

半导体泵浦,亚纳秒被动型 Q 开关激光器

Diode Pumped Sub-Nanosecond Passively Q-Switched Laser

产品特点

- > 1064nm 波长处脉冲能量高达 1 mJ
- > 短脉冲持续时间 < 500ps
- > 高达 100Hz 的可变脉冲重复频率
- > 极致紧凑的设计
- > 被动型 Q开关
- > 平均功率 100mW
- > 高峰值功率 2MW
- > 使用寿命 > 3 Gshot
- > 可实现其他波长(e.g. 1053 nm, 1342 nm, 671 nm, 447 nm)

应用领域

- > 激光诱导击穿光谱 (LIBS)
- > 时间分辨荧光测量
- > DNA分析
- > 污染监测
- > 遥感技术
- > 超连续谱产生

DPSS TUNABLE LASER

产品简介

MPL1510系列DPSS被动Q开关亚纳秒激光器可在以100Hz重复频率运行时提供高峰值功率。短的创新型激光腔固定在可提供非常稳定的输出参数性能的耐热性基板上。小光斑的特点使其成为广受欢迎的集成OEM激光器。亚纳秒脉冲持续时间< 500 ps,高脉冲能量超过1mJ以及拥有从1Hz到100Hz的可变重复频率等特点使其涵盖了众多应用领域如:污染监测、DNA分析、超连续谱产生等。由于脉冲持续时间短可获得的高脉冲能量峰值功率高达2.8MW。输出波长也可选配转换为绿光波长(532nm)或紫外波长(355nm, 266nm)。

MPL1510



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规格参数

型号	MPL1510	MPL2510
脉冲能量:		
at 1064 nm	> 1 mJ	> 2 mJ
at 532 nm	> 0.5 mJ	> 1 mJ
at 355 nm	> 0.25 mJ	> 0.5 mJ
at 266 nm	> 0.15 mJ	> 0.25 mJ
典型脉宽	< 500 ps ²⁾	
峰峰值能量稳定性 (RMS):		
at 1064 nm	< 1% ³⁾	
at 532 nm	< 2.5% ³⁾	
at 355 nm	< 3.5% ³⁾	
at 266 nm	< 5.0% ³⁾	
功率输出漂移	± 3.0% ⁴⁾	
脉冲重复频率 ⁵⁾	1 - 100 Hz	
光束模式	Close to Gaussian	
光束发散 ⁶⁾	< 6 mrad	
偏振 (Polarization)	Linear, horizontal at 1064 nm	
光谱线宽	SLM	
光斑指向稳定性 ⁷⁾	< 50 μrad	
典型光束直径 ⁸⁾	2 mm	
光学抖动	~ 2 μs RMS ⁹⁾	

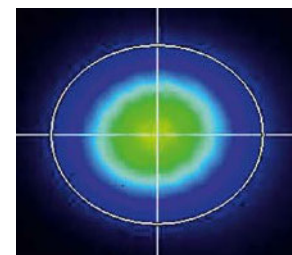
- ¹⁾ Due to continuous improvements all specifications are subject to change. Unless stated otherwise all specifications are measured at 1064 nm.
- ²⁾ FWHM level at 1064 nm. Shorter pulse duration (< 350 ps) is available by request. Please inquire for detailed specifications.
- ³⁾ Averaged from 60 seconds time interval in 5 series.
- ⁴⁾ Over 8-hour period after max 5 minutes of warm-up when ambient temperature variation is less than ±2 °C.
- ⁵⁾ Factory-set pulse repetition rate is fixed at 100 Hz repetition rate. Higher repetition rates are available, please inquire for more details.
- ⁶⁾ Full angle measured at the 1/e² level.
- ⁷⁾ RMS value measured from 1000 shots.
- ⁸⁾ Beam diameter is measured 20 cm from laser output at the 1/e² level.
- ⁹⁾ In respect to Q-switch triggering rising edge pulse.
- ¹⁰⁾ Laser can be powered from appropriate 12 VDC power

尺寸

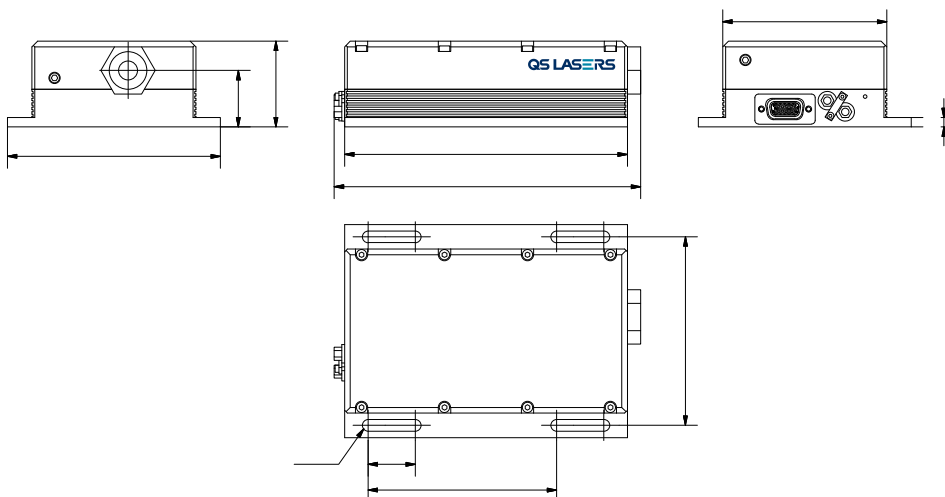
激光头 (W×L×H)	83 × 157 × 41.5 mm
控制器单元 (W×L×H)	75 × 200 × 70 mm(OEM版本)
电源适配器 (W×L×H)	119 × 179 × 30 mm(OEM版本)

运行环境

散热	Air cooled	
环境温度	15 – 30 °C	
相对湿度(non-condensing)	10 – 80 %	
电源	90 – 230 VAC, single phase, 47 – 63 Hz ¹⁰⁾	
功耗	< 10 W	< 20 W



Typical beam intensity profile (20 cm from laser output) of MPL1510 series lasers



MPL1510 laser head dimensions (in mm)