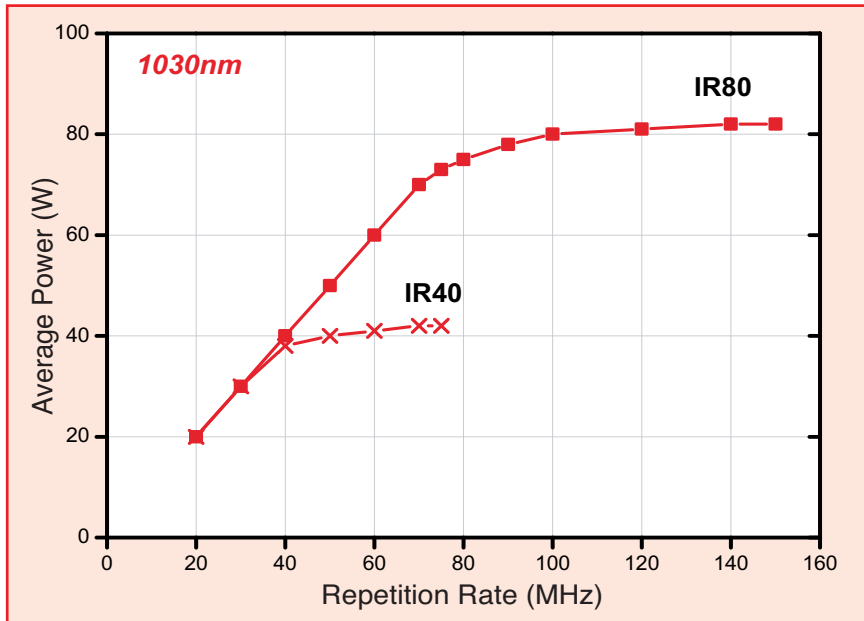


# BOREAS IR

**NANOSECOND HIGH POWER FIBER LASER**



## Key Features

High Power	up to 80 W at 1030 nm
High repetition rate	up to 150 kHz
Short ns pulses	down to 15 ns
Excellent beam quality	$M^2 < 1.3$ over full repetition rate
Superior power stability	2 % over 8 hours
24/7 industrial design	

## Applications

Metal deep engraving

ITO ablation

High speed plastic cutting

Photovoltaic manufacturing



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# BOREAS



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**NANOSECOND HIGH POWER FIBER LASER**

Laser characteristics	IR40	IR80
Wavelength	1030 nm	1030 nm
Max average power*	40 W	80 W
Repetition rate	20-75 kHz	20-150 kHz
Energy per pulse**	1 mJ	1 mJ
Pulse width**	< 15 ns	< 15 ns
Beam quality M <sup>2</sup> over full frequency range	< 1.3	< 1.3
Polarization	> 99 % linear	> 99 % linear
Beam circularity	> 95 %	> 95 %
Beam diameter	2 mm	2 mm
Beam divergence (half angle)	0.4 mrad	0.4 mrad
Average power stability over 8h (RMS 1σ)	< 2 %	< 2 %
Pulse to pulse energy stability (RMS 1σ)	< 2 %	< 2 %
Bore sight accuracy	1 mm & 5 mrad	1 mm & 5 mrad
Beam pointing stability (RMS 1σ, in % divergence)	2 %	2 %
	* @75 kHz up to 35 kHz	** @150 kHz up to 70 kHz

General characteristics	IR40	IR80
Laserhead size in mm	950 x 235 x 105	950 x 235 x 105
Power supply size in mm	19 inch 6U rack - 483 x 266 x 605	
Laserhead Weight	30 kg	30 kg
Power supply Weight	33 kg	33 kg
Cooling type	water cooled	
Electrical power consumption	Max 750 W	Max 750 W
Power requirement	100 V / 240 V, 50/60 Hz single phase	
Fiber & cable length (from power supply to laser head)	Fibre length = 5, m RF / Dsub25 = 5 m	
Interfaces	USB and RS232	
Cooling requirement	900 W max. heat load	900 W max. heat load

**OPTIONS**  
External Shutter, Attenuator

