JenLas® *disk IR50*

IR disk laser, tunable pulse length

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:

- Solar cell processing
  - MWT (Metal Wrap Through)
  - EWT (Emitter Wrap Through)
  - LFC (Laser Fired Contacts)
- Wafer dicing / scribing
- Microcutting (e.g. Stents Cutting)
- Microdrilling
- Microstructuring
- Engraving

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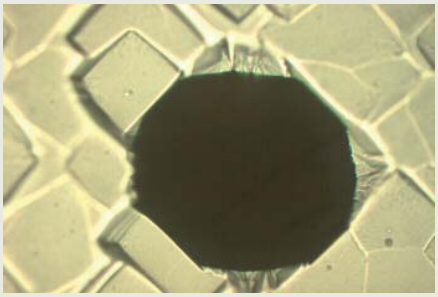
Specifications

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	> 39 W @ 30 kHz
Polarization	linear	linear
Beam Quality	$M^2 \leq 1.2$	$M^2 \leq 1.2$
Beam Diameter	1.5 mm	1.5 mm
Q-switched operation		
Pulse energy	> 5 mJ @ 8 kHz	> 4.3 mJ @ 8 kHz
Pulse repetition rate	8 ... 30 kHz	8 ... 100 kHz
Pulse length (typ.)	800 ... 2000 ns (dependent on repetition rate)	200 ... 1000 ns (independently adjustable)
Options	Aiming Laser Beam Expander	Aiming Laser Beam Expander

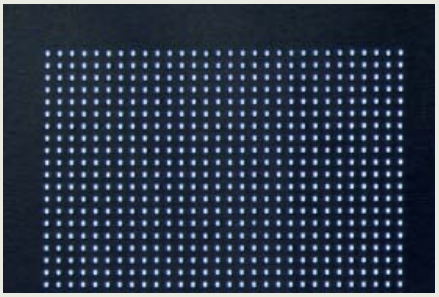
Mechanical specifications	
Laser head	
Dimensions (L x W x H)	865 mm x 340 mm x 184 mm
Weight	approx. 50 kg
Power supply	
Dimensions (W x H x D)	19“ x 4 RU[1)] x 500 mm
Weight	approx. 15 kg
Chiller	
Dimensions (W x H x D)	19“ x 7 RU[1)] x 650 mm
Weight	approx. 65 kg

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

Applications



Drilling of Si wafer for back contact of solar cells (MWT technology)



Drilling microstrainer pattern in 0.3 mm stainless steel

Deep engraving in a refractory Titanium alloy ablation rate 3.5 mm³/s

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