

# SWL-1550-M



## 1550 nm Swept Wavelength Laser Module

The Optilab SWL-1550-M laser source module unit provides fast continuous wavelength sweeping, driven by an electrical ramp voltage input, and contains a fast tunable laser source with control electronics. Specifically designed for FBG fiber sensor interrogation applications, the versatile SWL-1550-M is available with spectral tuning of up to 80 nm. The wider the sweeping range, the higher the number of FBG sensors that can be incorporated in the interrogation systems. The SWL-1550-M has a high output power of up to 20 mW, and is ideal for increasing the sensing distance and also the number of channels of an FSI. SWL-1550-R is also available in a rackmount housing. Contact Optilab for more information.

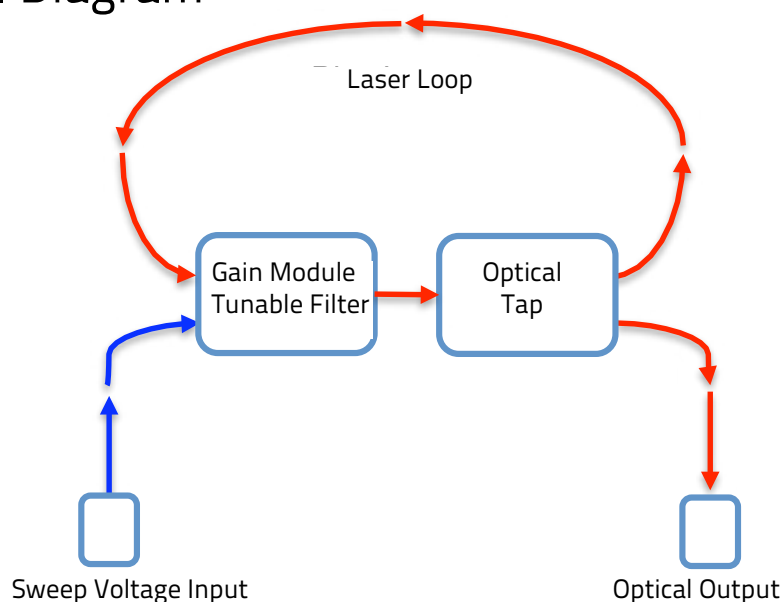
### Features

- Wide sweeping range up to 80 nm
- High power 20 mW
- Laser linewidth, FWHM, of 0.15 nm
- Optical Signal to Noise Ratio of 40 dB
- RS-232 interface for status monitoring
- **3 year warranty standard**

### Applications

- FBG sensor interrogation
- Laboratory testing & measurement
- Fiber optic component qualification
- Variable Wavelength Laser Source

### Functional Diagram



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## OPTIONS

### SWL-1550-M-X

Spectral Tuning Range:

- X S: 60 nm
- W: 80 nm

## TECHNICAL INFO

For technical info and support:

[sales@optilab.com](mailto:sales@optilab.com)

[www.optilab.com](http://www.optilab.com)

## WEB ORDER

To order, please visit [OEQuest.com](http://OEQuest.com).

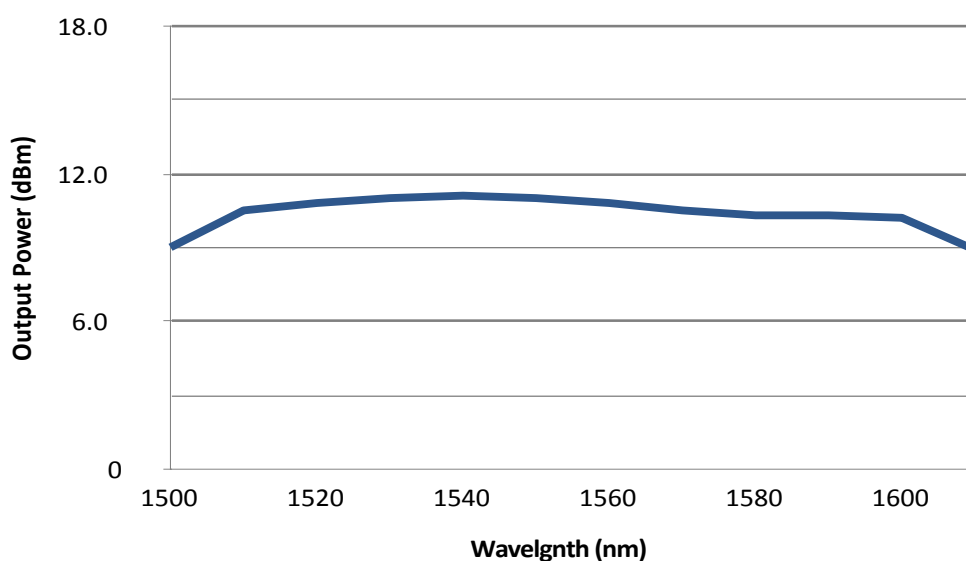


## Optilab Advantage

- Innovation
- Performance
- Quality
- Customization
- Warranty

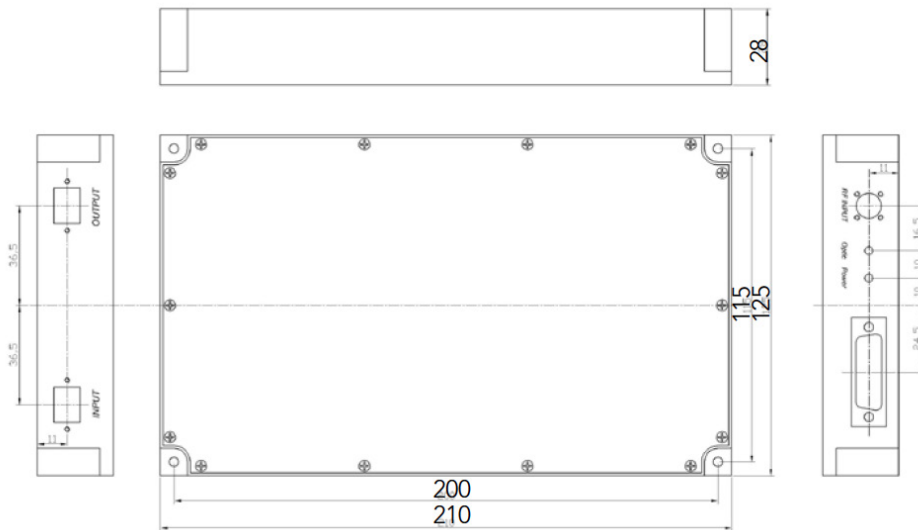
Wide Sweeping Wavelength Range Specifications	
Spectral Tuning Range	60 nm typ. (S) 80 nm typ. (W)
FBG Wavelength Range	1520 nm to 1580 nm, typ. (S) 1510 nm to 1590 nm, typ. (W)
Output Power	20 mW typ.; Higher power is available
Optical Specifications	
Laser Linewidth	0.15 nm typ.
Output Power Variation	< ± 1.0 dB over full wavelength range
Optical Signal Noise Ratio	40 dB typ.
Output Polarization	Unpolarized
Fiber Type	SMF-28
Optical Connectors	FC/APC
Electrical Specifications	
Sweep Voltage Input	12 Vp-p typical
Voltage Input Connector	SMA Female
Mechanical Specifications	
Operating Temperature	-10 °C to +60 °C
Storage Temperature	-50 °C to +70 °C
Display	LEDs for SWL On/Off, Power
Remote Control	Optional RS-232 for laser control & status monitoring
Connector (Power & RS-232)	DB-15 Female
Dimensions	210 mm x 125 mm x 28 mm
Accessories Included	±5 V DC, 1 A max., power supply

Power Output vs Wavelength of SWL-1550-M-W



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## Mechanical Drawing



## FBG Sensor Waveform

