



JenLas[®] disk IR50

IR disk laser, tunable pulselength



Advantages:

- Laserparameter adjustable
- Passively-cooled diodes
- High pulse repetition rate
- Fast AOM power control
- Disk laser design

Benefits:

- Optimized application
- Long Life Performance
- Fast processing
- Flexible application
- Superior beam quality over power range

Applications:

- 3 D prototyping
- Wafer dicing / scribing
- Engraving
- Microcutting
- Microsintering
- Microstructuring
- Microdrilling
- Solar cell processing

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Specifications

Parameters	Basic Features	With Pulse & Frequency Control (Parameter Set of „Basic Features“ are included)
Laser	Disk laser	Disk laser
Wavelength	1030 nm	1030 nm
Output power	> 45 W @ 30 kHz	> 36 W @ 30 kHz
Polarization	linear	linear
Beam Quality	$M^2 \leq 1.2$	$M^2 \leq 1.2$

Q-switched operation		
Pulse energy	> 5 mJ @ 8 kHz	> 4 mJ @ 8 kHz
Pulse repetition rate	8 ... 30 kHz	8 ... 100 kHz
Pulse length (typ.)	800 ... 2100 ns (dependent on repetition rate)	250 ... 700 ns (independently adjustable)
Options	Aiming Laser Beam Expander	Aiming Laser Beam Expander

Mechanical specifications		
Laser head		
Dimensions (L x W x H)	865 mm x 340 mm x 184 mm	865 mm x 340 mm x 184 mm
Weight	approx. 50 kg	approx. 50 kg
Power supply		
Dimensions (W x H x D)	19" x 4 RU ¹⁾ x 500 mm	19" x 4 RU ¹⁾ x 500 mm
Weight	approx. 15 kg	approx. 15 kg
Chiller		
Dimensions (W x H x D)	19" x 7 RU ¹⁾ x 650 mm	19" x 7 RU ¹⁾ x 650 mm
Weight	approx. 65 kg	approx. 65 kg

¹⁾ RU = Rack Unit (1 RU = 1,75 inch = 44,45 mm)

Applications



Trenching of Silicon
Thickness: 725 μm , width: 600 μm ,
cycle time: $\sim 0.3 \text{ mm}^3/\text{s}$



Drilling of Solar Silicon Slides
Thickness: 250 μm , diameter: 300 μm ,
cycle time: 36 ms/hole



Deep engraving in a refractory Titanium alloy
ablation rate 3.5 mm^3/s

It is our policy to constantly improve the design and specifications. Accordingly, the details represented herein cannot be regarded as final and binding.



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