



Environmentally Sealed CW DPSS Laser System

DPS Series

Data Sheet



Overview

The DPS series is a family of visible and near infrared diode pumped solid state (DPSS) lasers that have good sealing with IP rating up to IP67 for harsh conditions and can deliver up to 1500 mW output power. The DPS laser series features a compact design, good sealing, long lifetime, easy operation working under the pressure of 0.02kPa, and FDA-compliant system with driver. The laser is widely used in collimation, laser medical treatment, scientific experiment, optical instrument, laser display, laser lighting show, and many other applications.

Features

- Visible and infrared wavelength spectral range
- CW operating mode
- Optical output power 10mW to 1500mW
- Ultra-compact design
- FDA compliant

Applications

- Scientific experiment
- Optical instrument
- Laser display
- Laser lighting show
- Collimation
- Laser medical treatment

473-577 nm Specifications

Parameter	DPS473		DPS532		DPS561		DPS577	
Wavelength	473±1 nm		532±1 nm		561±1 nm		577±2 nm	
Output power	>50 mW		>30 mW, >50 mW, >80 mW, >100 mW, >200 mW, >300 mW		>30 mW, >50 mW		>30 mW	
Operating mode	CW		CW		CW		CW	
Transverse mode	TEM ₀₀		TEM ₀₀		TEM ₀₀		TEM ₀₀	
Power stability (rms, over 4 hours)	<5%, <3%, <2%		<3%, <1%		<3%, <2%, <1%		<5%, <3%, <2%, <1%	
M ² factor	<1.2		<1.2, <1.1		<1.2		<1.2	
Beam diameter at aperture (1/e ²)	<1.0 mm		<1.0 mm		<1.0 mm		<1.0 mm	
Beam divergence, full angle	<1.5 mrad		<1.5 mrad		<1.5 mrad		<1.5 mrad	
Polarization ratio	>100:1		>100:1		>100:1		>100:1	
Warm-up time	<5 min		<5 min		<5 min		<5 min	
Pointing stability after warm-up	<0.05 mrad		<0.05 mrad		<0.05 mrad		<0.05 mrad	
Pointing stability over temp	<8 urad/°C		<8 urad/°C		<8 urad/°C		<8 urad/°C	
Power consumption	<30 W		<30 W		<30 W		<30 W	
Shock tolerance (6ms)	7g laterally, 15g vertically		7g laterally, 15g vertically		7g laterally, 15g vertically		7g laterally, 15g vertically	
IP rating	IP67	IP65	IP67	IP65	IP65		IP67	IP65
Max heat dissipation	10W@50°C	4W@25°C	10W@50°C	4W@25°C	/		10W@50°C	4W@25°C
Operating temperature	0-60°C	10-35°C	0-60°C	10-35°C	10-35°C		0-60°C	10-35°C
Modulation option	TTL/Analog: 1Hz-1kHz, 1kHz, 10kHz, 10kHz-30kHz							
Expected lifetime	10,000 hours							
Warranty period	10 months							

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.

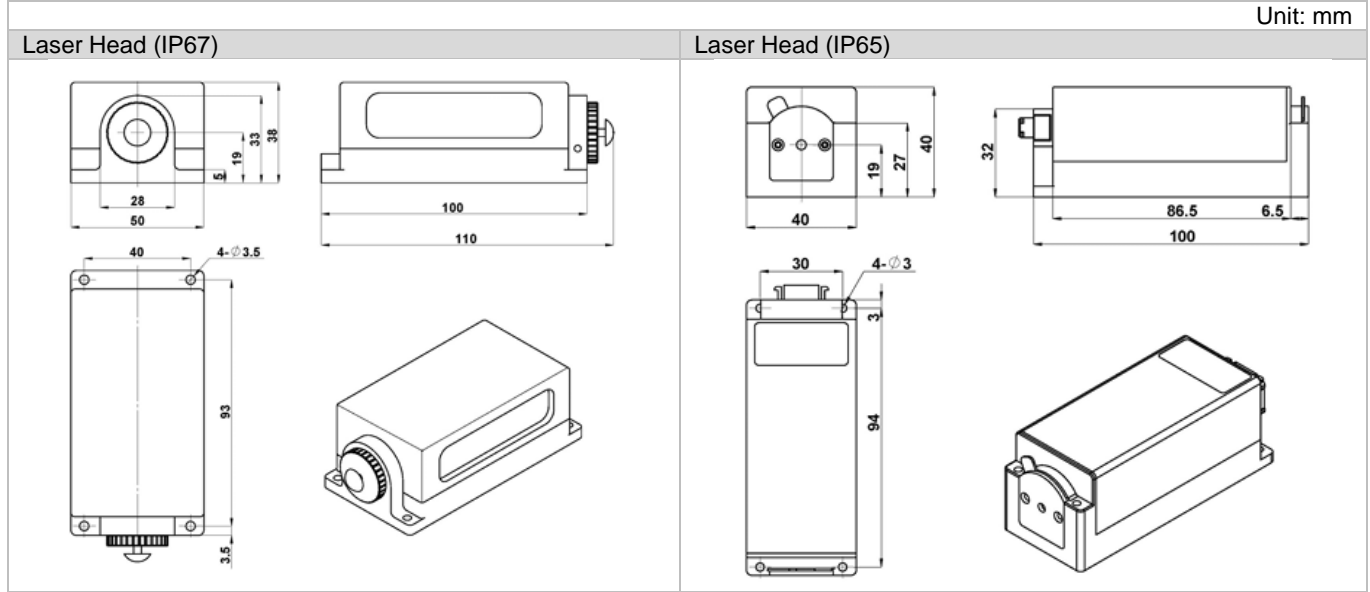
588-1064 nm Specifications

Parameter	DPS588		DPS589		DPS671		DPS1064	
Wavelength	588±2 nm		589±1 nm		671±1 nm		1064±1 nm	
Output power	>10 mW, >30 mW, >50 mW		>30 mW, >50 mW		>100 mW, >200 mW		>300 mW, >500 mW, >800 mW, >1000 mW, >1500 mW	
Operating mode	CW		CW		CW		CW	
Transverse mode	TEM ₀₀		TEM ₀₀		TEM ₀₀		TEM ₀₀	
Power stability (rms, over 4 hours)	<5%, <3%, <1%		<3%, <2%, <1%		<3%, <2%		<3%, <2%	
M ² factor	<1.2		<1.2		<1.2		<1.2	<1.5
Beam diameter at aperture (1/e ²)	<1.0 mm		<1.0 mm		<1.0 mm		<1.2 mm	
Beam divergence, full angle	<1.5 mrad		<1.5 mrad		<1.5 mrad		<1.7 mrad	
Polarization ratio	>100:1		>100:1		>100:1		>100:1	
Warm-up time	<5 min		<5 min		<5 min		<5 min	
Pointing stability after warm-up	<0.05 mrad		<0.05 mrad		<0.05 mrad		<0.05 mrad	
Pointing stability over temp	<8 urad/°C		<8 urad/°C		<8 urad/°C		<8 urad/°C	
Power consumption	<30 W		<30 W		<30 W		<40 W	
Shock tolerance (6ms)	7g laterally, 15g vertically		7g laterally, 15g vertically		7g laterally, 15g vertically		7g laterally, 15g vertically	
IP rating	IP67	IP65	IP67	IP65	IP67	IP65	IP67	IP65
Max heat dissipation	10W@50°C	4W@25°C	10W@50°C	4W@25°C	10W@50°C	4W@25°C	10W@50°C	4W@25°C
Operating temperature	0-60°C	10-35°C	0-60°C	10-35°C	0-60°C	10-35°C	0-60°C	10-35°C
Modulation option	TTL/Analog: 1Hz-1kHz, 1kHz, 10kHz, 10kHz-30kHz							
Expected lifetime	10,000 hours							
Warranty period	10 months							

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.

DPS Series Laser Head Dimensions



Parameter	IP67	IP65
Dimensions	142.5(L)×60(W) ×50(H) mm ³	100(L)×40(W) ×40(H) mm ³
Weight	1.0 kg	0.36 kg
Beam height from base plate	19 mm	19 mm

DPS Series Power Supply Dimensions



Parameter	High Power Elite Power Supply (IP67)	A Version Elite Power Supply (IP65)	A Version Laboratory Power Supply (IP65)
Dimensions	275(L) ×145(W) ×104(H) mm ³	162(L) ×144(W) ×55(H) mm ³	162(L) ×144(W) ×70(H) mm ³
Weight	2.3 kg	0.5 kg	0.6 kg
Input voltage	90-264VAC	90-264VAC	90-264VAC
Feature	Standard	Standard	Adjustable power

Ordering Information

For more information, please contact Lasermate directly at sales@lasermate.com.

Part Number Configuration DPS[1][2][3][4][5][6]						
DPS = Laser Model Series	[1] = Wavelength	[2] = Output Power	[3] = Power Supply	[4] = Power Stability	[5] = IP Rating	[6] = Modulation
		10= >10mW 30= >30mW 50= >50mW 80= >80mW 100= >100mW 200= >200mW 300= >300mW 500= >500mW 800= >800mW 1W= >1000mW 1H= >1500mW	H= High Power Elite Power Supply F= A Version Elite Power Supply T= A Version Laboratory Power Supply	A= <5% E= <3% D= <1%	W=IP67 (Harsh Condition) D=IP65 (Normal Condition)	0=None T1=TTL 1Hz-1kHz T2=TTL 1kHz-10kHz T3=TTL 10kHz-30kHz A1=Analog 1Hz-1kHz A2=Analog 1kHz-10kHz A3=Analog 10kHz-30kHz

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