



## DPNU457 Series 457nm Narrow Linewidth Low Noise DPSS Laser System up to 300mW

### Overview

The DPNU457 series diode pumped solid-state (DPSS) laser is ideal for applications that require a wavelength of 457nm and output power levels up to 300mW. The laser features narrow spectral linewidth, low noise, high stability, ultra-compact design, long operating lifetime, and FDA-compliant system with driver. The laser is widely used in scientific experiment, medical measurement, instrument, spectrum analysis, and many other applications.



### Specifications

|   |   |  |  |
|---|---|--|--|
| <b>Model Number</b>                               | <b>DPNU457-XYZLA</b>                        |  |  |
| Wavelength (nm)                                   | 457±1                                       |  |  |
| Output power (mW)                                 | >30 (X=30), >50 (X=50), >100 (X=100)        | >150 (X=150), >200 (X=200), >300 (X=300) |  |
| Transverse mode                                   | TEM <sub>00</sub>                           |  |  |
| Operating mode                                    | CW  |  |  |
| Power stability (rms, over 4 hours)               | <5% (Z=A), <3% (Z=E), <1% (Z=D)             | <5% (Z=A), <3% (Z=E)                     |  |
| Spectral linewidth (nm)                           | <0.003 (L=J)                                |  |  |
| Noise of amplitude (rms, 1Hz-20MHz)               | <0.5% (A=L), <1% (A=1)                      |  |  |
| M <sup>2</sup> factor                             | <1.5  |  |  |
| Beam diameter at aperture (1/e <sup>2</sup> , mm) | 0.70±0.05                                   |  |  |
| Beam divergence, full angle (mrad)                | <1.5  |  |  |
| Polarization ratio                                | >100:1, Vertical ±5 degree                  |  |  |
| Warm-up time (minutes)                            | <10   |  |  |
| Pointing stability after warm-up (mrad)           | <0.05                                       |  |  |
| Beam height from base plate (mm)                  | 27.4  |  |  |
| Laser head consumption (W)                        | 15 (typical), <25 (40°C)                    |  |  |
| Max laser head base plate temperature (°C)        | 50  |  |  |
| Operating temperature (°C)                        | 10-40                                       |  |  |
| Dimensions of laser head (mm)                     | 142.5(L)×60(W) ×50(H) mm <sup>3</sup>       |  |  |
| Weight of laser head (kg)                         | 1.0 kg                                      |  |  |
| Power supply                                      |   |  |  |
| High Power Elite Power Supply (Y=H)               | Input voltage                               | 90-264VAC                                |  |
|   | Dimensions                                  | 275(L) ×145(W) ×104(H) mm <sup>3</sup>   |  |
|   | Weight                                      | 2.3 kg                                   |  |
|   | Notes                                       | Fixed output power                       |  |
| Expected lifetime (hours)                         | 10,000                                      |  |  |
| Warranty period                                   | 10 months                                   |  |  |
| FDA Compliance                                    | FDA CDRH Title 21 CFR 1040.10/11 Class IIIb |  |  |

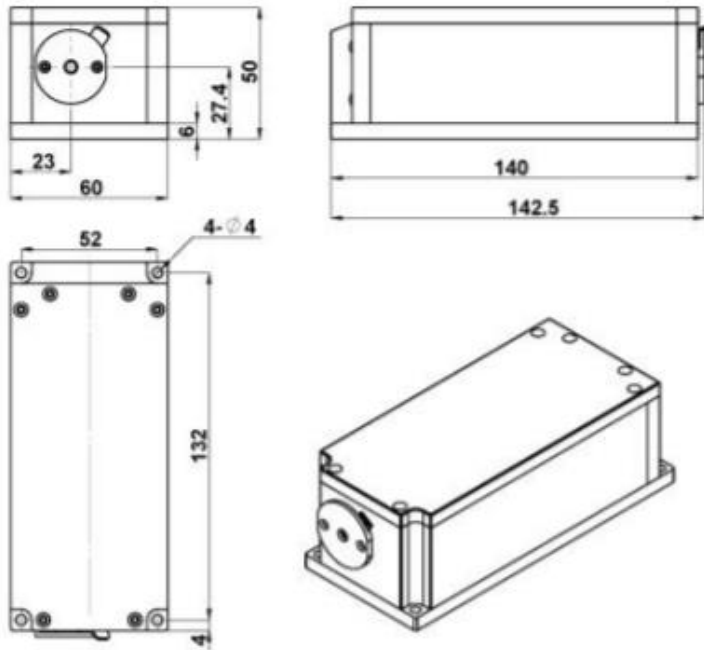
#### Remarks:

- The laser head needs to be used on a heat sink with good heat dissipation.
- Specifications of the CW laser is based on the laser performance at full power output after the specified warmup period. The stability of output power may change when output power is adjusted at a different power level.

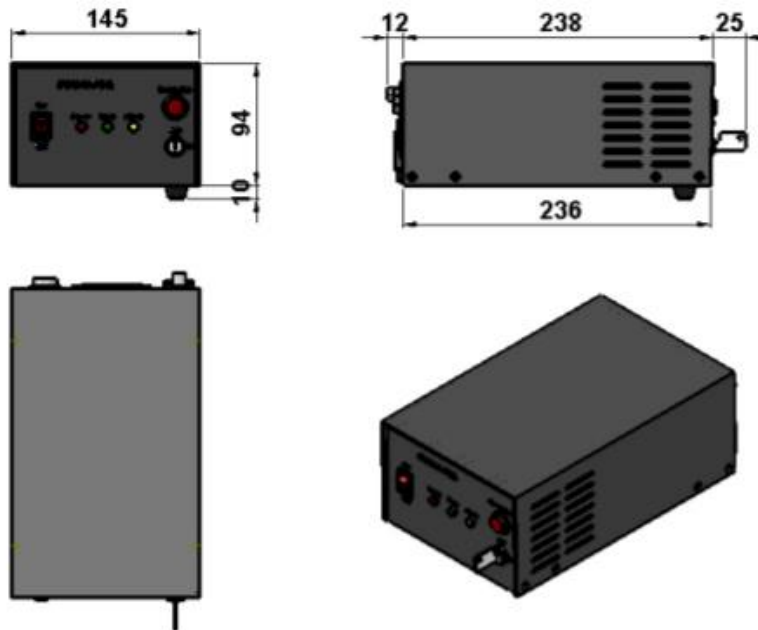


**Outline Dimensions (unit: mm)**

**Laser Head**



**Power Supply**



Note: The above specifications are subject to change without notice.