



上海尖丰光电技术有限公司

PL2210 二极管泵浦皮秒 Nd : YAG 激光器(PL2210 series diode pumped picosecond Nd:YAG lasers)

型号 : PL2210

产品简介:

短脉宽、高能量，高达 2 kHz 的重复率和优良的脉冲稳定性进行 pl2210 系列二极管泵浦皮秒激光器的许多应用的首选，如材料加工、激光光谱学、光学参量发生器泵和其他任务。



产品特点：

1. 高脉冲能量
2. 二极管泵浦固体设计
3. 空气冷却,不需要外部供水
4. 交钥匙工程
5. 维护成本低
6. 可选条纹相机触发脉冲与 < 10 的均方根抖动
7. 遥控板
8. 通过 USB 接口与 PC 机提供的控制
9. LabVIEW™ drivers
10. 可选的温度稳定性，第二，第三，第四谐波发生器

产品应用：

1. 时间分辨荧光，泵浦-探测光谱
2. OPG/OPA/OPO 泵浦
3. 其他光谱和非线性光学中的应用
4. 激光遥感

规格：

型号	PL2210	PL2210A	PL2210B	PL2210B-TR	PL2210C
输出功率					
at 1064 nm	0.4 mJ	0.9 mJ	2.5 mJ	2.5 mJ at 1 kHz 5 W at 88 MHz	2.5 mJ / 5 mJ
at 532 nm ²⁾	0.2 mJ	0.45 mJ	1.3 mJ	-	1.3 mJ / 2.5 mJ
at 355 nm ³⁾	0.11 mJ	0.3 mJ	0.8 mJ	-	0.8 mJ / 1.3 mJ
at 266 nm ⁴⁾	0.05 mJ	0.15 mJ	0.5 mJ	-	0.5 mJ / 0.8 mJ



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型号	PL2210	PL2210A	PL2210B	PL2210B-TR	PL2210C
脉冲能量稳定(Std. Dev) ⁵⁾					
at 1064 nm	0.5 %				
at 532 nm	0.8 %				#colspan#
at 355 nm	1 %				
at 266 nm	2.5 %				
脉冲持续时间 (FWHM) ⁶⁾	25±2 ps	25±2 ps	80±8 ps	100±10 ps	25±2 ps / 80±8 ps
脉宽稳定性 ⁷⁾	±1 ps	±1 ps	±3 ps	±3 ps	±1 ps / ±3 ps
脉冲重复率 ⁸⁾	1 or 2 kHz	1 kHz		1 kHz / 1 MHz	1 kHz
触发模式	internal/external				
典型的同步输出 脉冲延迟 ^{9) 10)}	-500...50 ns				
同步输出脉冲 抖动(Std. Dev)	<0.1 ns rms				
空间模式 ¹¹⁾	TEM ₀₀				
光束发散角 ¹²⁾	<1.6 mrad				
光斑直径 ¹³⁾	~3 mm				
光束指向稳定性 ¹⁴⁾	<30 μrad				
脉冲对比度	>200:1				
极化	linear, >100:1				
物理特性					
Laser head size (W x L x H), mm ¹⁵⁾	455 x 1035 x 242			455x1235x242 mm	
电源尺寸(W x L x H), mm	365 x392 x 290		475 x 460 x 290		365x285x360 mm
操作要求					



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型号	PL2210	PL2210A	PL2210B	PL2210B-TR	PL2210C
冷却水	没要求，空气冷却				
相对湿度	10-80 % (non condensing)				
环境温度	22 ± 2 °C				
电源要求	100-240 VAC, single phase, 50/60 Hz				
功率消耗 ¹⁶⁾	<0.5 kW	<1 kW	<1 kW	<2 kW	<1.5 kW

1) Due to continuous improvement, all specifications are subject to change without notice. Parameters marked typical are not specifications. They are indications of typical performance and will vary with each unit we manufacture. Unless stated otherwise, all specifications are measured at 1064 nm.

2) For PL2210x-SH and PL2210x-SH/FH options. Outputs are not simultaneous. Please inquire for pulse energies for other harmonic generator options.

3) For PL2210x-TH option. Outputs are not simultaneous. Please inquire for pulse energies for other harmonic generator options.

4) For PL2210x-SH/FH option. Outputs are not simultaneous. Please inquire for pulse energies for other harmonic generator options.

5) Averaged from 300 pulses at 1 kHz pulse repetition rate.

6) Optional 80±8 ps duration.

7) Measured over 1 hour period when ambient temperature variation is less than ±2 °C.

8) Should be specified when ordering. Inquire for custom pulse repetition rates.

9) In respect to optical pulse. <10 ps rms jitter is provided with PRETRIG option.

10) SYNC OUT lead or delay can be adjusted with 0.25 ns steps in specified range.

11) Gaussian fit >90%.

12) Full angle measured at the 1/e² point at 1064 nm .

13) Beam diameter is measured at 1064 nm at the 1/e² point.

14) Rms value measured from 300 shots.

15) 455×1235×250 mm (W×L×H) laser head size might be required for some optional configurations.

16) At 1 kHz pulse repetition rate.

Options

- Option PRETRIG provides low jitter pulse for streak camera triggering with lead/delay in -150...150 μs range and <10 ps rms jitter.
- Option P80 provides 80±8 ps output pulse duration. Main specifications:

型号	PL2210	PL2210A
脉冲能量 ¹⁾	0.7 mJ	1.2 mJ
脉冲持续时间(FWHM)	<80 ps	

*At 1064 nm

- Option PC allows reduction of the pulse repetition rate of the PL2210 series laser by integer numbers. Single shot mode is also possible. In addition, the –PC option reduces the low-intensity quasi-CW background that is present at laser output at 1064 nm wavelength. Please note that the output of fundamental wavelength and harmonics will be reduced by approx. 20% with installation of the –PC option.

光束轮廓

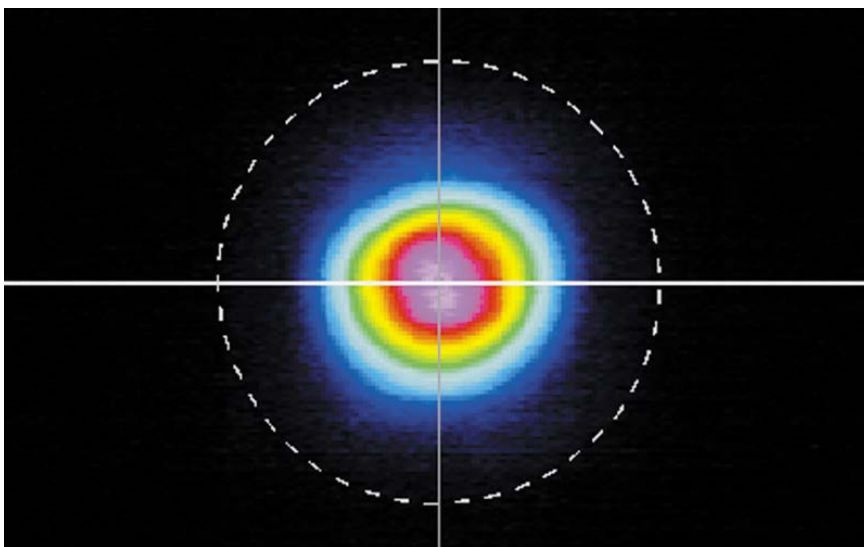


图 1 典型的近 pl2210 系列激光束剖面

外形图：

