



SFL-775-PM-B



DEVICE

Single Frequency Laser Benchtop, 775 nm, Up to 20 mW, PM Output

OVERVIEW

The Optilab SFL-775-PM-B is a single frequency laser coupled with Polarization Maintaining fiber at 775 nm in a single benchtop housing. Built with Fiber Bragg Grating, it provides a pure, single longitudinal mode, and extremely stable wavelength and up to 20 mW of output optical power with a high Side Mode Suppression Ratio (SMSR). This laser can be used in applications such as a CW seeding the external modulation and coherence interferometry. The laser is temperature stabilized with the built-in TEC controller. The laser drive current and operation temperature can be controlled so by using the intuitive front panel or an optional USB interface of the benchtop. Contact Optilab for more information.

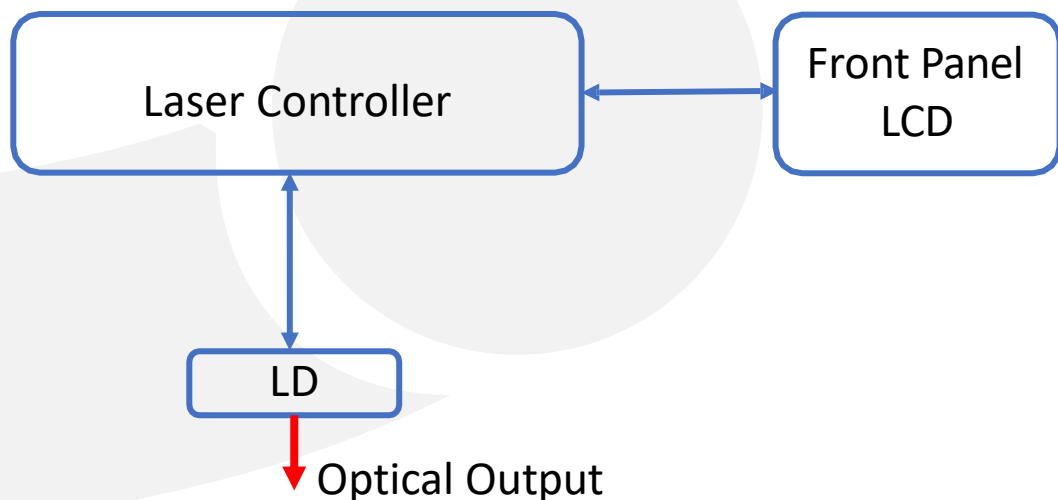
FEATURES

- Polarization maintaining output
- High polarization extinction ratio
- High SMSR
- USB Control Interface
- Up to 20 mW output power
- Low RIN noise
- Built in TEC Controller

USE IN

- Seed Laser for External Modulation
- Quantum Photonics
- CW Laser Source
- General laboratory and research use

FUNCTIONAL DIAGRAM





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GENERAL SPECIFICATIONS (T_c = 25 °C unless otherwise specified)

Parameter	Symbol	Conditions	Min	Typ.	Max	Unit
Laser Output Wavelength	λ		774	775	776	nm
Max Optical power	P _{op}		17	20		mW
Threshold Current	I _{th}		25	30	40	mA
Side Mode Suppression Ratio	SMSR	P _{op}	40	45	50	dB
Laser Linewidth	$\Delta \nu$	P _{op}		2	10	MHz
Optical Isolation	ISO		30			dB
Relative Intensity Noise	RIN	20~ 1000 MHz		-145		dB/Hz
Polarization Extinction Ratio	PER	Polarized along slow axis	18	20		dB
Bias at Operation	I _o	P _{op}	70	80	90	mA
Slope Efficiency	DE	P _{op}	0.2	0.5	0.8	mW/mA
Operating Temperature	T		15	25	35	° C

FIBER SPECIFICATIONS

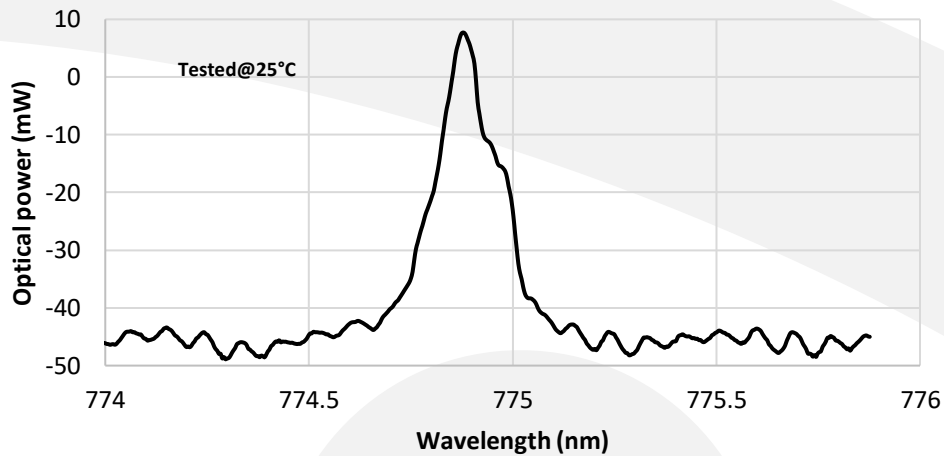
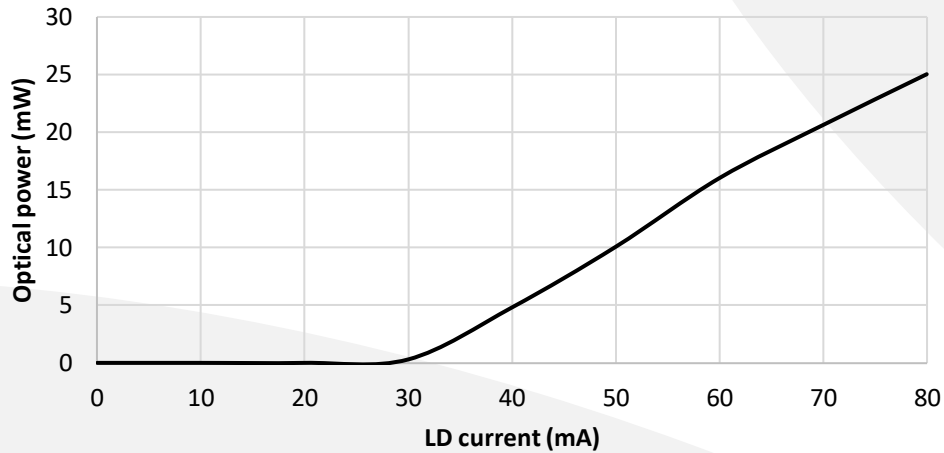
Parameter	Note	Min	Typ.	Max	Unit
Optical Connector	Slow axis aligned to Key		FC/APC		
Optical Fiber Type			PM780		
Mode Field Diameter			5.3		μm
Cladding Diameter		122	125	128	μm
Buffer Diameter		230	245	260	μm





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TYPICAL I-L CURVE AND THE SPECTRUM



LASER SAFETY INFORMATION

All Versions of this laser are Class IV laser product, tested according to IEC 60825-1:2014/EN 60825-1:2014 Single-mode fiber pigtail with FC/APC connectors (standard).

Wavelength = 0.75 μm . Maximum power = 30 mW.

Caution: Use of controls, adjustments and procedures other than those specified herein may result in hazardous laser radiation exposure.

