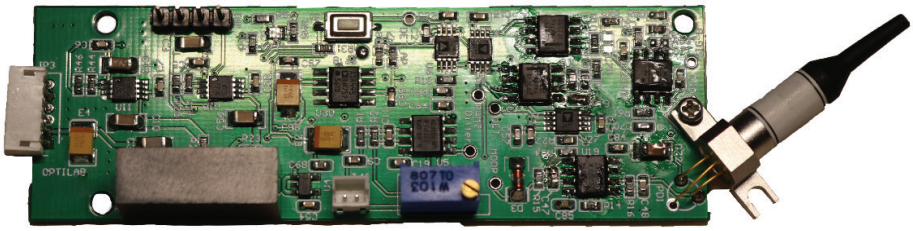
M-CB

Modulator Bias Control Board, Five Bias Mode

The M-CB 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 M-CB 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 M-CB unit is the ideal choice for industrial and OEM applications when paired with any of Newport's wide variety of optical modulators.



Features & Uses

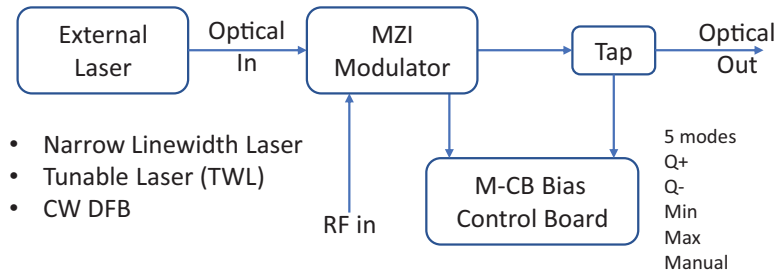
Features

- On-board InGaAs (1000 – 1600 nm) PD for feedback
- RS-485 Control
- Single +5V DC Power
- Q+, Q-, Min., Max., Manual bias setting modes

Benefits of Use

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

Function Diagram



Specifications

GENERAL

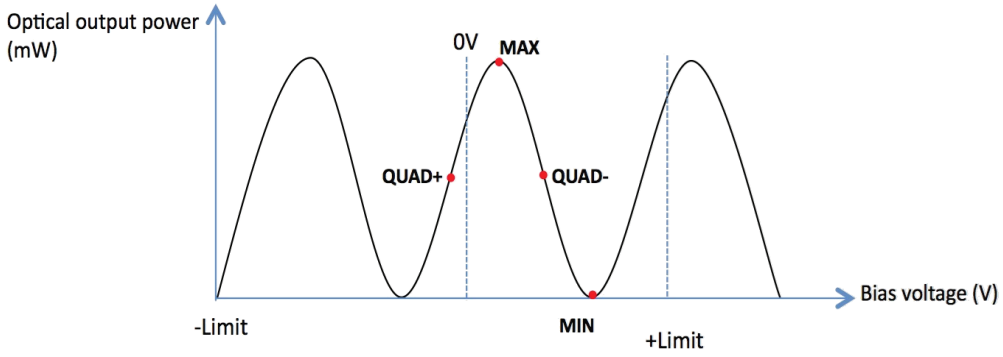
Modulator Type	Mach Zehnder Interferometer
Bias Control Principle	Small Signal Dithering/Phase lock loop
Dither Frequency	1 kHz
Dither Amplitude	20 to 450 mVpp adjustable
Feedback Optical Power @ MAX	-20 to -10 dBm
Bias Output Voltage	± 10 V
Applicable Modulator Bias VPI	1.5 - 8 V

MECHANICAL

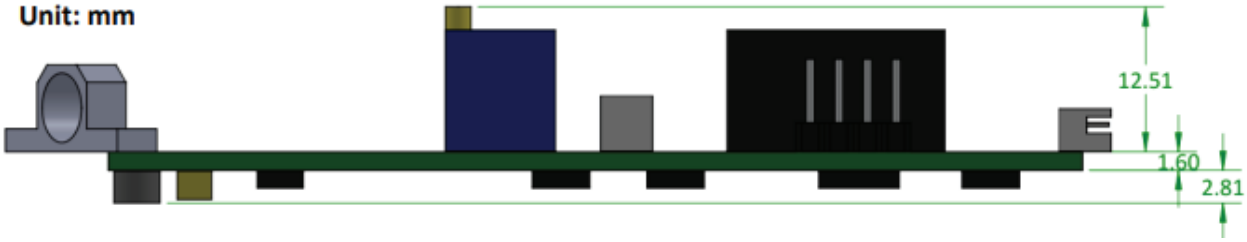
Operating Temperature	-10°C to +60°C
Storage Temperature	-60°C to +90°C
Power Supply Requirements	5 V, 100 mA typ
Control Interface	RS-485
Alarm	LED DC Power status
Dimensions	85 mm x 27.5 mm x 17 mm

BIAS CONTROL MODE

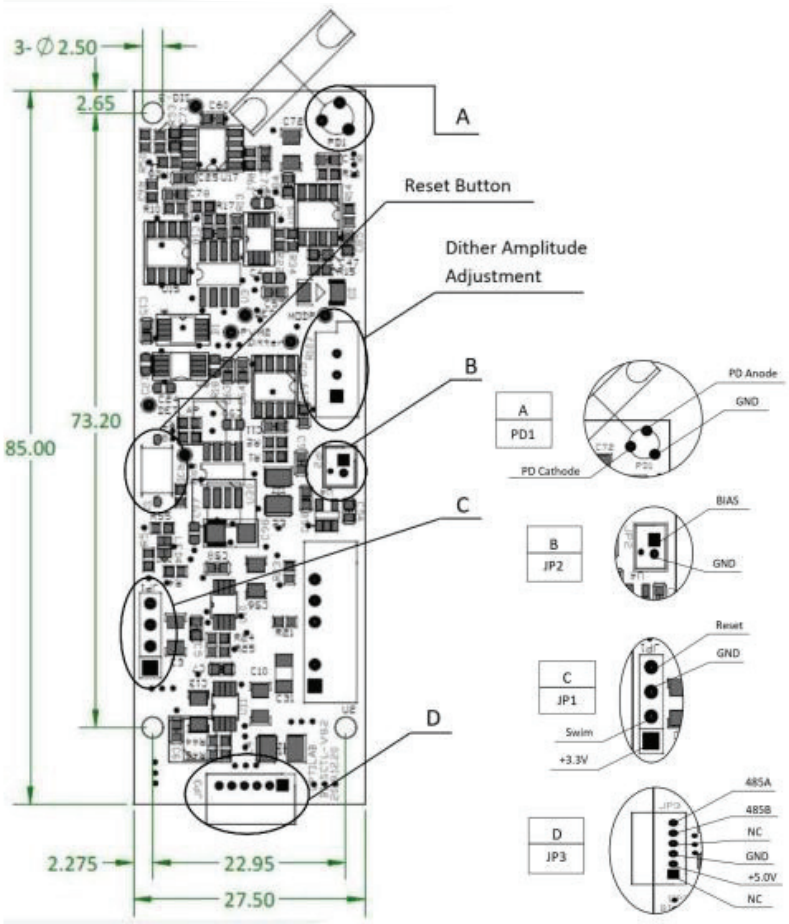
Mode	Operational Conditions	Modulation Format
Q+	Set to quadrature point of positive slope	-Analog, NRZ
Q-	Set to quadrature point of negative slope	Analog, NRZ
Min.	Set to min. point of modulator curve	Pulse, RZ, BPSK
Max.	Set to max. point of modulator curve	Pulse, RZ
Manual	DC voltage	



Mechanical Drawing



CONTROL AND PINOUT



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