



# TWL-C-HP-B-M



## DEVICE

## C-Band Tunable Laser Module, High Performance Version

## OVERVIEW

The TWL-C-HP-B-M is a wavelength tunable laser module in C-band based on integrable tunable laser assembly (ITLA). 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 to applications of optical regeneration and wavelength conversion, with the HP version also including 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. Its 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. Contact Optilab for more information.

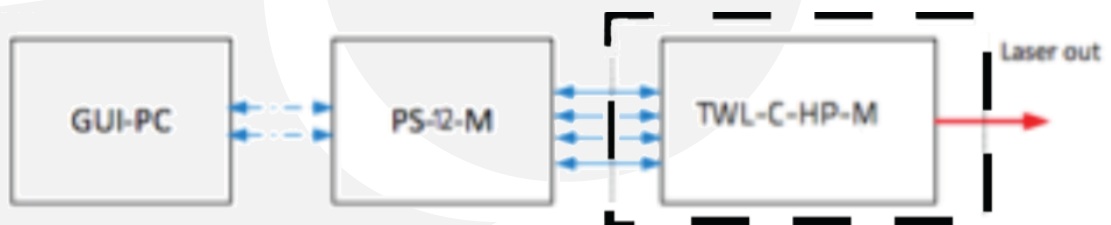
## FEATURES

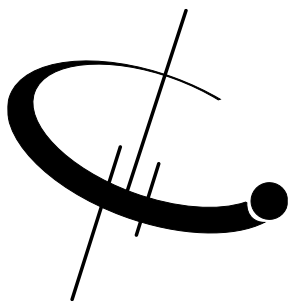
- Wavelength tuning range: 1527.6 – 1567.13 nm
- 1 MHz precise wavelength step resolution
- Continuous wavelength sweeping function
- Polarization Maintaining (PM) output
- Intuitive and easy to use USB interface
- 40 mW high optical output power
- < 10 kHz ultra narrow laser linewidth
- Excellent Side Mode Suppression Ratio of 55 dB

## USE IN

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

## FUNCTIONAL DIAGRAM





# TWL-C-HP-B-M

## SPECIFICATIONS

Operating Wavelength	1527.60 to 1567.13 nm
Wavelength Accuracy	$\pm 1.5$ GHz
Fine Tune Wavelength Resolution	1 MHz
Wavelength Stability	$\pm 1$ 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

## TECHNICAL

Linewidth (FWHM)	< 10 kHz instantaneous w/o dither, 100 kHz with SBS disabled, < 750 MHz w/ SBS enabled
Carrier Noise Ratio	50 dBc typ. @ -5 dBm
Side Mode Suppression Ratio	55 dB typ.
Relative Intensity Noise (RIN)	-157 dB/Hz @ 13 dBm
Polarization Extinction Ratio	20 dB min.
Optical Isolation	30 dB min.
Fiber Type	Panda 1550 PM fiber

## MECHANICAL

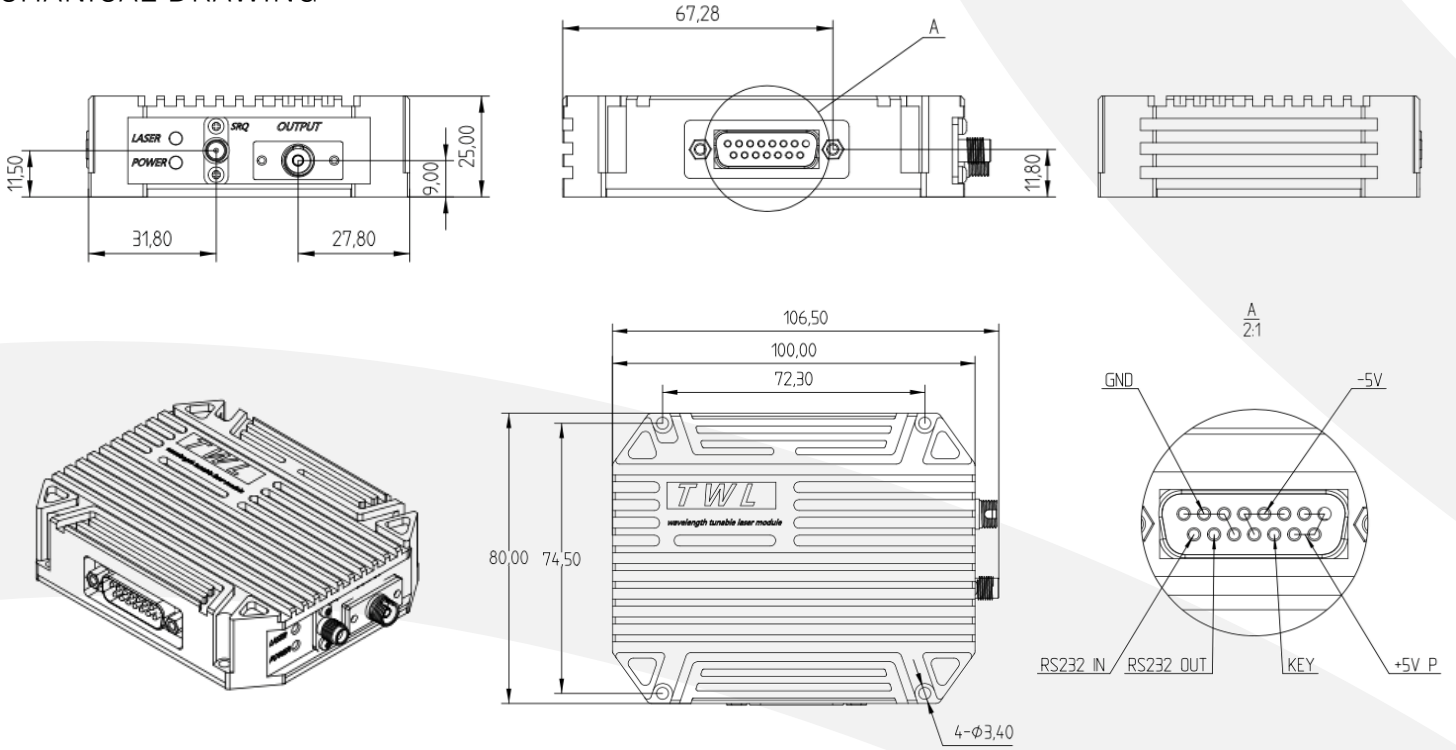
Power Supply Requirements	110 - 240 VAC
Optical Connectors	PM Narrow Key FC/APC standard, additional types available upon request
Operating Temperature	0°C to +40°C
Storage Temperature	-40°C to +70°C
Control/Monitoring	Output power level & wavelength via GUI software
Communication Interface	RS232, via DB9 serial or USB 2.0
Power Supply	PS-12-M, 12 V Power Supply
Local Alarms	Over Temperature, Current Overflow
Housing Dimensions	120 mm x 112 mm x 32 mm





# TWL-C-HP-B-M

## MECHANICAL DRAWING



## PIN OUT DIAGRAM

