



# High Power Fiber Coupled Diode Laser System

## FCL-A Series

Data Sheet



### Overview

The FCL-A series is a line of fiber coupled diode lasers that can deliver high output power levels up to 40 W. The laser series is available in the wavelength range from 793nm to 980nm and features an integrated laser diode, fiber coupling optics, laser power supply, LD current and temperature control in one box. Its compact dimensions and convenient functions, including but not limited to power adjustment, temperature control, and LED display make the laser suitable for pumping, scientific research, industrial and medical applications.

### Features

- Wavelength range from 793nm to 980nm
- CW operating mode
- High output power 16 W to 40 W
- Compact dimension
- LED display
- Power adjustable

### Applications

- Holographic, photography optogenetics
- Fluorescence excitation
- Raman spectrum measurement
- Interference measuring method
- Bioengineering
- Laser communication
- Photoelectric inspection
- Photodynamic therapy
- Material analysis
- Stage, landmark

**793-885 nm Specifications**

Parameter	FCL793A	FCL808A	FCL810A	FCL879A	FCL880A	FCL885A
Wavelength	793 nm	808 nm	810 nm	879 nm	880 nm	885 nm
Wavelength tolerance	±3 nm	±3 nm		±3 nm	±3 nm	±3 nm
Operating mode	CW					
Output power after fiber	~16W, ~30W, ~40W	~30W, ~40W	~20W, ~30W, ~40W	~20W, ~30W, ~40W	~20W, ~40W	~20W, ~40W
Power stability (rms, over 4 hours)	<2%, <1%, <0.5%					
Fiber core diameter	400um					
Fiber numerical aperture	0.22 NA					
Fiber connector	SMA905					
Fiber length	2 m					
Output power control	0-100%, adjustable by knob					
LED display	Diode current					
Operating temperature	10-40°C					
Red pilot light option	Available					
Input power	100-240VAC, 50 to 60 Hz					
Cooling method	Air cooled					
Modulation option	TTL/Analog: 1Hz-1kHz, 1kHz-10kHz, 10kHz-30kHz					
Expected lifetime	10,000 hours					
Warranty period	10 months					

## Remarks:

- The laser can be run from 0-30kHz. However, the laser will be adjusted such that the waveform and performance is good at the requested specified range.
- Specifications of the CW laser is based on the laser performance at full power output after the specified warmup period. The stability of output power may change when output power is adjusted at a different power level.

**915-980 nm Specifications**

Parameter	FCL915A	FCL938A	FCL940A	FCL976A	FCL980A
Wavelength	915 nm	938 nm	940 nm	976 nm	980 nm
Wavelength tolerance	±3 nm	±3 nm	±10 nm	±10 nm	±10 nm
Operating mode	CW	CW	CW	CW	CW
Output power after fiber	~30W	~30W	~30W	~25W, ~30W	~25W, ~30W
Power stability (rms, over 4 hours)	<2%, <1%, <0.5%				
Fiber core diameter	400um				
Fiber numerical aperture	0.22 NA				
Fiber connector	SMA905				
Fiber length	2 m				
Output power control	0-100%, adjustable by knob				
LED display	Diode current				
Operating temperature	10-40°C				
Red pilot light option	Available				
Input power	100-240VAC, 50 to 60 Hz				
Cooling method	Air cooled				
Modulation option	TTL/Analog: 1Hz-1kHz, 1kHz-10kHz, 10kHz-30kHz				
Expected lifetime	10,000 hours				
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FCL-A Series Laser Dimensions

Unit: mm



Parameter	FCL-A Series
Dimensions	288(L)×264(W) ×148(H) mm <sup>3</sup>
Weight	7.1 kg

**Ordering Information**

For more information, please contact Lasermate directly at [sales@lasermate.com](mailto:sales@lasermate.com).

Part Number Configuration FCL[1]A[2][3][4][5][6]							
FCL = Laser Model Series	[1] = Wavelength	A = Version	[2] = Output Power	[3] = Power Stability	[4] = Modulation	[5] = Red Pilot Light	[6] = Fiber
	793= 793nm 808= 808nm 810= 810nm 879= 879nm 880= 880nm 885= 885nm 915= 915nm 938= 938nm 940= 940nm 976= 976nm 980= 980nm		16W= 16W 20W= 20W 25W= 25W 30W= 30W 40W= 40W	2= <2% D= <1% S= <0.5%	0=None T1=TTL 1Hz-1kHz T2=TTL 1kHz-10kHz T3=TTL 10kHz-30kHz A1=Analog 1Hz-1kHz A2=Analog 1kHz-10kHz A3=Analog 10kHz-30kHz	R= Yes N= No	A= 400um MM fiber, SMA905

Note: The above specifications are subject to change without notice.