

半导体泵浦,亚纳秒主动型 Q 开关激光器

Diode Pumped Sub-Nanosecond Actively Q-Switched Laser

产品特点

- > 1064nm 波长处脉冲能量超过 500μJ
- > 短脉冲持续时间 < 700ps
- > 1000Hz 脉冲重复频率
- > 标准可选波长 532nm, 355nm, 266nm
- > 主动型 Q开关
- > 高峰值功率 0.7MW
- > 可实现其他波长(e.g. 1053 nm, 1342 nm, 671 nm, 447 nm)

应用领域

- > OLED 修复
- > 标记
- > 非线性光学
- > seeding 激光放大器
- > 污染监测
- > 遥感技术

产品简介

MPL15100系列是稳定可靠的DPSS主动Q开关亚纳秒激光器,可提供数千瓦峰值功率,在1000Hz重复频率下脉冲持续时间小于1ns。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< 700 ps,接近衍射极限的线宽,输出重复频率高达1 kHz, 定时抖动< 200 ps以及脉冲能量超过500μJ等特点使其涵盖了从LIBS到激光荧光光谱到其他众多领域的广泛应用范围。可选配的谐波发生器的也可获得绿光波长(532nm)和紫外波长(355nm, 266nm)。

MPL15100



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规格参数

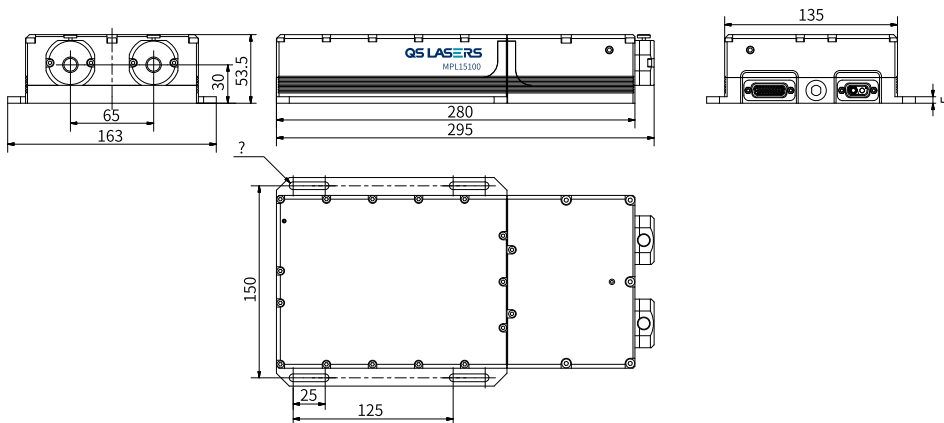
型号	MPL15100	MPL15100-1K
脉冲能量:		
at 1064 nm	0.5 mJ	
at 532 nm	0.25 mJ	
at 355 nm	0.15 mJ	
at 266 nm	0.05 mJ	
峰峰值能量稳定性 (RMS):		
at 1064 nm	< 0.5 % ²⁾	
at 532 nm	< 1.0 % ²⁾	
at 355 nm	< 1.5 % ²⁾	
at 266 nm	< 2.0 % ²⁾	
典型脉宽	≤ 700 ps ³⁾	
功率输出漂移	± 3.0 % ⁴⁾	
脉冲重复频率 ⁵⁾	100 Hz	1000 Hz
光束模式	Close to Gaussian	
光束发散 ⁶⁾	< 4 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⁾	1.2 mm	
光学抖动	< 0.3 ns ⁹⁾	

尺寸

激光头 (W×L×H)	163 × 295 × 53.5 mm
控制器单元 (W×L×H)	257 × 271 × 153 mm
线缆长度	1 m

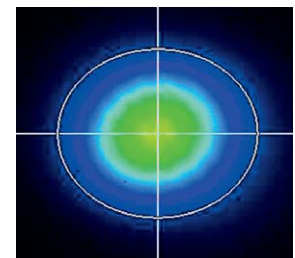
运行环境

散热	air cooled
环境温度	15 – 30 °C
相对湿度	10 – 80 % (non-condensing)
电源	100 – 240 VAC, single phase, 50 – 60 Hz
功耗	< 10 W



MPL15100 laser head dimensions with attached harmonics unit (in mm)

- ¹⁾ Due to continuous improvements all specifications are subject to change. Unless stated otherwise all specifications are measured at 1064 nm.
- ²⁾ Averaged from 60 seconds time interval.
- ³⁾ FWHM level at 1064 nm.
- 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 max repetition rate. Higher repetition rates are available, please inquire for 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.



Typical beam intensity profile (20 cm from laser output) of MPL15100 series lasers