MISFIT PHOTONICS

300W-500W

High-stability CW Fiber Lasers

The High-stability 300W-500W CW Fiber Lasers are a highly reliable laser family with high power stability and ideal laser beam quality, and QBH or QCS fiber delivery options. With fast response to DI/AI control inputs, it will satisfy the most demanding applica-tions such as 3D printing, micro-process-ing and fine-welding.

Applications

- Metal 3D printing
- Precision metal cutting
- Precision metal welding

Characteristics

- High beam quality
- Excellent long-term power stability
- Fast optical response

Specifications

	Product Code	FFRC-300-H	FFRC-500-H
Optical Parameters	Output Power (W)	300	500
	Operating Mode	CW / Modulated	
	Polarization State	Random	
	Output Power Tunability (%)	10 - 100	
	Beam Quality M^2	< 1.2	
	Output Power Instability 25℃ (%)	< 1 (8 hours)	
	Emission Wavelength (nm)	1080 ± 5	
	Spectrum Width FWHM (nm)	< 4	
	PWM on Time (μs)	< 10	
	Beam Circularity (%)	≥ 96	
	Modulation Frequency (kHz)	20	
	Red Laser Power (μW)	> 200	
Fiber Delivery Cable Parameters	Output Type	QBH / QCS	
	Length (m)	3	
	Core Diameter (μm)	14	
	Minimum Bending Radius of Cable (mm)	150	
Electrical Characteristics	Operating Voltage (VAC)	200 - 240, 1PH 50 / 60Hz	
	Control Mode	RS232 / AD / Ethernet	
	Max Power Consumption (kW)	1	1.5
Other Characteristics	Operating Temperature (℃)	10 - 30	
	Humidity (%)	10 - 80	
	Storage Temperature (℃)	-20 to 60	
	Cooling Method	Water Cooled	
	Water-cooling Temperature (℃)	25 ± 1	
	Water-cooling Flow (L/min)	> 10 (Laser), 1.5 - 2.5 (QBH)	
	Water-cooling Pressure (Bar)	3 - 5	
	Joint Diameter (mm)	12	
	Dimensions (mm)	W482 x D545 x H155 (Include handles)	