

Spectrum Stabilized Fiber Coupled Laser Source



DATASHEET

[Return to the Webpage](#)



The SSFL 785 nm Spectrum Stabilized Fiber Coupled Laser Source provides a powerful and extremely stable laser source that is ideal for scientific applications including Raman Spectroscopy. The unit contains a fiber-coupled high-power diode that is spectrally narrowed and wavelength-stabilized by incorporating a Volume Bragg Grating (VGB). It outputs over 300 mW and 500mW at 785 nm laser having wavelength stabilized within 0.5 nm.

Extreme care should be taken when operating this unit to avoid potentially hazardous exposure to both eyes and skin. Users should wear eye protection when operating this unit and should avoid exposure to the output beam.

Features

- High Reliability
- High Stability
- Cost Effective

Applications

- R&D Applications
- Instrumentations
- Sensors

Specifications

Parameter	Min	Typical	Max	Unit
Wavelength		785		nm
Center Wavelength Tolerance	-0.5	0	0.5	nm
Output Power		300		mW
		500		mW
Linewidth		0.1	0.15	nm
Power Consumption		1	3	W
CDRH Class	Class IV			
Humidity	<80, no-condensing			%
Operating Temperature	10 ~ 35			°C
Storage Temperature	-40 ~ 85			°C
Fiber Type	105 μ m Core, NA 0.22			
Fiber Connector	FC/PC			

Legal notices: All product information is believed to be accurate and is subject to change without notice. Information contained herein shall legally bind Agiltron only if it is specifically incorporated into the terms and conditions of a sales agreement. Some specific combinations of options may not be available. The user assumes all risks and liability whatsoever in connection with the use of a product or its application.

Rev 12/25/24

© Photonwares Corporation

P +1 781-935-1200

E sales@photonwares.com

W www.agiltron.com

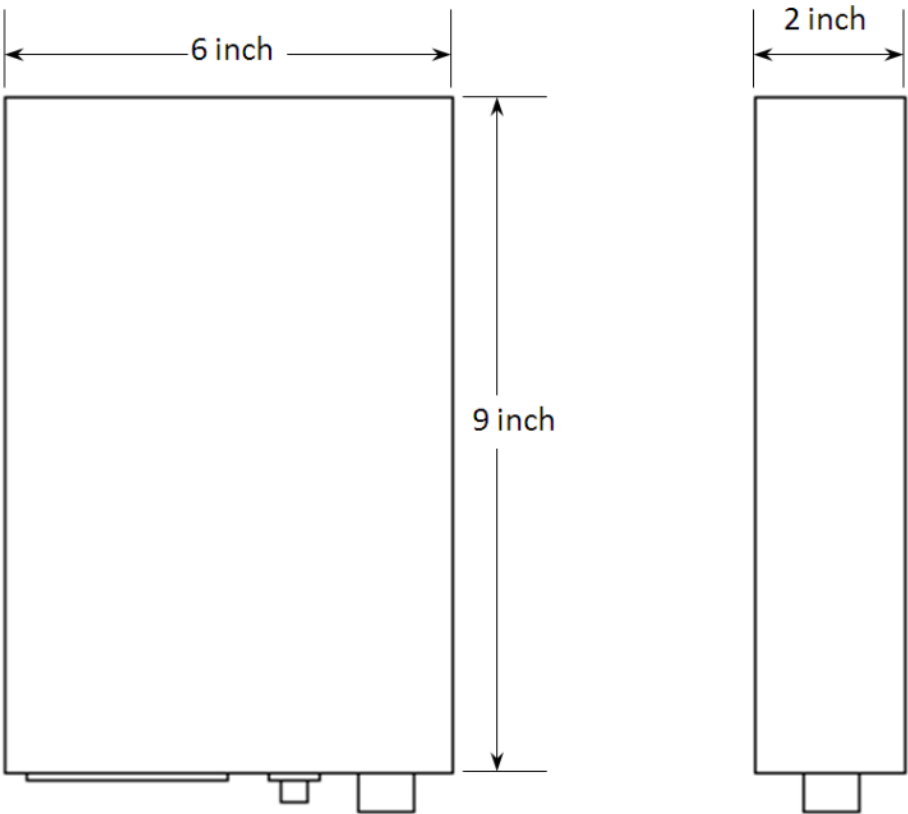
Information contained herein is deemed to be reliable and accurate as of the issue date. Photonwares reserves the right to change the design or specifications at any time without notice. Agiltron is a registered trademark of Photonwares Corporation in the U.S. and other countries.

Spectrum Stabilized Fiber Coupled Laser Source



 DATASHEET

Mechanical Dimension



*Product dimensions may change without notice. This is sometimes required for non-standard specifications.

Ordering Information (Part Number) System

	☐	☐ ☐ ☐ ☐	☐	☐	☐	☐
Prefix	Package	Wavelength	Laser Type	Fiber Type	Optical Power	Connector ^[1]
SSFL-	Standard = 1 Special = 0	785 nm = 0785 1600 nm = 1600 1620 nm = 1620	Phase Grating = 1	105 μm = 1 Special = 0	300mW = 1 500mW = 2	FC/PC = 1

[1]. The default connector configuration uses fiber with 0.9 mm buffer protection. The connector cannot be installed directly onto bare fiber because the bare fiber is prone to damage during shipping. However, the connector can be assembled on bare fiber if a 3 cm protective loose tube is added for reinforcement. The customer may remove this protective tube after testing. The optical power handling of a standard connector is less than 0.5 W for SMF-28 fiber and decreases further for smaller-core fibers.

Spectrum Stabilized Fiber Coupled Laser Source



DATASHEET

Application Notes

Fiber Core Alignment

Note that the minimum attenuation for these devices depends on excellent core-to-core alignment when the connectors are mated. This is crucial for shorter wavelengths with smaller fiber core diameters that can increase the loss of many decibels above the specification if they are not perfectly aligned. Different vendors' connectors may not mate well with each other, especially for angled APC.

Fiber Cleanliness

Fibers with smaller core diameters ($<5\text{ }\mu\text{m}$) must be kept extremely clean, contamination at fiber-fiber interfaces, combined with the high optical power density, can lead to significant optical damage. This type of damage usually requires re-polishing or replacement of the connector.

Maximum Optical Input Power

Due to their small fiber core diameters for short wavelength and high photon energies, the damage thresholds for device is substantially reduced than the common 1550nm fiber. To avoid damage to the exposed fiber end faces and internal components, the optical input power should never exceed 20 mW for wavelengths shorter 650nm. We produce a special version to increase the handling by expanding the core side at the fiber ends.