980nm Fiber Coupled DFB Laser Source

400-600mW, 2nm, Benchtop or Module

AGILTRON®

DATASHEET

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.

Features

- Turnkey Laser Source
- High Stability
- Advanced Feedback Control

Applications

- Medical Laser Treatment
- Biotechnology
- Others

ATTENTION

OBSERVE PRECAUTIONS
FOR HANDLING
ELECTROSTATIC

Specifications

Parameter		Min	Typical	Max	Unit
Operating Case Temperature		-5	-	75	℃
Storage Temperature		-40	-	85	℃
LD Forward Current		-	-	1100	mA
LD Reverse Current		-	-	10	µA
LD Reverse Voltage		-	-	2	V
PD Forward Current		-	-	-10	mA
PD Reverse Voltage		-	-	20	V
TEC Current		-	-	2	A
TEC Voltage		-	-	3.5	V
Fiber Bend Radius		30	-	-	mm
Relative Humidity		0	-	95%	-
Lead Soldering Time		-	-	10	s
Fiber Axial Pull Force		-	-	5	N
Fiber Side Pull Force		-	-	2.5	N
Optical & Electrical Characteristics(Tc=25 ℃, unless otherwise noted)					
LD Threshold Current		-	90	110	mA
Outpower		-	-	400	mW
LD Forward Current		-	-	900	mA
Kink Free Power		450	-	-	mW
Kink Free Current		≥ 1.2*If(BOL)			mA
LD Forward Voltage		-	-	2.5	V
Center Wavelength		975	976	977	nm
Peak Wavelength Turning		-	-	0.02	nm/℃
Spectrum Width		-	-	2	nm
Spectrum Stability		-0.5	-	0.5	nm
Monitor Responsivity		-	1	20	uA/mW
Monitor Responsivity Stability		-	-	20%	-
Monitor Dark Current		-	-	50	nA
TEC Current		-	-	2	A
TEC Voltage		-	-	3.5	V
TEC Modual Power Consumption		-	-	5	W
Power Stability	>20mW			0.2	dB
	10-20mW			0.5	
	3.5-10mW			1	
Tracking Error		-0.5	-	0.5	dB
Thermistor Resistance		9.5	10	10.5	Kohm
Thermistor B constant		-	3900	-	k

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 09/30/24

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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
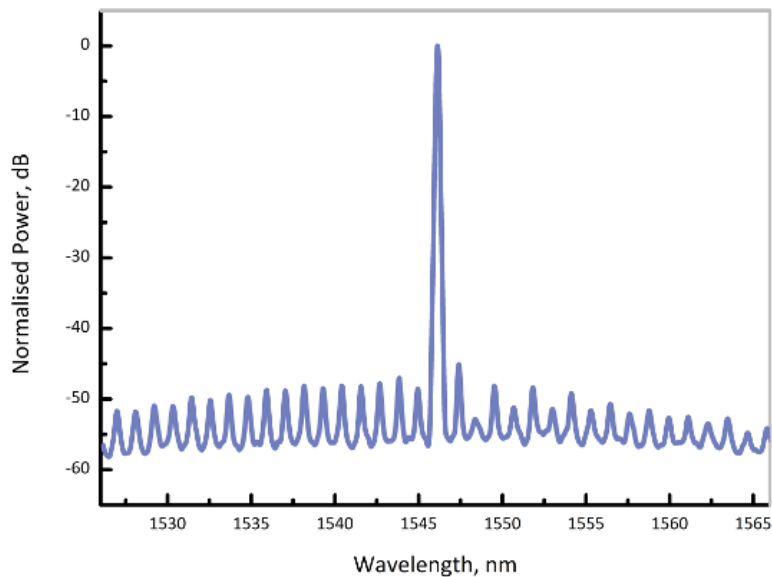- Measure the output power to verify

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Typical Spectrum

Ordering Information

Prefix	Wavelength	Power	Package	Isolator	Control Mode	TEC Cooling	Fiber Type	Connector
	☐☐☐☐	☐	☐	☐	☐	☐	☐	☐
FCLS-	980nm = 0980	>400mW = 4 >600mW = 6	Benchtop = 1 Module = 2	None = 1 Yes = 2	Constant Current = 2 Constant Power = 1	No = 1 Yes = 2	Hi1060 = 2 PM980 = 9 50/125 = A Special = 0	FC/APC = 3 FC/PC = 2 Non = 1 SC/PC = 4 SC/APC = 5 LC/PC = 7 LC/UPC = U Special = 0