BCB-4

DEVICE

Modulator Bias Control Board, Five Bias Mode

OVERVIEW

The Optilab BCB-4 is a compact bias control board designed to maintain the linear operating point of optical intensity modulators. Featuring a compact miniature design for OEM integration, the BCB-4 allows for a stable Q+, Q-, Min, Max, and Manual operation over long periods of time. With a single +5V DC power and RS485 multi-addressing control and monitor interface, the BCB-4 unit is the ideal choice for industrial and OEM applications when paired with any of Optilab's wide variety of optical modulators, contact Optilab for more information.

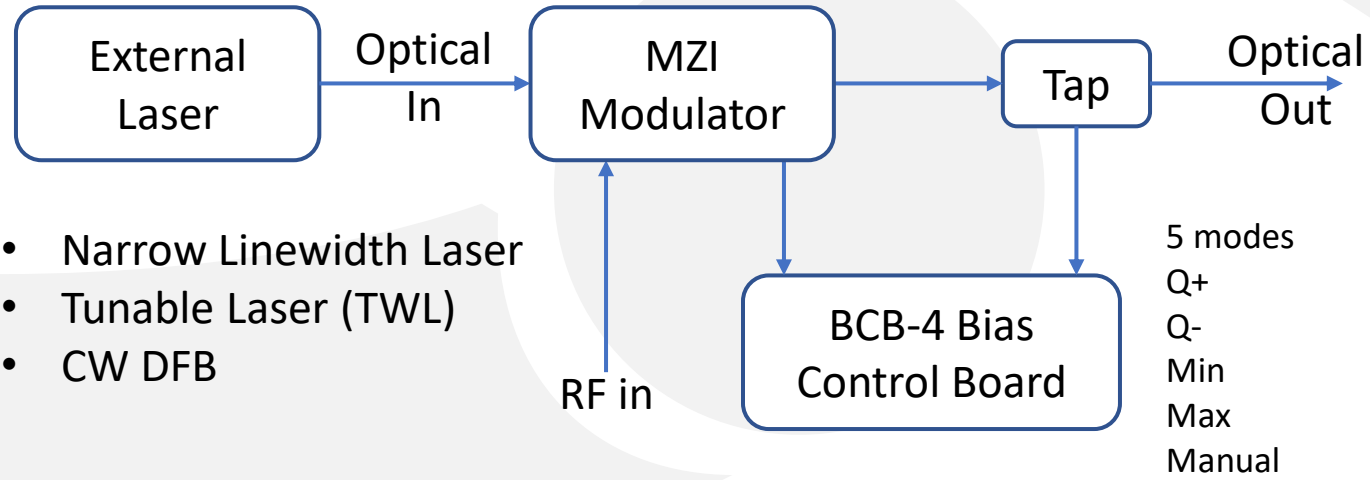
FEATURES

- On-Board Photodiode
- InGaAs based PD (1000-1610 nm)
- Silicon based PD (500-1000 nm)
- NA PD
- RS-485 Control
- Single +5V DC Power
- Q+, Q-, Min., Max., Manual bias setting modes

USE IN

- RF/IF Signal Distribution
- Satellite Communication
- Optical Communications
- Bandwidth RFoF Transmission
- Picosecond Pulse Generation
- High Bandwidth RFoF Transmission
- Pulse picking/gating

FUNCTIONAL DIAGRAM



- Narrow Linewidth Laser
- Tunable Laser (TWL)
- CW DFB

BCB-4

SPECIFICATIONS

GENERAL

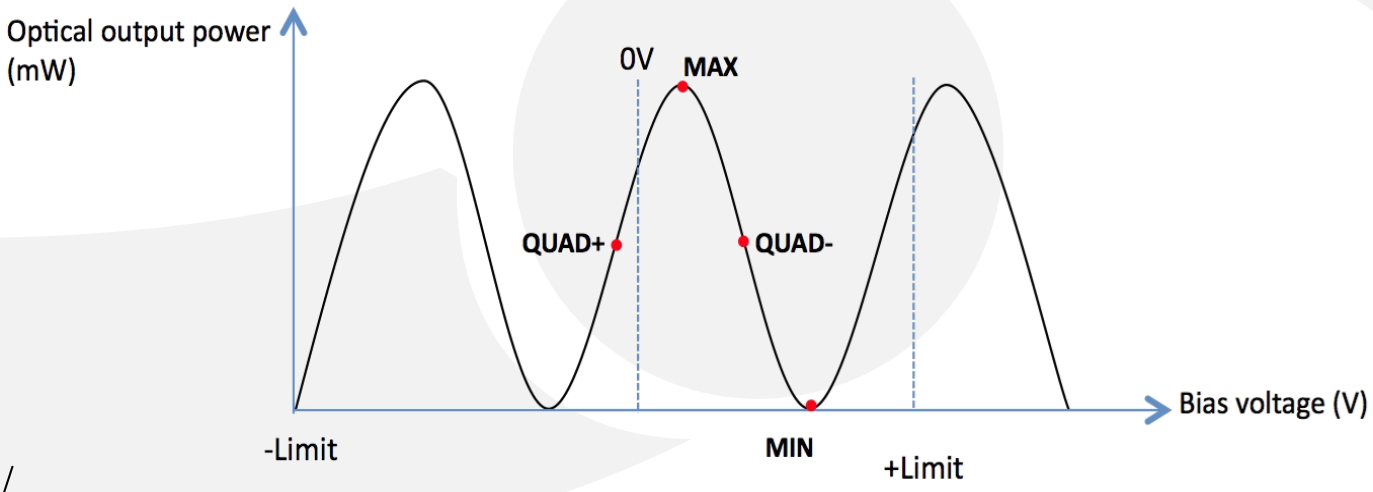
Modulator Type	Mach Zehnder Interferometer
Bias Control Principle	Small Signal Dithering/Phase lock loop
Dither Frequency	1 kHz
Dither Amplitude	20 to 450 mVpp adjustable
Feedback Optical Power @ MAX	-20 to -10 dBm
Bias Output Voltage	± 10 V
Applicable Modulator Bias V_{PI}	1.5 - 8 V

MECHANICAL

Operating Temperature	-10°C to +60°C
Storage Temperature	-60°C to +90°C
Power Supply Requirements	5 V, 100 mA typ.
Control Interface	RS-485
Alarm	LED DC Power status
Dimensions	85 mm x 27.5 mm x 17 mm

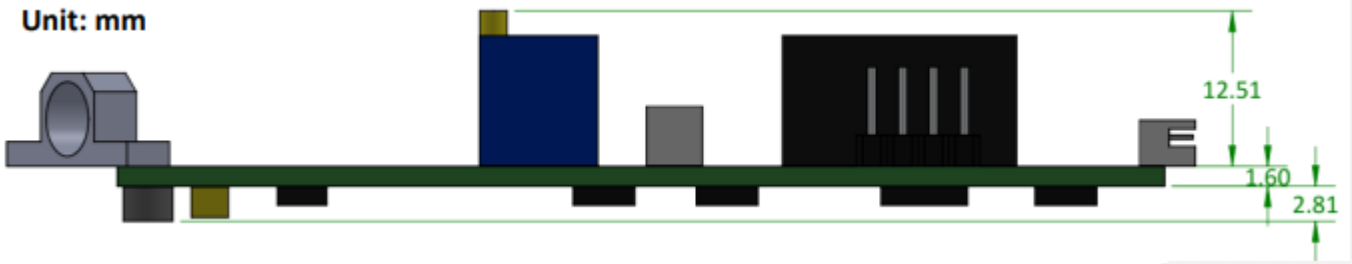
BIAS CONTROL MODE

Mode	Operation Conditions	Modulation Format
Q+	Set to quadrature point of positive slope	Analog, NRZ
Q-	Set to quadrature point of negative slope	Analog, NRZ
Min.	Set to min. point of modulator curve	Pulse, RZ, BPSK
Max.	Set to max. point of modulator curve	Pulse, RZ
Manual	DC voltage	

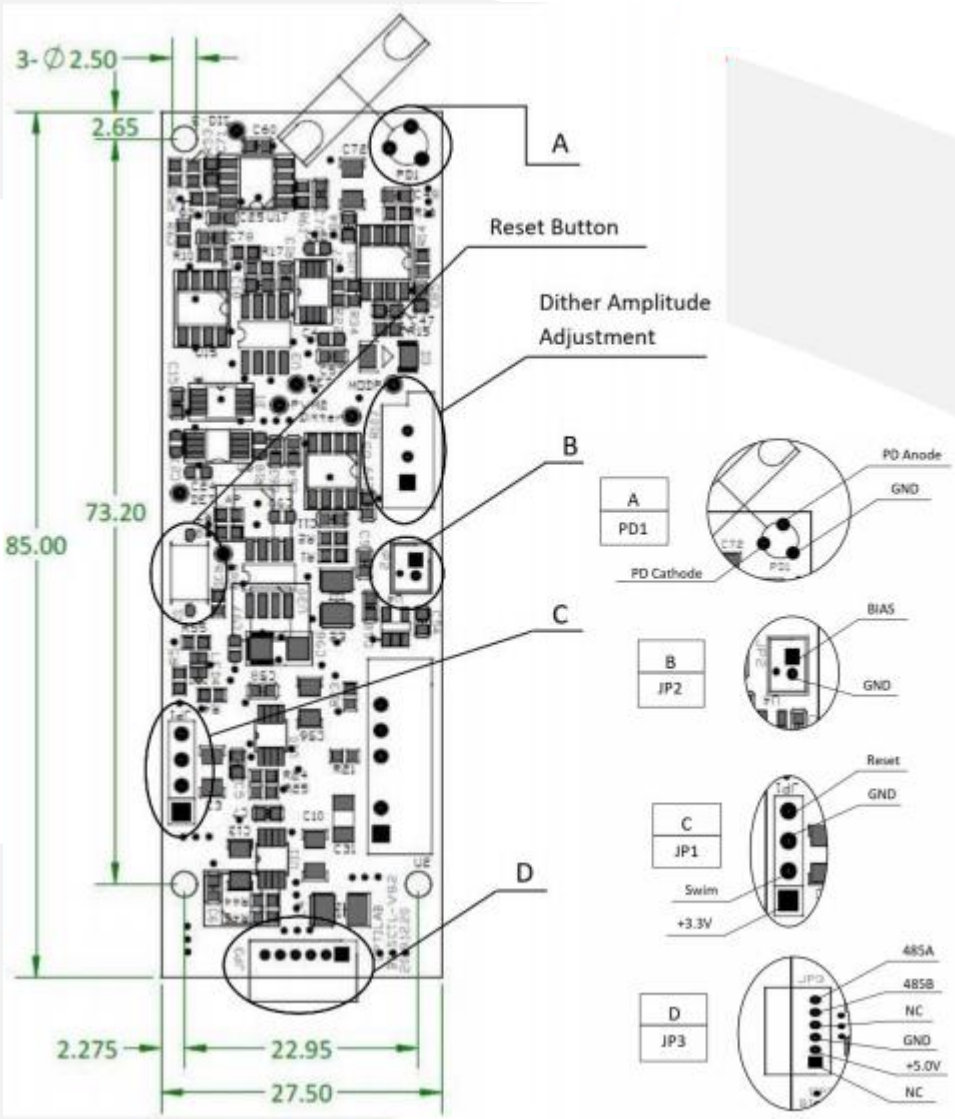


BCB-4

MECHANICAL DRAWING



CONTROL AND PINOUT



BCB-4

PD OPTIONS

Onboard PD

1. None
2. InGaAs based PD (1000-1610 nm)
3. Silicon based PD (500-1000 nm)