

# LASERS AND LASER SYSTEMS

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# LASERS AND LASER SYSTEMS

## Diode pumped passively Q-switched micro laser AltLAS



### Description

Yb:YAG micro laser produces high energy pulses at high repetition rates with medium peak power.

There are two operation modes (AltLAS-C): internal trigger with several fixed pulse repetition rates and external trigger mode where laser can generate single pulse as well as any periodic or non periodic pulse train. Minimal duration between adjacent pulses at least 100 microseconds in AltLAS - C - 10kHz model

Yb:YAG micro laser is the latest development of Altechna R&D department. This device combines high repetition rate and powerful pulses with excellent beam quality and very high output power. Due to unique characteristics of Yb:YAG laser crystal we can propose very wide range of different parameters on request.

### Picture



### Features

- Excellent beam quality
- High repetition rate
- High pulse energy
- High output power
- Small footprint
- High level of frequency control - from single pulse to 10kHz
- Second Harmonic available

### Applications

- Pump source for harmonic generators, and amplifiers
- Laser Induced Fluorescence
- Laser Induced Breakdown Spectroscopy (LIBS)
- Test and measurement systems
- Environmental sensing, biodetection
- Add Your application!

### Miscellaneous

- Latest development of Altechna R&D department.
- If you do not find suitable output power or other specifications do not meet your requirements please contact us and we guarantee to provide a solution for you.

## ■ Catalog Items

Specifications	Product ID			
	AltLAS – C5	AltLAS – C10	AltLAS – G5	AltLAS - CW
Wavelength, nm	1030	1030	515	1030
Output power, mW	200	250	50	1000
Pulse energy, $\mu$ J	40	25	10	-
Pulse duration, ns	<1.3	<1.5	<1.3	-
Repetition rate, kHz	0.001– 5*	0.001 – 10*	0.001 – 5*	-
M <sup>2</sup>	<1.2	<1.2	<1.4	<1.2
Polarization ratio	>30:1	>30:1	>50:1	>30:1
P2P energy stability, %	+/-5	+/-5	+/-5	-
Maximal timing jitter, $\mu$ s	<2	<2	<2	-
Output power stability	Rms 1.25 %, PTP 2.6 %			Rms 0.75 %, PTP 1.6 %
Operating temperature, °C	15 - 30			
Warranty	One year			
Price, €	5190€	5190€	5690€	4490€

\*- From Single Shot up to maximum rate (adjustable by external trigger signal);

Single shot – 1kHz – 2kHz-5kHz-10kHz (internal trigger mode)

### Related products and accessories

- Safety glasses (→ page 200)
- Motorized continuously variable attenuator (→ page 181)
- Continuously Variable Attenuator/Beamsplitter (→ page 177)
- General and Polarization optics (→ pages 9-117)
- High power laser diode DRIVER for DPSS lasers (→ page 173)
- Laser Beam Visualizers (→ page 199)
- Laser beam shaping systems (→ page 187)

# Sub – nanosecond DPSS micro laser

## ■ Description

High peak power (up to 100 kW) with sub – nanosecond pulse length or high repetition rater (up to 200 kHz) and are now available from Altechna. This family of high reliable, solid state lasers consists of a power supply unit and laser head. The power supply unit includes a laser diode (LD) driver, fiber pigtailed LD and internal pulse generator.

The laser repetition rate can be operated in two different modes and changed from single pulse to max repetition rate either pulsed LD pumping mode.

- Repetition rate fixed by internal pulse generator (Pulsed LD pumping).
- Repetition rate fixed by the external TTL level pulses.

## ■ Picture



### Available models include

- Model STA-01, STA-02 – designates pulses of the fundamental wavelength
- Model STA-01SH – designates pulses of second harmonic
- Model STA-01CW – designates continuous wave output

### Applications

- Pump source for harmonic generators, optical parametric oscillators and amplifiers (using periodically poled KTP or LiNbO<sub>3</sub> crystals)
- Low-coherence “white light” interferometry
- Test and measurement systems
- Optical coherence tomography
- Two-photon microscopy
- Fluorescence microscopy

### Miscellaneous

- STA-01 - Diode pumped Nd:LSB solid-state micro laser models manufactured by Standa Co. Ltd.

### Related products and accessories

- Safety glasses (→ page 200)
- Motorized continuously variable attenuator (→ page 181)
- Continuously Variable Attenuator/Beamsplitter (→ page 177)
- General and Polarization optics (→ pages 9-117)
- High power laser diode DRIVER for DPSS lasers (→ page 173)
- Laser Beam Visualizers (→ page 199)
- Laser beam shaping systems (→ page 187)

## ■ Catalog Items

Specifications	Product ID							
	STA-01-1	STA-01-2	STA-01-3	STA-01-4	STA-01-5	STA-01-6	STA-02-1	STA-01CW
Wavelength, nm	1062	1062	1062	1062	1062	1062	1064	1062
Output power, mW	140	100	120	125	65	12	50	0-200
Pulse energy, $\mu$ J	2	2	3	5	6.5	12	5	-
Pulse duration, ns	<1	0.6	0.8	0.6	0.7	<0.8	<0.7	-
Repetition rate, kHz	70	50	40	25	10	1	10	-
M <sup>2</sup>	<1.2							
General mode	Single longitudinal mode							Multimode
Polarization ratio	>100:1							
Operating temperature, °C	10 - 30							
Warranty	One year							
Laser head dimensions								
Diameter, mm	25	25	25	25	25	25	25	25
Length, mm	44.5	44.5	44.5	44.5	44.5	44.5	44.5	76.5
Price, €	6000€	6000€	6000€	6000€	6000€	6000€	6000€	Call Us!

If you do not find suitable output power or other specifications do not meet you requirements please contact us and we guaranty to provide a solution for you.

Specifications	Product ID					
	STA-01SH-1	STA-01SH-2	STA-01SH-3	STA-01SH-4	STA-01-TH	STA-01-FH
Wavelength, nm	531	531	531	531	354	265.5
Average output power (max), mW	40	25	50	50	15	10
Pulse energy, $\mu$ J	4	5	50	0.5	>1.5	>1
Pulse duration, ns	0.5	<0.7	0.5	0.5	<0.5	<0.5
Repetition rate (max), kHz	10	5	1	100	10	10
Beam Profile	<1.2					
Pulse spectral structure	single longitudinal mode					
Polarization ratio	> 100:1					
Operating temperature, °C	10 - 30					
Warranty	One year					
Laser head dimensions:						
diameter, mm	25				30	
length, mm	76.5				120	
Price, €	7500€	7500€	8500€	8000€	12000€	10000€

# DPSS CW Blue Laser, 457 nm

## ■ Description

The output power of 457-DPSS Blue Laser Systems ranges from 1 mW to 10 W. The laser system is TEC cooled. It is designed to be operated and maintained easily. 457nm blue laser features ultra compact, long lifetime, low cost and easy operating. Different power stabilities, 3%, 5%, 10% available.

## ■ Picture



## Features

- Up to 10 W
- Continuous wave
- Highly reliable
- Low cost
- No additional cooling
- Fiber coupled lasers available

## Applications

- DNA Sequencing
- Flow Cytometry
- Cell Sorting
- Optical Instrument
- Spectrum analysis
- Interference Measurements
- Holography
- Laser lighting show

## ■ Standard Specifications

<b>Model</b>	457-DPSS
<b>Wavelength</b>	457 nm +/-1 nm
<b>Operating mode</b>	CW
<b>Transverse mode</b>	Near TEM <sub>00</sub>
<b>Operating mode</b>	Several
<b>Warm up time</b>	<10 min
<b>Spectral linewidth</b>	<1 nm
<b>Polarization ratio</b>	>100:1
<b>Noise of amplitude</b>	<30% rms (Low Noise <3% available)
<b>Point stability</b>	<0.05
<b>Operating temperature</b>	10 - 35 °C
<b>Expected lifetime</b>	10'000 hours

## Related products and accessories

- Safety glasses (→ page 200)
- Motorized continuously variable attenuator (→ page 181)
- Continuously Variable Attenuator/Beamsplitter (→ page 177)
- General and Polarization optics (→ pages 9-117)
- High power laser diode DRIVER for DPSS lasers (→ page 173)
- Laser Beam Visualizers (→ page 199)
- Laser beam shaping systems (→ page 187)

## ■ Catalog Items

Specifications	Product ID						
	5-457-DPSS-0.1	5-457-DPSS-0.2	5-457-DPSS-0.4	5-457-DPSS-2.0	5-457-DPSS-0.1-LN	5-457-DPSS 0.2-LN	5-457-DPSS-0.4-LN
<b>Output power, mW</b>	1-100	200	400	2000	1-100	200	400
<b>Power stability, rms, over 4 hours</b>	<5%	<5%	<5%	<5%	<3%	<3%	<3%
<b>Transverse mode</b>	Near TEM <sub>00</sub>	Near TEM <sub>00</sub>	Near TEM <sub>00</sub>	Near TEM <sub>01</sub>	Near TEM <sub>00</sub>	Near TEM <sub>00</sub>	Near TEM <sub>00</sub>
<b>M2 factor</b>	<2.0	<2.0	<2.0	<3.0	<2.0	<2.0	<2.0
<b>Beam divergence, mrad</b>	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5
<b>Beam diameter at aperture, mm</b>	~3	~3	~3	~3	~3	~3	~3
<b>Noise of amplitude, rms</b>	< 30%	< 30%	< 30%	< 30%	< 3%	< 3%	< 3%
<b>Net weight of laser head, kg</b>	1.6	1.6	1.6	2.6	1.6	1.6	1.6
<b>Dimensions of laser head, mm</b>	215x88x74	215x88x74	215x88x74	235x99x94	215x88x74	215x88x74	215x88x74
<b>Power supply, 80 ~260 VAC</b>	240(L) x 146(W) x 108(H)	240(L) x 146(W) x 108(H)	240(L) x 146(W) x 108(H)	240(L) x 146(W) x 108(H)	240(L) x 146(W) x 108(H)	240(L) x 146(W) x 108(H)	240(L)x 146(W)x 108(H)
<b>Weight of power supply, kg</b>	2.6	2.6	2.6	2.6	2.6	2.6	2.6
<b>TTL modulation, kHz</b>	0 – 30 (optional)	0 – 30 (optional)	0 – 30 (optional)	0 – 30 (optional)	n/a		
<b>Analog modulation 5V, kHz</b>	0 – 10 (optional)	0 – 10 (optional)	0 – 10 (optional)	0 – 10 (optional)			
<b>Warranty</b>	One year						
<b>Price, €</b>	<b>6000€</b>	<b>6150€</b>	<b>6750€</b>	<b>12 000€</b>	<b>9000€</b>	<b>9230€</b>	<b>10 130€</b>

General Optics

Polarization Optics

Laser and Passive Q-Switch Crystals

Nonlinear Optics

Lasers and laser systems

Laser Accessories and Equipment

Optomechanics

# DPSS CW Blue Laser, 473 nm

## ■ Description

The output power of 473-DPSS Blue Laser Systems ranges from 1 mW to 500 mW. Laser system is TEC cooled. It is designed to be operated and maintained easily. 473nm blue laser is ultra compact, long lifetime, low cost and easy operating. Different power stabilities, 3%, 5%, 10% available.

## ■ Picture



## Features

- Up to 1.5 W
- Continuous wave
- Highly reliable
- Low cost
- No additional Cooling
- Low noise of amplitude available
- Fiber coupled lasers available

## Applications

- DNA Sequencing
- Flow Cytometry
- Cell Sorting
- Optical Instrument
- Spectrum analysis
- Interference Measurements
- Holography and etc.

## ■ Standard Specifications

<b>Model</b>	473-DPSS
<b>Wavelength</b>	473 +/-1 nm
<b>Operating mode</b>	CW
<b>Operating longitudinal mode</b>	Several
<b>Power stability</b>	<3%, <5%, 10% available
<b>Warm up time</b>	<15 min
<b>Spectral linewidth</b>	<0.1 nm
<b>Polarization ratio</b>	>100:1
<b>Noise of amplitude (rms, 1~20MHz)</b>	<30% rms (Low Noise <3% is also available)
<b>Point stability, mrad</b>	<0.05
<b>Operating temperature</b>	10 - 35 °C
<b>Expected lifetime</b>	10'000 hours

## Miscellaneous

- Fill the Request Form at our Website to request DPSS CW Blue Laser, 473nm with custom parameters!

## Related products and accessories

- Safety glasses (→ page 200)
- Motorized continuously variable attenuator (→ page 181)
- Continuously Variable Attenuator/Beamsplitter (→ page 177)
- General and Polarization optics (→ pages 9-117)
- High power laser diode DRIVER for DPSS lasers (→ page 173)
- Laser Beam Visualizers (→ page 199)
- Laser beam shaping systems (→ page 187)

## ■ Catalog Items

Specifications	Product ID						
	5-473-DPSS-0.02	5-473-DPSS-0.05	5-473-DPSS-0.1	5-473-DPSS-0.1LN	5-473-DPSS-0.2	5-473-DPSS-0.4	5-473-DPSS-0.5
<b>Output power, mW</b>	20	50	100	100	200	400	500
<b>Power stability, rms, over 4 hours</b>	<5%	<5%	<5%	<3%	<5%	<5%	<5%
<b>Noise of amplitude, rms</b>	< 30%	< 30%	< 30%	< 30%	< 30%	< 30%	< 30%
<b>Transverse mode</b>	TEM <sub>00</sub>	TEM <sub>00</sub>	TEM <sub>00</sub>	TEM <sub>00</sub>	Near TEM <sub>00</sub>	Near TEM <sub>00</sub>	Near TEM <sub>00</sub>
<b>M2 factor</b>	<1.2	<1.2	<1.2	<1.2	<1.2	<1.2	<2.0
<b>Beam divergence, mrad</b>	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<2.0
<b>Beam diameter at aperture, mm</b>	~2.0	~2.0	~2.0	~2.0	~3.0	~3.0	~3.0
<b>Net weight of laser head, kg</b>	0.6	0.6	0.6	0.6	1.6	1.6	0.9
<b>Dimensions of laser head, mm</b>	141 x 73 x 46	141 x 73 x 46	141 x 73 x 46	1401 x 73 x 46	212 x 88 x 74	141 x 73 x 46	333x140 x125
<b>Power supply, 80 ~260 VAC</b>	154(L) x 155(W) x 95(H)	154(L) x 155(W) x 95(H)	154(L) x 155(W) x 95(H)	133(L) x 130(W) x 65(H)	240(L) x 146(W) x 108(H)	240(L) x 146(W) x 108(H)	240(L) x 146(W) x 108(H)
<b>Weight of power supply, kg</b>	1.5	1.5	1.5	1.2	2.6	2.6	2.6
<b>TTL modulation, kHz</b>	0 - 30	0 - 30	0 - 30	0 - 30	0 - 30	0 - 30	0 - 30
<b>Analog modulation 5V, kHz</b>	0 - 10	0 - 10	0 - 10	0 - 10	0 - 10	0 - 10	0 - 10
<b>Warranty</b>	One year						
<b>Price, €</b>	<b>825€</b>	<b>975€</b>	<b>1350€</b>	<b>3100€</b>	<b>2350€</b>	<b>3750€</b>	<b>5260€</b>

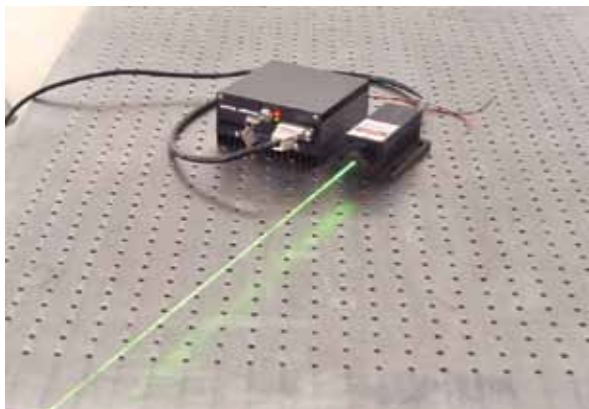
If you do not find suitable output power or other specifications do not meet you requirements please contact us and we guaranty to provide a solution for you.

# DPSS CW GREEN Laser 532 nm

## Description

The output power of 532-DPSS green laser systems ranges from 10 mW to 5 W. Laser system is TEC cooled with high temperature stability. It is designed to be operated and maintained easily. Single longitudinal mode laser is available.

## Picture



## Features

- Up to 15 W
- Continuous wave
- Highly reliable
- Low Noise of Amplitude
- Single Longitudinal Mode (SLM) laser available
- Low cost
- No additional Cooling

## Applications

- Medical applications
- Crystal inspections
- Holography
- Raman spectroscopy

## Standard Specifications

<b>Model</b>	532-DPSS
<b>Wavelength</b>	532 nm
<b>Operating mode</b>	CW
<b>Transverse mode</b>	TEM <sub>00</sub>
<b>Operating mode</b>	Several (Single Longitudinal Mode (SLM) available)
<b>Warm up time</b>	<10 min
<b>Spectral linewidth</b>	<0.1 nm (<0.0001nm of SLM)
<b>Polarization ratio</b>	>100:1
<b>Power Stability RMS, over 4 hours</b>	<3% (<1%, <5%, <10% is also available for lower price!)
<b>Point stability</b>	<0.05
<b>Operating temperature</b>	10 - 35 °C
<b>Expected lifetime</b>	10'000 hours

## Related products and accessories

- Safety glasses (→ page 200)
- Motorized continuously variable attenuator (→ page 181)
- Continuously Variable Attenuator/Beamsplitter (→ page 177)
- General and Polarization optics (→ pages 9-117)
- High power laser diode DRIVER for DPSS lasers (→ page 173)
- Laser Beam Visualizers (→ page 199)
- Laser beam shaping systems (→ page 187)

## ■ Catalog Items

Specifications	Product ID					
	5-532-DPSS-0.1	5-532-DPSS-0.3	5-532-DPSS-0.5	5-532-DPSS-1.0	5-532-DPSS-0.05-SLM	5-532-DPSS-0.1-SLM
<b>Output power, mW</b>	100	300	500	1000	50	100
<b>Power stability, rms, over 4 hours</b>	<5%	<5%	<5%	<5%	<1%	<1%
<b>M2 factor</b>	<1.2	<1.2	<2.0	<2.0	<1.2	<1.2
<b>Transverse mode</b>	TEM <sub>00</sub>	TEM <sub>00</sub>	Near TEM <sub>00</sub>	Near TEM <sub>00</sub>	TEM <sub>00</sub>	TEM <sub>00</sub>
<b>Beam divergence, mrad</b>	<1.5	<1.5	<2.0	<2.0	<1.5	<1.5
<b>Beam diameter at aperture, mm</b>	~2.0	~3.0	<3.0	<3.0	~2.0	~2.0
<b>Noise of amplitude, RMS</b>	<5%	<5%	<5%	<5%	<5%	<5%
<b>Operating Longitudinal mode</b>	several	several	several	several	single	single
<b>Net weight of laser head, kg</b>	0.4	0.9	1.5	0.9	0.6	0.6
<b>Dimensions of laser head, mm</b>	141 x 73 x 46	141 x 73 x 46	155 x 77 x 60	155 x 77 x 60	141 x 73 x 46	140.8 x 73 x 46.2
<b>Power supply, 80 ~260 VAC</b>	154(L) x 155(W) x 95(H)	154(L) x 155(W) x 95(H)	240(L) x 146(W) x 108(H)	240(L) x 146(W) x 108(H)	133(L) x 130(W) x 65(H)	154(L) x 155(W) x 95(H)
<b>Weight of power supply, kg</b>	0.25	5	12	2.6	1.5	1.5
<b>TTL modulation, kHz</b>	0 - 30	0 - 30	0 - 30	0 - 30	n/a	
<b>Analog modulation 5V, kHz</b>	0 - 10	0 - 10	0 - 10	0 - 10		
<b>Warranty</b>	One year					
<b>Price, €</b>	<b>725€</b>	<b>800€</b>	<b>1650€</b>	<b>2300€</b>	<b>4500€</b>	<b>6300€</b>

If you do not find suitable output power or other specifications do not meet your requirements please contact us and we guaranty to provide a solution for you.

# DPSS CW Yellow Laser, 593.5 nm

## ■ Description

The output power of 593-DPSS Yellow Laser Systems ranges from 1 up to 800 mW. Laser system is TEC cooled. It is designed to be operated and maintained easily. Different power stabilities, 3%, 5%, 10% needs available.

## ■ Picture



## Features

- Up to 800 mW
- Continuous wave
- Highly reliable
- Low cost
- No additional Cooling

## Applications

- Scientific experiment
- Optical sensor
- Measurement,
- Communication,
- Spectrum analysis, etc.

## ■ Standard Specifications

<b>Model</b>	593-DPSS
<b>Wavelength</b>	593.5 nm
<b>Operating mode</b>	CW
<b>Transverse mode</b>	TEM <sub>00</sub>
<b>Operating mode</b>	Several
<b>Warm up time</b>	<10 min
<b>Spectral linewidth</b>	<1 nm
<b>Polarization ratio</b>	>100:1
<b>Noise of amplitude</b>	<30% (Low Noise <3% is available)
<b>Power Stability</b>	<3%, <5%, <10%
<b>Point stability</b>	<0.05
<b>Operating temperature</b>	10 - 35 °C
<b>Expected lifetime</b>	10'000 hours

## Related products and accessories

- Safety glasses (→ page 200)
- Motorized continuously variable attenuator (→ page 181)
- Continuously Variable Attenuator/Beamsplitter (→ page 177)
- General and Polarization optics (→ pages 9-117)
- High power laser diode DRIVER for DPSS lasers (→ page 173)
- Laser Beam Visualizers (→ page 199)
- Laser beam shaping systems (→ page 187)

## ■ Catalog Items

Specifications	Product ID					
	5-593-DPSS-0.03	5-593-DPSS-0.1	5-593-DPSS-0.2	5-593-DPSS-0.3	5-593-DPSS-0.5	5-593-DPSS-0.8
<b>Output power, mW</b>	1-30	100	200	300	500	400-800
<b>Power stability, rms, over 4 hours</b>	<5%	<5%	<5%	<5%	<5%	<5%
<b>M<sup>2</sup> factor</b>	<1.2	<2.0	~3.0 – 6.0	~3.0 – 6.0	~3.0 – 6.0	~3.0 – 6.0
<b>Beam divergence, mrad</b>	<1.5	<2.0	<2.0	<2.0	<2.0	<2.0
<b>Beam diameter at aperture, mm</b>	~2	~3	~4	~4	~4	~4
<b>Net weight of laser head, kg</b>	0.4	1.6	6.1	6.1	6.1	6.1
<b>Dimensions of laser head, mm</b>	140.8 × 73 × 46.2	211.5 × 88 × 74	333 × 1140 × 125	333 × 1140 × 125	333 × 1140 × 125	333 × 1140 × 125
<b>Power supply, 80 ~260 VAC</b>	135(L) × 130(W) × 61(H)	240(L) × 146(W) × 108(H)	300(L) × 162(W) × 134(H)	300(L) × 162(W) × 134(H)	300(L) × 162(W) × 134(H)	300(L) × 162(W) × 134(H)
<b>Weight of power supply, kg</b>	0.6	2.6	5.2	5.2	5.2	5.2
<b>TTL modulation, kHz</b>	0 - 30	0 - 30	0 - 30	0 - 30	0 - 30	n/a
<b>Analog modulation 5V, kHz</b>	0 - 10	0 - 10	0 - 10	0 - 10	0 - 10	
<b>Warranty</b>	One year					
<b>Price, €</b>	<b>5260€</b>	<b>8250€</b>	<b>15 000€</b>	<b>16 500€</b>	<b>21 750€</b>	<b>24 750€</b>

If you do not find suitable output power or other specifications do not meet you requirements please contact us and we guaranty to provide a solution for you.

# DPSS CW RED laser, 671 nm

## ■ Description

TEC cooled, high stability DPSS lasers, suitable for applications in harsh environments.

Altechna Co.LTD provides continuous wave 671-DPSS red laser system with wavelength of 671 nm, and the power range of 0.5 to 4.5 W. It is TEC cooled, high stability and suitable for applications in harsh environment. 671-DPSS laser system combines both high performance and budgetary price. Single longitudinal laser (spectral width <0.0001% and coherence length 50 m) is available.

## ■ Picture



### Features

- Up to 4 W
- Continuous wave
- Highly reliable
- Low cost
- Beam diameter 4mm
- Single longitudinal mode available

### Applications

- DNA sequencing,
- Flow cytometry,
- Cell sorting,
- Spectrum analysis,
- Interference,
- Measurement,
- Holography,
- Laser printing,
- Chip inspection,

## ■ Standard Specifications

<b>Model</b>	671-DPSS
<b>Wavelength</b>	671 nm +/-1 nm
<b>Operating mode</b>	CW
<b>Transverse mode</b>	TEM <sub>00</sub>
<b>Operating mode</b>	Several
<b>Warm up time</b>	<15 min
<b>Spectral linewidth</b>	<1 nm
<b>Polarization ratio</b>	>100:1
<b>Noise of amplitude</b>	<30% rms (low noise<1% available, SLM <0.0001%)
<b>Power Stability</b>	<1%, <3%, <5%
<b>Point stability</b>	<0.05
<b>Operating temperature</b>	10 - 35 °C
<b>Expected lifetime</b>	10'000 hours
<b>Warranty time</b>	One year

### Related products and accessories

- Safety glasses (→ page 200)
- Motorized continuously variable attenuator (→ page 181)
- Continuously Variable Attenuator/Beamsplitter (→ page 177)
- General and Polarization optics (→ pages 9-117)
- High power laser diode DRIVER for DPSS lasers (→ page 173)
- Laser Beam Visualizers (→ page 199)
- Laser beam shaping systems (→ page 187)

## ■ Catalog Items

Specifications	Product ID								
	5-671-DPSS-0.05	5-671-DPSS-0.1	5-671-DPSS-0.2	5-671-DPSS-0.5	5-671-DPSS-1.0	5-671-DPSS-0.05-SLM	5-671-DPSS-0.05-LN	5-671-DPSS-0.1-LN	5-671-DPSS-0.3-LN
Output power, mW	50	100	200	500	1000	50	50	100	300
Power stability, rms, over 4 hours	<5%	<5%	<5%	<5%	<5%	<1%	<3%	<3%	<3%
M <sup>2</sup> factor	<1.2	<1.2	<1.2	<2.0	3.0 – 6.0	<1.2	<1.2	<1.2	<1.2
Beam divergence, mrad	<1.5	<1.5	<1.5	<2.0	<2.0	<1.5	<1.5	<1.5	<1.5
Noise of amplitude	<30%	<30%	<30%	<30%	<30%	<0.5%	<1%	<1%	<1%
Beam diameter at aperture, mm	~2	~2	~2	~2.0	~4	~2	~2	~2	~2
Net weight of laser head, kg	0.6	0.6	0.6	0.9	6.1	0.6	0.6	0.6	0.6
Dimensions of laser head, mm	140.8 × 73 × 46.2	140.8 × 73 × 46.2	140.8 × 73 × 46.2	155 × 77 × 60	333 × 140 × 125	140.8 × 73 × 46.2	140.8 × 73 × 46.2	140.8 × 73 × 46.2	140.8 × 73 × 46.2
Power supply, 80 ~260 VAC	133(L) x 30(W) x 65(H)	133(L) x 30(W) x 65(H)	133(L) x 30(W) x 65(H)	238(L) x 6(W) x 102(H)	307(L) x 68(W) x 123(H)	133(L) x 30(W) x 65(H)	133(L) x 30(W) x 65(H)	133(L) x 30(W) x 65(H)	133(L) x 30(W) x 65(H)
Weight of power supply, kg	1.2	1.2	1.2	2.6	5.1	1.2	1.2	1.2	1.2
TTL modulation, kHz	0 – 30 (optional)	0 – 30 (optional)	0 – 30 (optional)	0 – 30 (optional)	0 – 30 (optional)	n/a			
Analog modulation 5V, kHz	0 – 30 (optional)	0 – 30 (optional)	0 – 30 (optional)	0 – 30 (optional)	0 – 30 (optional)				
Warranty	One year								
Price, €	900€	980€	1050€	2325€	2030€	6300€	1170€	1280€	1430€

If you do not find suitable output power or other specifications do not meet your requirements please contact us and we guarantee to provide a solution for you.

# DPSS CW IR laser, 1064nm

## ■ Description

DPSS-IR lasers are suitable for applications in harsh or industrial environments, requiring no additional heat sinking. DPSS-IR laser system combines both high performance and affordability. With an emphasis on satisfying a variety of applications and budgetary needs. Power levels range from 50 mW to 5 W.

## ■ Picture



## Features

- Up to 5 W
- Continuous wave
- Highly reliable
- Low cost
- Beam diameter 4mm
- Can be used as OEM module

## Applications

- Scientific experiment
- Measurement
- Optical instrument
- Optical sensor
- Communication
- Spectrum analysis

## ■ Standard Specifications

<b>Model</b>	1064-DPSS
<b>Wavelength</b>	1064 nm
<b>Laser crystal</b>	Nd:YVO <sub>4</sub>
<b>Operating mode</b>	CW
<b>Transverse mode</b>	TEM <sub>00</sub>
<b>Warm up time</b>	<15 min
<b>Polarization ratio</b>	> 100:1
<b>Noise of amplitude</b>	<5% (Low noise <1% rms available)
<b>Power Stability</b>	<1%, <3%, <5%
<b>Point stability</b>	<0.05
<b>Operating temperature</b>	10 - 40 °C
<b>Expected lifetime</b>	> 10'000 hours

## Related products and accessories

- Safety glasses (→ page 200)
- Motorized continuously variable attenuator (→ page 181)
- Continuously Variable Attenuator/Beamsplitter (→ page 177)
- General and Polarization optics (→ pages 9-117)
- High power laser diode DRIVER for DPSS lasers (→ page 173)
- Laser Beam Visualizers (→ page 199)
- Laser beam shaping systems (→ page 187)

## ■ Catalog Items

Specifications	Product ID								
	5-1064-DPSS-0.5	5-1064-DPSS-1	5-1064-DPSS-2.0	5-1064-DPSS-3.0	5-1064-DPSS-5.0	5-1064-DPSS-SLM	5-1064-DPSS-0.5-LN	5-1064-DPSS-1-LN	5-1064-DPSS-2.0-LN
<b>Output power, mW</b>	1 - 500	1000	2000	3000	5000	100	1 - 500	1000	2000
<b>Power stability</b>	<5%	<5%	<5%	<5%	<5%	<1%	<3%	<3%	<3%
<b>M<sup>2</sup> factor</b>	<1.5	<1.5	<1.5	<1.5	<2.0	<1.5	<1.5	<1.5	<1.5
<b>Beam divergence, mrad</b>	<1.5	<1.5	<2.0	<2.0	<2.0	<1.5	<1.5	<1.5	<2.0
<b>Beam diameter at aperture, mm</b>	~2.0	~2.0	~3	~3	~5	~2	~2.0	~2.0	~3
<b>Spectral linewidth, nm</b>	<1nm	<1nm	<1nm	<1nm	<1nm	<0.0001nm	<1nm	<1nm	<1nm
<b>Noise of amplitude</b>	<5%	<5%	<5%	<5%	<5%	<0.5%	<1%	<1%	<1%
<b>Net weight of laser head, kg</b>	0.6	0.6	0.9	0.9	0.9	0.6	0.6	0.6	0.9
<b>Dimensions of laser head, mm</b>	140.8 x 73 x 46.2	140.8 x 73 x 46.2	158 x 77 x 60	158 x 77 x 60	158 x 77 x 60	140.8 x 73 x 46.2	140.8 x 73 x 46.2	140.8 x 73 x 46.2	1558 x 77 x 60
<b>Power supply, 80 ~260 VAC</b>	154(L) x 55(W) x 95(H)	154(L) x 55(W) x 95(H)	240(L) x 60(W) x 108(H)	240(L) x 60(W) x 108(H)	240(L) x 60(W) x 108(H)	133(L) x 30(W) x 65(H)	154(L) x 55(W) x 95(H)	154(L) x 55(W) x 95(H)	240(L) x 60(W) x 108(H)
<b>Weight of power supply, kg</b>	1.5	1.5	2.6	2.6	2.6	1.2	1.5	1.5	2.6
<b>TTL modulation, kHz</b>	2kHz (on request, up to 30kHz)	2kHz (on request, up to 30kHz)	2kHz (on request, up to 30kHz)	2kHz (on request, up to 30kHz)	2kHz (on request, up to 30kHz)	Modulation not available.	2kHz (on request, up to 30kHz)	2kHz (on request, up to 30kHz)	2kHz (on request, up to 30kHz)
<b>Warranty</b>	One year								
<b>Price, €</b>	<b>875€</b>	<b>1800€</b>	<b>3150€</b>	<b>4800€</b>	<b>7650€</b>	<b>3150€</b>	<b>825€</b>	<b>2030€</b>	<b>3450€</b>

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