

TWL-C-HP-B-M



DEVICE

C-Band Tunable Wavelength Laser Module, High Performance Version

OVERVIEW

The TWL-C-HP-B-M is a wavelength tunable laser module in C band. The TWL-C-HP-B-M alleviates inventory and costs in high-channel-count DWDM systems by allowing a single device to replace each of the single-channel devices. Full-band tunable assemblies also enable system functionality such as hot back-up and dynamic provisioning. In addition, applications such as optical regeneration and wavelength conversion can be achieved. The HP version also includes a built-in sweep function for continuous scanning applications. The TWL-C-HP-B-M has a low Relative Intensity Noise (RIN), a high Side-Mode Suppression Ratio (SMSR), an ultra narrow linewidth, and excellent wavelength accuracy. A RS232 control complies to OIF ITLA Multi Source Agreement (MSA) standard, with a provided GUI software for intuitive control of the wavelength and optical power. The TWL-C-HP-B-M can be used for Dense Wavelength Division Multiplexing (DWDM) optical transceivers and DWDM discrete line card designs. The TWL-C-HP-B-M requires a single ± 5 Volt DC power supply for operation.

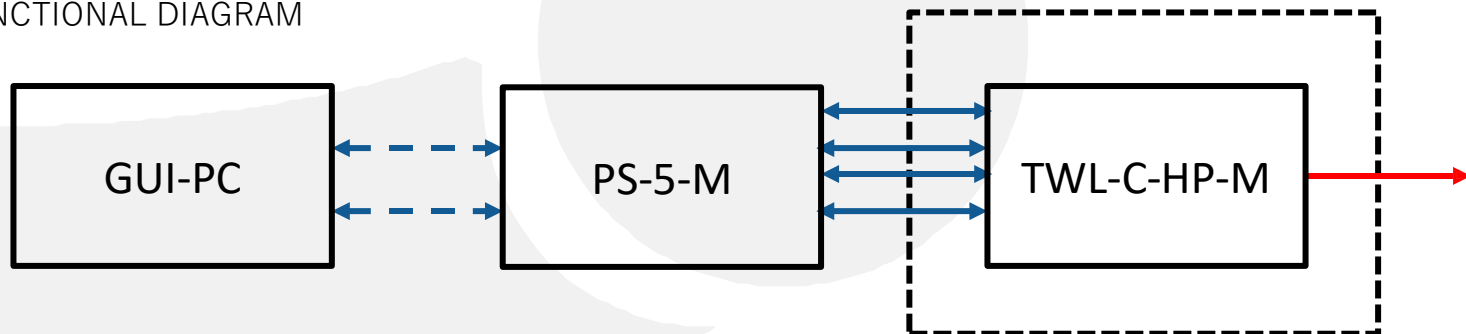
FEATURES

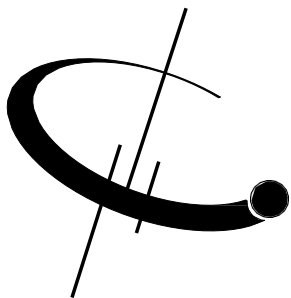
- Excellent Side Mode Suppression Ratio of 55 dB
- Precise Wavelength step resolution of 1 MHz
- Continuous wavelength sweeping function
- Wide wavelength range from 1527.6 to 1567.13 nm
- Polarization Maintaining (PM) Output
- Intuitive and easy to use USB interface
- High optical output power of 50 mW
- Ultra narrow laser line width < 10 kHz

USE IN

- DWDM transmission systems
- Tunable DWDM transponders and transceivers
- Optical spectrum characterization
- Optical packet or burst-mode switching
- Test and measurement equipment
- Fiber sensing and interrogation
- Reconfigurable optical add/drop multiplexers

FUNCTIONAL DIAGRAM





TWL-C-HP-B-M

SPECIFICATIONS

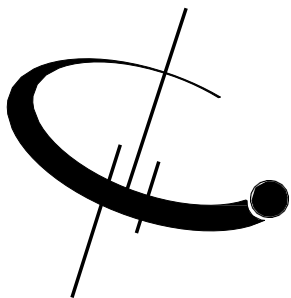
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| Operating Wavelength | 1527.60 nm to 1567.13 nm |
| Wavelength Accuracy | ± 1.5 GHz |
| Fine Tune Wavelength Resolution | 1 MHz |
| Wavelength Stability | ± 1 pm Over 24 Hours |
| Wavelength Sweeping | Continuous Over Full C-Band Range |
| Output Power | 40 mW typ. |
| Output Stability | 0.02 dB over 8 hours |
| Linewidth (FWHM) | <10 kHz instantaneous w/o dither <100 kHz with SBS disabled |
| Carrier Noise Ratio | 50 dBc typical @ -5 dBm |
| Side Mode Suppression Ratio | 55 dB typical |
| Relative Intensity Noise (RIN) | -157 dB/Hz @ 13 dBm |
| Polarization Extinction Ratio | 20 dB minimum |
| Optical Isolation | 30 dB minimum |
| Fiber Type | Panda 1550 PM Fiber |

GENERAL

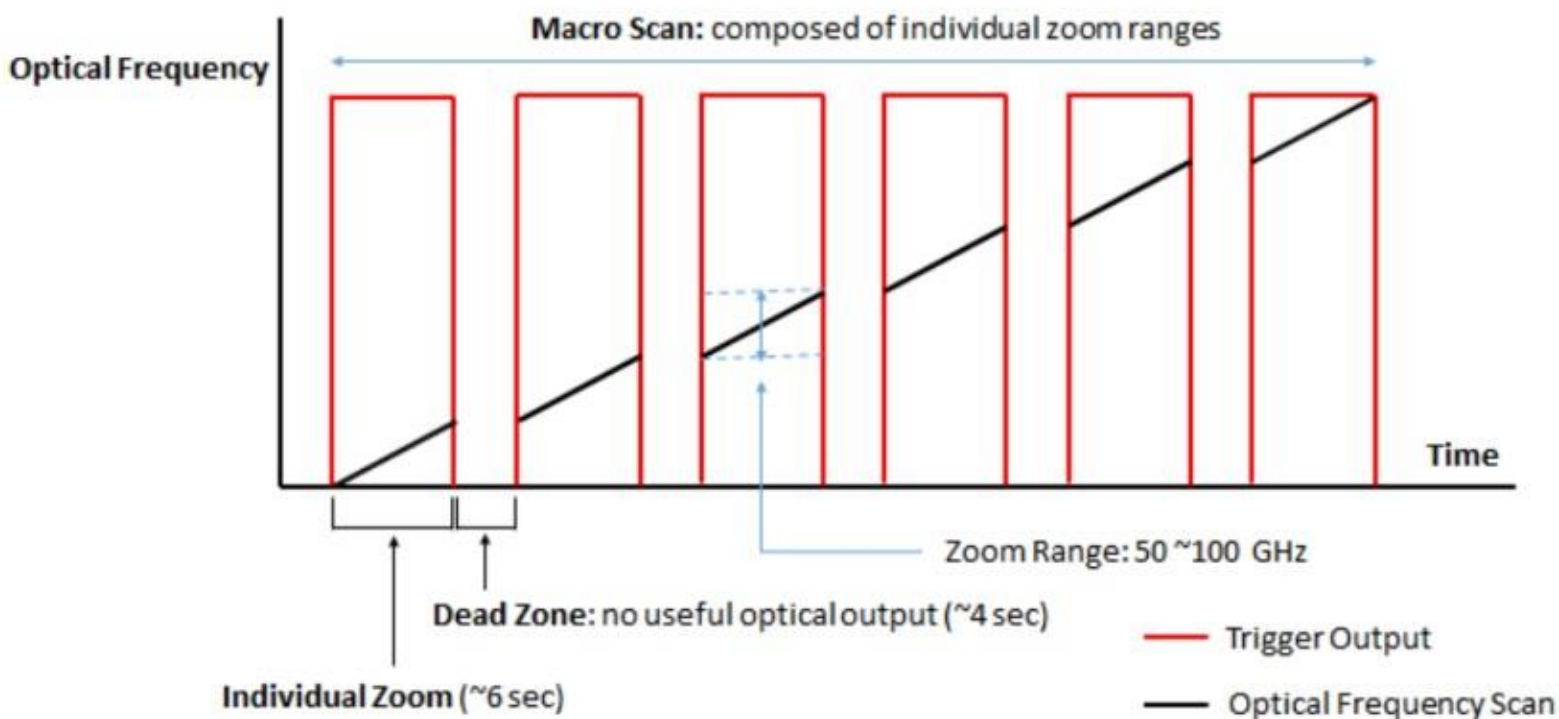
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|---------------------------|---|
| Power Supply Requirements | 100 - 240 VAC |
| Optical Connectors | PM FC/APC standard, additional types available upon request |
| Operating Temperature | 0°C to +40°C |
| Storage Temperature | -40°C to +70°C |
| Control/Monitoring | Output Power Level & Wavelength via GUI Software |
| Communication Interface | RS232 via DB9 Serial or USB 2.0 |
| Power Supply | PS-5-M, +/-5 V Power Supply |
| Local Alarm | Over Temperature, Current Overflow |
| Housing Dimensions | 120mm x 112mm x 32mm |

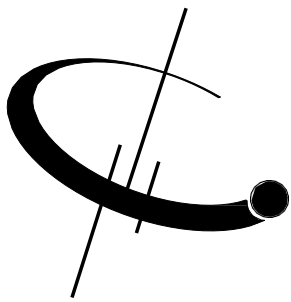
MECHANICAL





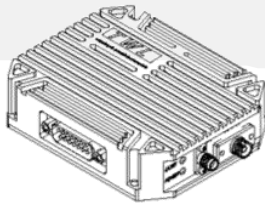
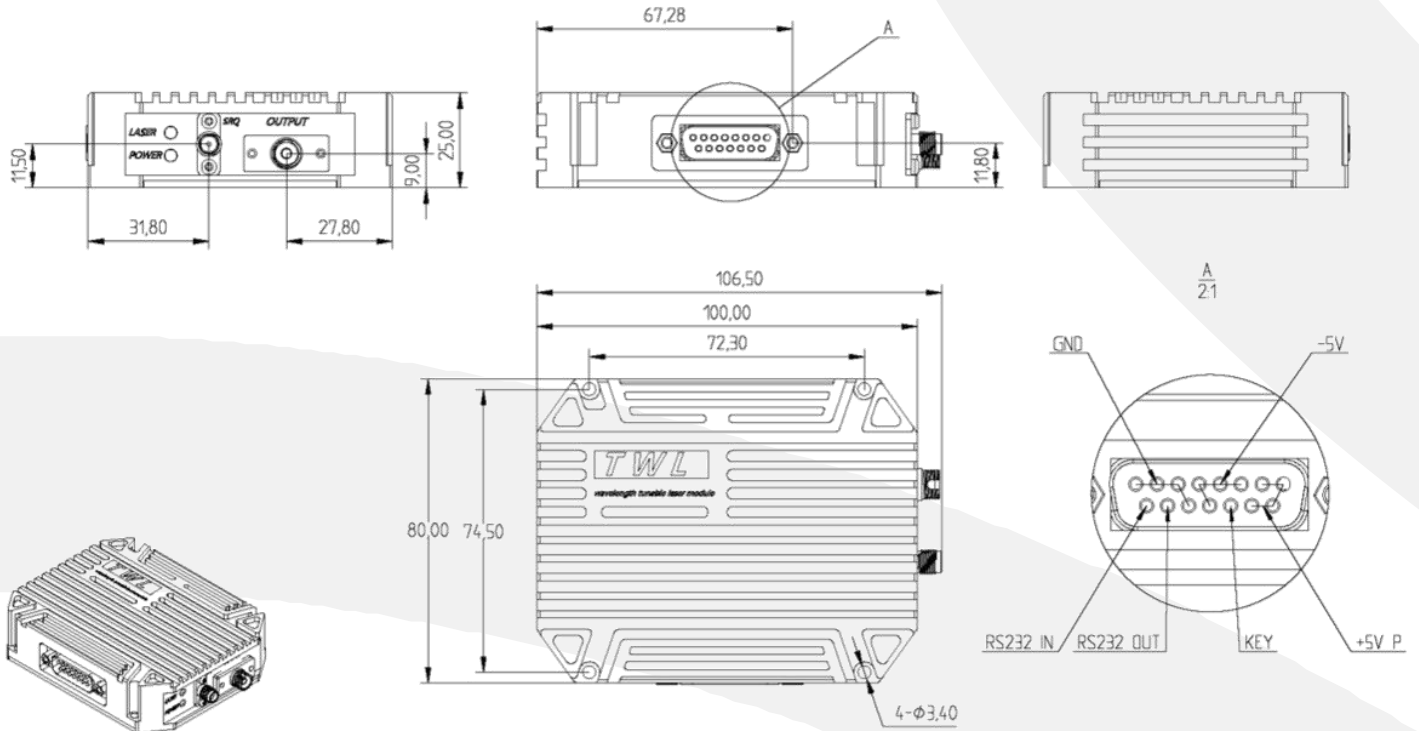
Wavelength Scanning Structure





TWL-C-HP-B-M

MECHANICAL DRAWING



PIN OUT DIAGRAM

