

## 1099nm Pulse Laser

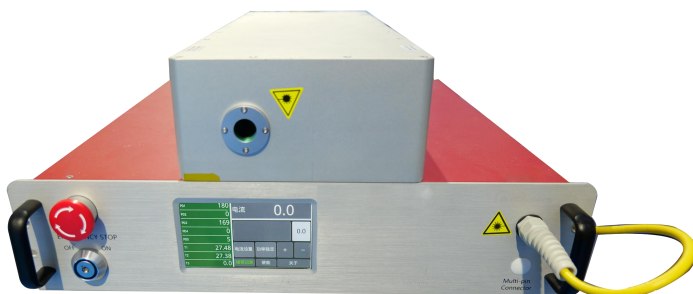
Laser Stealth Dicing is a non-contact cutting technique that can cut semiconductor materials accurately and efficiently. The wafer Stealth Dicing laser introduced by Precilasers has achieved high quality stealth dicing on a variety of wafer materials. The infrared laser's pulse width and waveform can be adjusted, also feature with pulse width and repetition rate be adjusted continuously, to achieve accurate processing of the wafer.

### Features

- High Power
- Waveform Can Be Edited,
- Good Beam Quality
- Pulse Width Adjustable
- Repetition Rate Adjustable

### Application

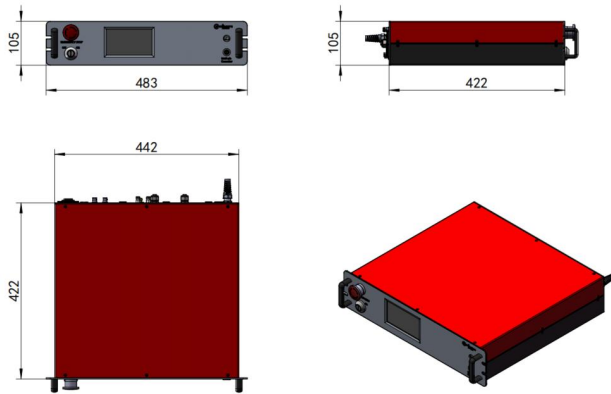
- Wafer Stealth Dicing



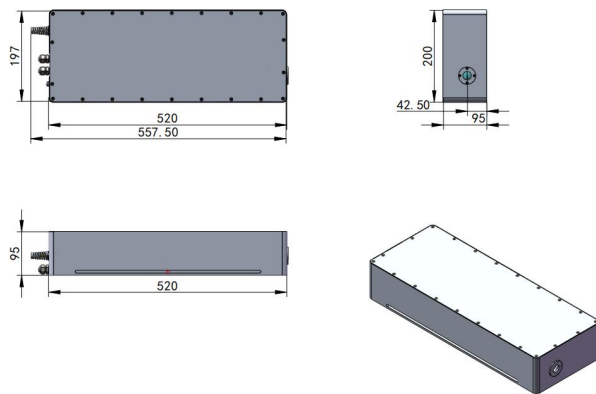
Specification		
Partnumber	FL-NSF-1099-20-QCW	
Center Wavelength	1099nm	
Pulse Width	100-800ns (adjustable)	
Repetition Rate	50-200kHz (adjustable)	
Average Power	10W	20W
Beam Diameter	3±0.2mm	
Beam Divergence (full angle)	<0.5mrad	
Beam Circularity	> 95%	
Beam Quality	TEM <sub>00</sub> , M²<1.2	
Polarization	linear,>20dB	
Power Stability	<0.3% @3hours, RMS	
Waveform	Gaussian/Square waveform	
Cooling	Water cooling	
Warm-Up Time		
Cold Start	<2 hours	
Warm Start	<15 minutes	
Demension and Weight		
Controller Size	≤483mm x 422mm x 105mm	
Laser Head Size	≤68.5mm x 278mm x 46mm	≤520mm x 200mm x 95mm
Chiller Size	≤58cm x 29cm x 52cm	
Laser Head Weight	≤10kg	≤15kg
Laser Controller Weight	≤20kg	
Chiller Weight	≤25kg	
Cable Length Between Laser Head And Controller	fiber length>2m	
Environment and Power Supply		
Operating Temperature (No condensing)	15-35 °C (water cooling)	
Power Supply	100V-240V, AC, 50/60Hz	
Power Consumption	<200W	<250W
Communication	RS422	

## With Optical Switch

Laser Controller



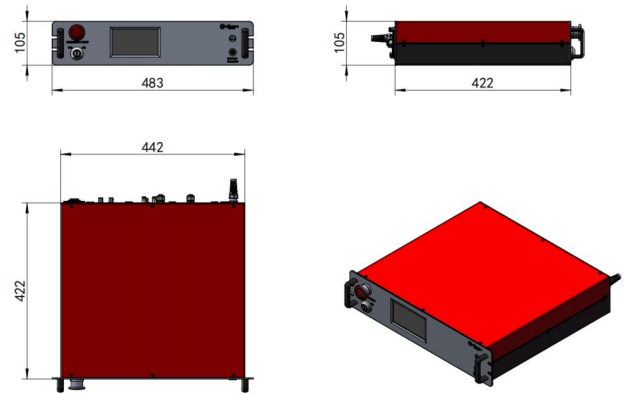
Laser Head



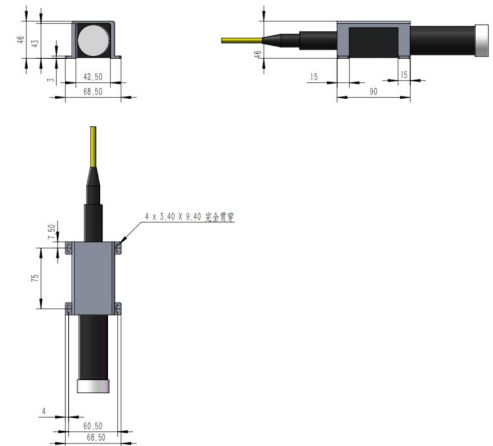
Non-dismantle fiber length  $\geq 2\text{m}$  between controller and laser head

## Without Optical Switch

Laser Controller

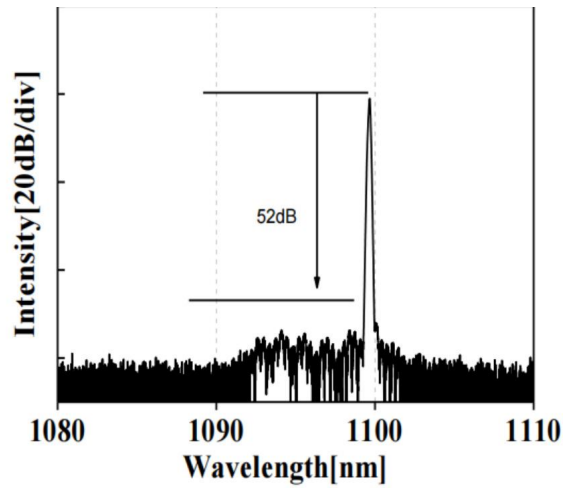


Laser Head



Non-dismantle fiber length  $\geq 2\text{m}$  between controller and laser head

❖ Performance(typical value)



Center wavelength testing

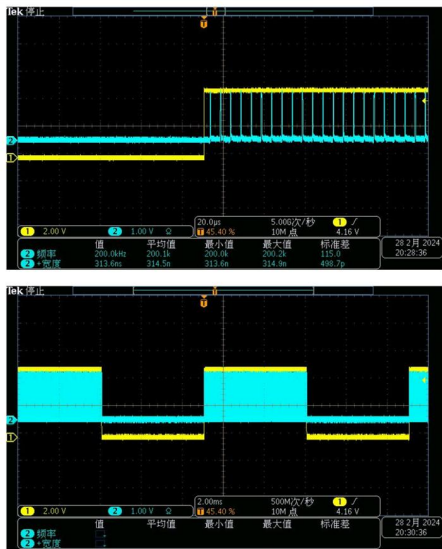


图 17: 图 15: Gate 信号测试 (黄色为高电平 5V 信号, 蓝色为激光脉冲信号)

Gate signal testing

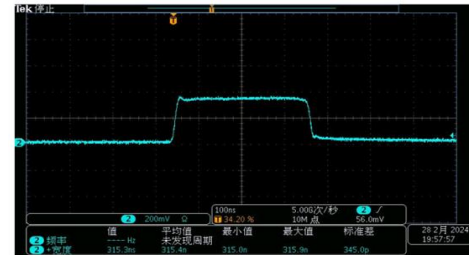


图 11: 200kHz 300ns

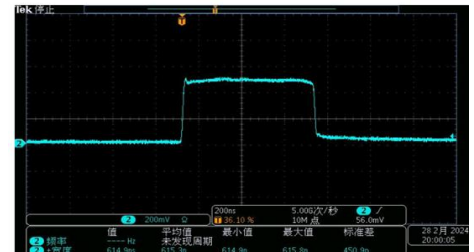


图 12: 200kHz 600ns

pulse width and repetition rate adjusted testing



Shanghai Precilasers Technology Co., Ltd.  
 Floor 2, Building 2, No. 1918, Xupan Road, Jiading  
 District, Shanghai  
 021-59160265

info@Precilasers.com | www.Precilasers.com



⚠ Laser Hazard

Visible or invisible laser radiation, avoid eye or skin exposure to direct, reflected or filtered radiation.

CLASS 4 Laser Products