

1 to 50 W CW High Power Single Mode Industrial Yb Fiber Laser

The FL-Y Series are a compact, OEM module or turnkey systems of diode-pumped single-mode Ytterbium fiber laser which provide up to 50 W of CW near diffraction limited ($M^2 < 1.1$) 1.08 μm laser beam. The fiber laser delivers a beam directly to the work side through a metal-shielded single mode fiber cable terminated by a collimator with beam diameter from 0.4 mm to 7 mm. Circular spots with focuser could be a few microns in diameter, with a long working distance focused onto the work piece. The all-fiber configuration guarantees the robustness of the lasers with monolithic design without any optical parts to align or to stabilize, no need for routine replacement parts or materials, which can operate under high shock, vibration and dust condition. These fiber lasers have a very high reliability, which could not be achieved by other solid state or gas laser systems. Output power could be amplitude modulate up to 60 kHz.

Fiber laser can be controlled by RS232 or USB, which allows a simple integration into customer setups.

All FL-Ys are available in Bench Top, 19" Rack-mount or Module formats.



Preliminary

Features

- Up to 50 W output power
- Beam quality $M^2 < 1.1$
- 1060 to 1100 nm fixed wavelength
- > 100,000 hrs pump diodes lifetime
- Compact, air cooled package
- Maintenance free operation
- High wall-plug efficiency
- High performance-to-cost ratio
- RS232 or USB interface
- Custom design flexibility

Applications

- Material processing
- Marking
- Precision cutting and welding
- Drilling and trimming
- Micromachining
- Graphic imaging
- Engraving

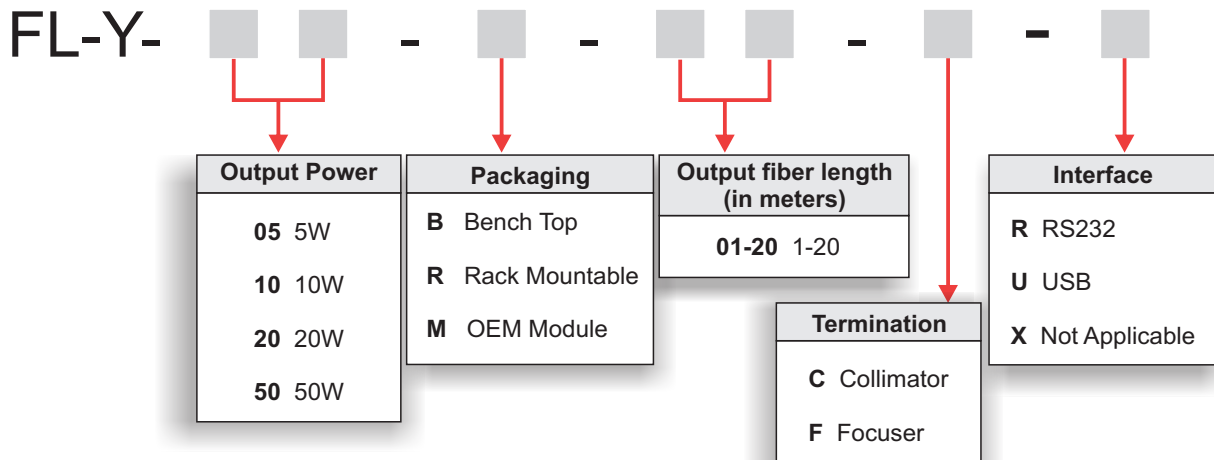
Typical Performance

Parameters	Unit	Value	Note
Mode of operation		CW	
Nominal output power	W	5,10,20 and 50	
Peak wavelength	nm	1060-1100	
Output power tunability	%	20-100 10-100	5 W 10, 20 and 50 W
Output power stability	%	<2	Long term (over 5 hours)
M^2		<1.1 <1.3	5, 10, 20 W 50 W
Emission linewidth(FWHM)	nm	<1	
Output polarization		random	
Output fiber length	m	1-20	
Cooling		forced air	
Operating temperature	C	0 to +50	
Storage temperature	C	-30 to +70	
Humidity	%	5 to 90	(Non-condensing)

Ordering information

Indicate your requirements by selecting one option from each configuration table.
For more information on this or other products and their availability, please contact QGLex Inc.

Sample: FL-Y- 05 - M - 03 - C - R



User Safety

The invisible and visible laser light emitted from this laser system is harmful to the human eye. Laser safety practices should be followed and proper eyewear must be worn during operation.

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