

976nm Fiber Coupled FP Laser Source

Single mode, up to 500mW, 2nm, Benchtop or Module



DATASHEET

[Return to the Webpage](#)



Features

- Turnkey Laser Source
- High Stability
- Advanced Feedback Control

Applications

- Medical Laser Treatment
- Biotechnology
- Others



Agiltron provides cost-effective fiber-coupled laser sources with a wide range emitting spectrum from 370nm to 2000nm and line width from 10kHz to broadband to select. Each benchtop laser source features a pigtailed laser and high-precision, low-noise auto-feedback drive electronics to ensure constant output power or a constant driving current, and an integrated temperature control unit maintains optimal operating conditions. Each unit features a front fiber output connector and a universal power supply compatible with 100 to 240 VAC. We offer two packages: benchtop for ease of use and compact module for system integration. The user interface benchtop includes an intuitive LCD display for independent control of output power and temperature via two front rotating knobs. The module has two front output power and temperature settings. All units have a built-in isolator option to prevent reflection-induced laser emissions instability. We produce fiber-coupled isolators from 370nm to 2000nm. An isolator is essential to obtain stable laser output.

Specifications

Parameter	Min	Typical	Max	Unit
Center Wavelength	974	976	978	nm
Peak Optical Output Power	500			mW
Polarization Extinction Ratio (PER)	20			dB
Spectral Width		1	2	nm
Laser Forward Current(I _f)		900	1000	mA
Laser Threshold Current (I _{th})		50	80	mA
Laser Forward Voltage (V _f)			2.5	V
Laser Reverse Voltage(V _{rpd})			2.5	V
Slope Efficiency	0.1	0.2	0.3	W/A
PD Monitor Current @500mW	0.9		9	mA
PD Dark Current			100	nA
PD Forward Current			5	mA
PD Reverse Voltage			30	V
Thermistor Current			2	mA
Thermistor Resistance (25°C)	9.5	10	10.5	KΩ
B Constant of R _{th}	3800		4100	K
TEC Voltage(V _{tec}) 25°C, 70°C	-3.5		3.5	V
TEC Current(I _{tec}) 25°C, 70°C	-1.5		+1.5	A
TEC Capacity(ΔT)			50	°C
TEC Set Temperature(T _{set})	15		35	°C
Operating Temperature(T _{op})	-20		65	°C
Storage Temperature(T _s)	-40		85	°C
Fiber Type	SM98-PS-U25D			
Pigtail Type	250μm bare fiber			
Reliability	Telcordia 468			

Note: The specifications provided are for general applications with a cost-effective approach. If you need to narrow or expand the tolerance, coverage, limit, or qualifications, please [click this link](#):

Rev 09/27/24

976nm Fiber Coupled FP Laser Source

Single mode, up to 500mW, 2nm, Benchtop or Module



DATASHEET

Benchtop Laser Source Operation Manual



- Plug in power cable
- Turn on Power Switch
- Setting the Output Power by rotating the knob
- Setting the laser diode Temperature by rotating the knob
- Connect a fiber path cable with matching connector (FC/APC is the default)
- Push the Emission switch to turn on the laser
- Measure the output power to verify

Module Laser Source Operation Manual



- Plug in power cable
- Turn on Power Switch
- Setting the Output Power by rotating the screw
- Setting the laser diode Temperature by rotating the screw
- Connect a fiber path cable with matching connector (FC/APC is the default)
- Push the Emission switch to turn on the laser
- Measure the output power to verify

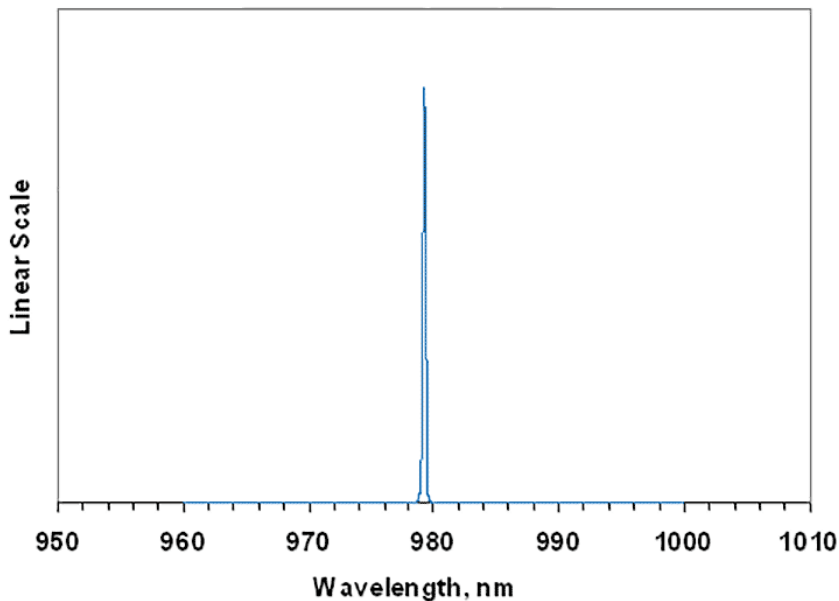
976nm Fiber Coupled FP Laser Source

Single mode, up to 500mW, 2nm, Benchtop or Module



DATASHEET

Typical Spectrum



Ordering Information

Prefix	Wavelength	Power	Package	Isolator	Control Mode	TEC Cooling	Fiber Type	Connector
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
FCLS-	980nm = 0980	0.5W = 5	Benchtop = 1 Module = 2	None = 1 Yes = 2	Constant Current = 2 Constant Power = 1	No = 1 Yes = 2	SM98-PS-U25D = 1 Special = 0	FC/APC = 3 Special = 0