

DIODE-PUMPED SOLID STATE LASER

Model DTL-324QT

SPECIFICATIONS

Wavelength	1064 nm
Max.Value of Average Pulse Energy (0,01 - 1 kHz)	100 + 15% μ J
Average Pulse Energy (single pulses – 0.01 kHz, unregulated)	100 \pm 25% μ J
Max.Value of Average Pulse Energy at 4 kHz	> 75 μ J
Max.Value of Average Pulse Energy at 10 kHz	> 30 μ J
Mode of Operation	Q-switched with AOM, ext./int. triggering/through RS-232
Range of Pulse Repetition Rate:	
Ext. Triggering ¹	single shot - 10 kHz
Int. Triggering: via RS-232 ²	0.01 - 10 kHz
without PC ³	1 \pm 0.03 kHz
Pulse Duration (FWHM, single pulse - 1 kHz, Average Pulse Energy > 80 μ J)	7.5 \pm 2.5 ns
Pulse-to-Pulse Stability – StdDev/Mean (0.01 - 1 kHz, Average Pulse Energy > 80 μ J)	< 2%
Beam Profile	TEM ₀₀
Beam Diameter at output aperture (1/e ²)	< 1.5 mm
Beam Divergence (full angle, 1/e ²)	< 1.6 mrad
Polarization Linearity	> 100:1, vertical (< 5°)
Beam Height	33.5 \pm 0.5 mm
Laser Trigger to Sync Out Pulse ⁴ (0.01 - 1 kHz, Average Pulse Energy > 80 μ J)	
Delay	300 \pm 250 ns
Jitter	< 8 ns
Laser Emission to Sync Out Pulse ⁴ (0.01 - 1 kHz, Average Pulse Energy > 80 μ J)	
Delay	< 50 ns
Jitter	< 2 ns
Operating Temp/Humidity Range	15 - 35 °C / up to 80% non-condensing
Shipping Temp/Humidity Range (In the manufacturer package)	-40 to +50 °C / up to 80% humidity at 25 °C
Dimensions (without connectors), L x H x W, mm:	
Laser Head	299 x 54 x 90
Laser Head with Heat Sink	299 x 122 x 90
Power Supply ⁵	150 x 43 x 93 (x 115 with key)
Power Supply with Heat Sink	150 x 110 x 93 (x 115 with key)
Weight:	
Laser Head	< 2.5 kg
Power Supply ⁵	< 1.5 kg
Laser Head Heat Sink	< 1.0 kg
Power Supply Heat Sink	< 1.0 kg
Laser Supply Operating Voltage with AC adapter	90 - 264 V AC
Operating Voltage without AC adapter	12 \pm 10% V DC
Current Consumption (12VDC)	< 6 A
Warm-Up Time	< 10 min
Remote Control of Laser Parameters	
(Ext./Int. Triggering, ON/OFF, pulse repetition rate, pulse energy)	via RS-232 interface
Data rate via Interface RS-232	4800 bit/s
Laser Class (CDRH)	IV
Compliance	CDRH, CE, RoHS
Life Time	> 5000 hours

¹ Triggering with external electric pulse generator; generator is not included in delivery set.

² Generation of periodical laser pulses using PC, step 0.01 kHz. Average energy may be changed by software from 10 μ J up to maximum value (100 + 15% μ J is guaranteed in the range of 0.01-1 kHz, if >1 kHz the max. energy may be less).

³ Generation of periodical laser pulses at 1 kHz rep. rate; external generator and/or PC are not needed.

⁴ Sync Out signal is generated by pulse of laser light.

⁵ Without AC/DC adapter AS-120P-12 (12 VDC).