

HIGH PULSE ENERGY AIR-COOLED DPSS Nd:YAG LASER QX500

SOLAR LS presents a new model of completely air-cooled pulsed diode-pumped Nd:YAG laser.



The QX500 delivers 160 mJ at 1064 nm in nanosecond pulses at repetition rates up to 20 Hz.

The QX500 laser features long-life laser diode bars and delivers excellent pulse-to-pulse and long-term stability which is ideally suited for use in scientific, industrial, and medical applications. Diode pumping reduces size, improves reliability, and eliminates most maintenance operations.

Minimum service costs are conditioned by optical pumping using laser diode bars with more than 10^9 pulses lifetime.

Stability of the parameters and the laser reliability are guaranteed due to dustproof housing design and thermal stabilisation of the optical cavity.

The possibility of operation in the VIS and UV spectral range thanks to harmonic generators built into the QX500 laser head will expand your opportunities.

Compact laser design and complete air cooling not only simplify application of this device as a stand-alone unit, but also allow to integrate it into any equipment.

FEATURES

- High-power output of 160 mJ at 20 Hz
- Air cooling – no water required
- Smooth flat-top beam profile
- Built-in VIS and UV harmonic generators
- OEM/Industrial design for 24/7 operation
- Long diode lifetime over 1 billion shots
- Turn-key operation

APPLICATIONS

- OPO, Ti:Sapphire and Dye laser pumping
- Laser marking and materials processing
- Plasma generation and LIBS
- Laser spectroscopy
- Nonlinear optics
- LIDAR

SPECIFICATIONS *

Model	QX500
Max pulse repetition rate ¹⁾ , Hz	20
Pulsed energy, mJ	
at 1064 nm	160
at 532 nm	90
at 355 nm	50
at 266 nm	25
at 213 nm ²⁾	5
Pulsewidth (FWHM) ³⁾ , ns	10
Beam diameter, mm	< 5
Divergence ³⁾ , mrad	≤ 1.0
Pulse energy stability (StdDev) ³⁾ , %	< 1.5
Jitter (StdDev) ⁴⁾ , ns	< 1
Cooling	Air
Electrical service	100...240V, 50/60 Hz, ≤ 500W
Dimensions, mm:	
Laser Head (LxWxH)	390 x 215 x 170
Power Supply (HxWxD)	400 x 350 x 150

* Specifications are subject to change without notice.

1) You can choose any PRR from 1Hz to 20Hz when placing an order. All the parameters are specified for 20 Hz.

2) With external LG105 unit.

3) Specified at 1064 nm.

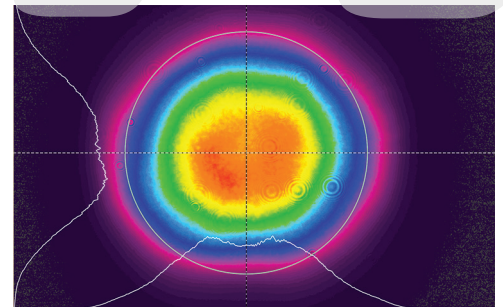
4) With respect to QSW IN pulse.

OPTIONS

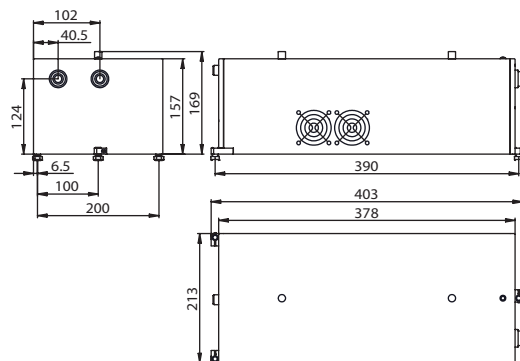
- TEM₀₀ mode
- External attenuators



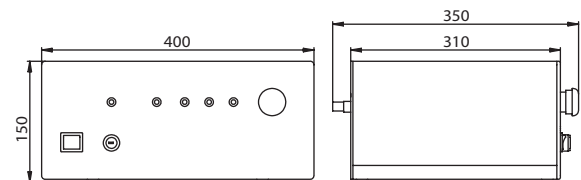
QX500 Nd:YAG laser with external harmonic generators (Models LG101 and LG103).



QX500 laser typical near field beam profile at 532 nm.



QX500 laser head outline drawing.



QX500 laser power supply outline drawing.