



## Low Noise DPSS Laser



Spirit532N lasers are ultra compact, continuous wave, diode-pumped all-solid-state of low noise 532nm laser. . The laser is designed and manufactured to ensure a high level of reliability.

The Spirit532N lasers are intended for stand-alone use in laboratory environment or for integration as OEM component in equipment for many applications. Available output power is upto 100mW.

### Unique Features

- Ultra Low Noise:  $<0.1\%$
- Highest Reliability:  $<\pm 1\%$
- Narrow Spectral Bandwidth:  $<100\text{MHz}$
- Excellent Beam Quality:  $M^2 <1.05$
- Long Lifetime

### Applications

- Biotechnology
- Confocal Microscope
- DNA Sequencing
- Flow Cytometry
- Cell Sorting
- Interference
- Photoluminescence
- Micro-material Processing
- Bio-instrument
- Precision Measurement
- Physics Experiments

### Specifications

Wavelength	532 nm
Operating Mode	CW
Output Power	20, 50, 100 mW
Spatial Mode	TEM <sub>00</sub>
Longitudinal Mode	Multi Mode
Mode Quality $M^2$	$< 1.05$
Spectral Linewidth	$< 100\text{MHz}$
Coherent Length	$> 5\text{ cm}$
Beam Diameter @ $1/e^2$	$< 1.0\text{ mm}$ (Typical 0.8 mm)
Beam Divergence (full angle)	$< 1.0\text{ mrad}$
Circularity of Beam	$> 95\%$
Pointing Stability (rms, over 3 hours and $25\pm 2\text{ }^\circ\text{C}$ )	$< 10\text{ }\mu\text{rad}$
Noise (0 Hz to 20 MHz)	$< 0.1\% \text{ rms}$
Power Stability (rms, over 24 hours)	$< \pm 1\%$
Polarization Ratio (Liner, $45^\circ$ )	$> 100:1$
Beam Height from the Base (mm)	20 mm
Warm-up Time	$< 10\text{ minutes}$
Expected Lifetime	$> 10,000\text{ Hours}$

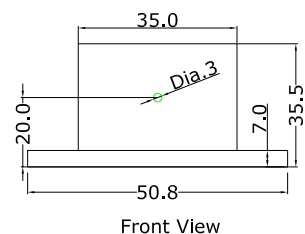


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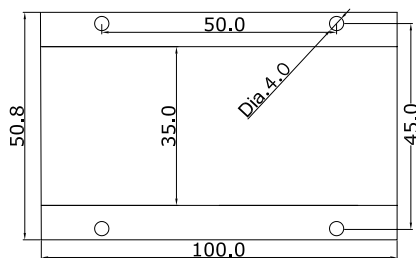
### Utility and Environmental Requirements

Operating Voltage	5VDC, 95-250VAC
Power Consumption	< 40W
Maximum Laser Head Baseplate Temp.	40°C
Ambient Temperature Operating Range	10°C ~ 35°C
Storage Temperature	-20°C ~ +70°C
Dimensions (LxWxH) of Laser Head	100 x 50.8 x 35.5 mm
Dimensions (LxWxH) of Power Supply	145 x 135 x 82 mm (for End User Version) 102 x 88 x 26 mm (for OEM User Version)
Weight of Laser Head	350 g
Weight of Power Supply	1200 g (End User Version) 300 g (OEM User Version )

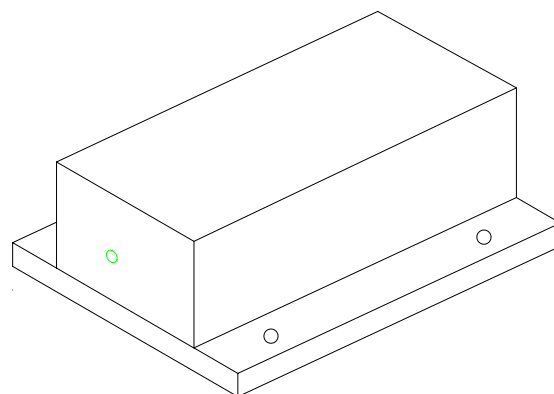
### Dimensions of Laser Head (in mm)



Front View



Top View

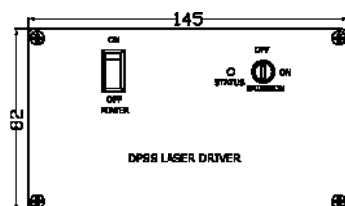


3D View

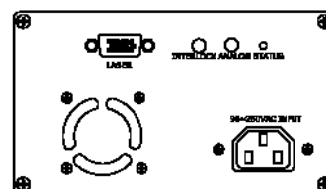


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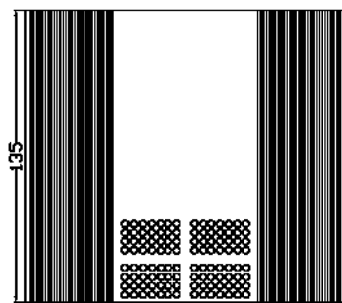
### Dimensions of Power Supply for End User Version (in mm)



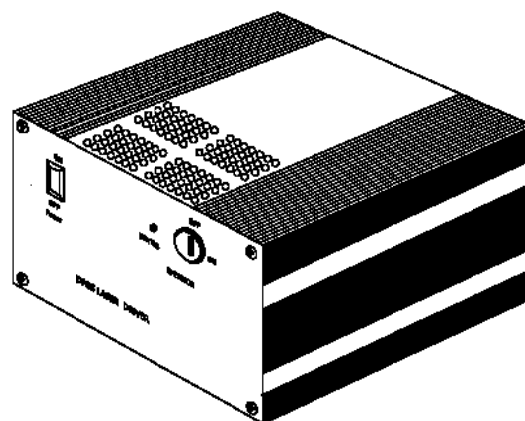
Front View



Back View

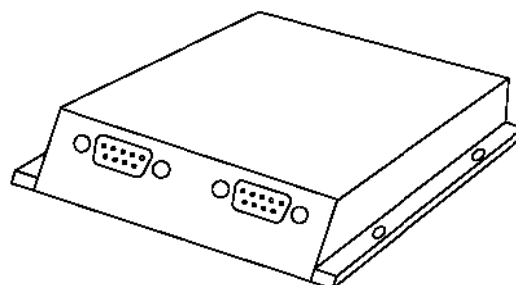
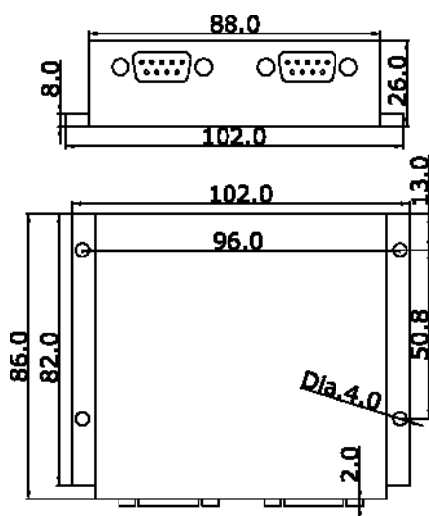


Top View



3-D View

### Dimensions of Power Supply for OEM User Version (in mm)





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### Order Information

Part No.	Output Power
Spirit532N-0020	20 mW
Spirit532N-0050	50 mW
Spirit532N-0100	100 mW

### Option

- \* Analog modulation (option): 0-2VDC
- \* TTL modulation (option): 0-10KHz

### Warranty

ATOP offers a limited warranty for all laser systems. ATOP diode-pumped solid state lasers are warranted to be free of defects in materials and workmanship for 12 months from the date of shipment. For full details of this warranty coverage of further products information, please refer to the Service and Support section at [www.atoplaser.com](http://www.atoplaser.com), or contact your local Sales or Service representative.

### Laser safety and electrical safety

Caution! Visible and invisible laser radiation is extremely dangerous. Avoid eye or skin exposure to direct radiation or diffuse reflection. Most ATOP laser systems fall into class III or class IV laser classification. Most laser systems utilize different level AC and DC voltage in both laser head and power supply. All ATOP products are designed in a compact package.

### Notices

1. Due to our continuous product improvement program, specifications may change without notice.
2. Specifications apply to operation at the wavelength noted.
3. All statements, technical information and recommendations related to the products herein are based upon information believed to be reliable or accuracy or completeness thereof is not guaranteed, and no responsibility is assumed for any inaccuracies. The user assumes all risks and liability whatsoever in connection with the use of a product or its application, ATOP reserves the right to change at any time of a product offered for sale herein. ATOP makes no representations that the products herein are free from any intellectual property claims of others. Please contact ATOP for more information.