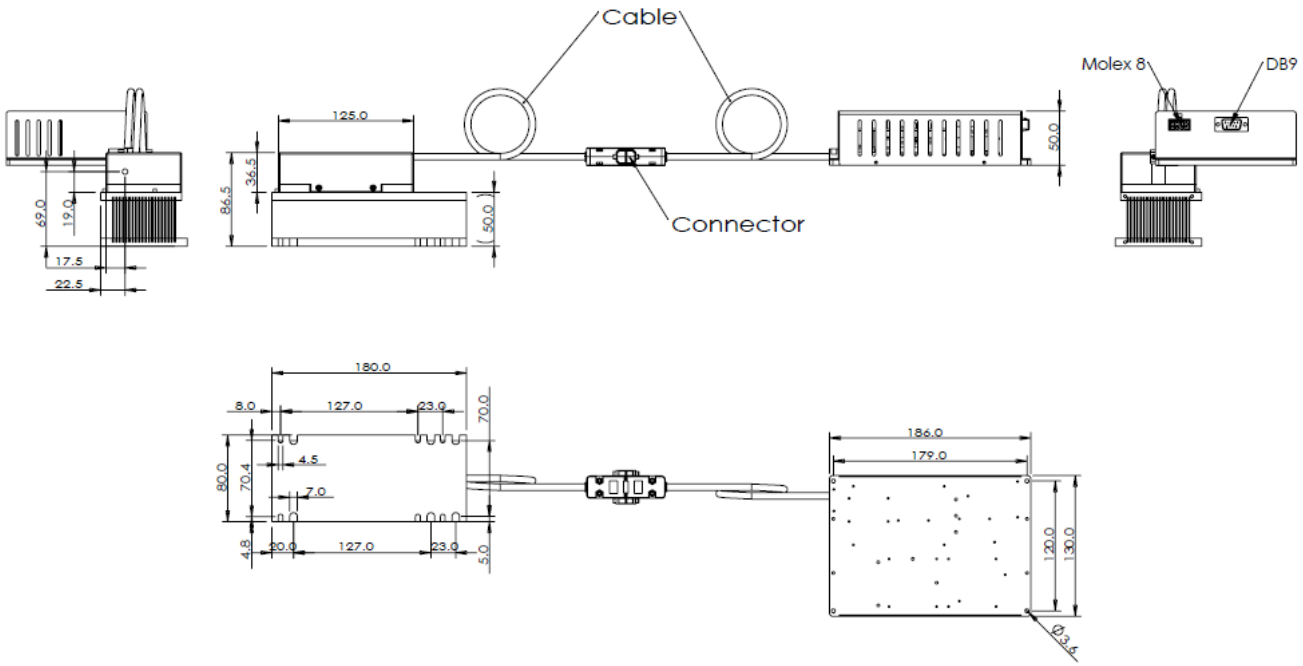

Figure 1 Laser Module Dimensions

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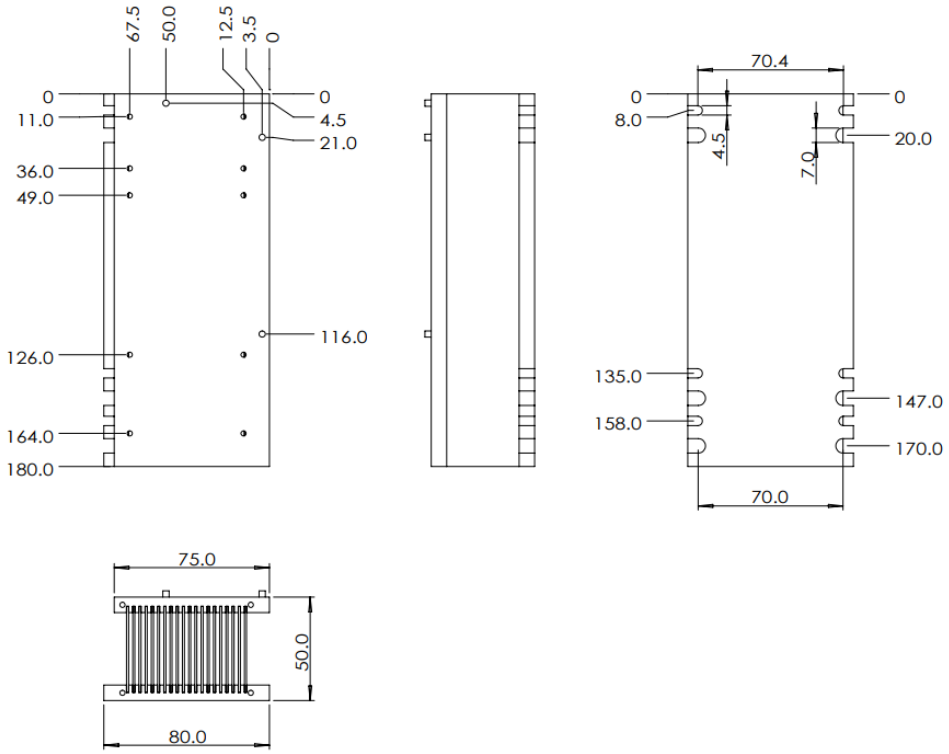

Figure 2 Heatsink Dimensions

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

ISO9001 & ISO13485 Registered