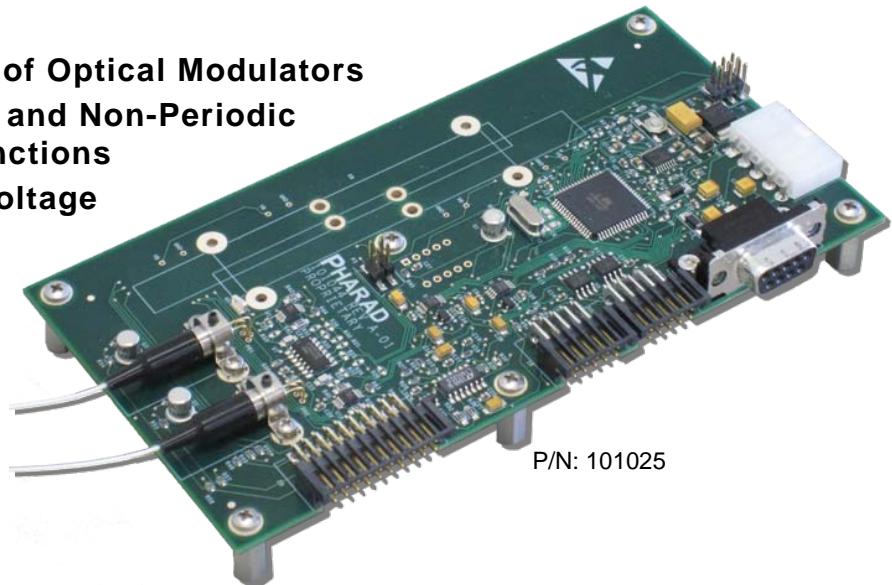


# Compact Dither-Free Modulator Bias Controller

## Features and Benefits

- Precision Bias Control of Optical Modulators
- Operates with Periodic and Non-Periodic Modulator Transfer Functions
- User Selectable Bias Voltage
- Dither-Free Operation
- Compact Form Factor
  - Modulator mounts directly to board
- Onboard Power and RS-232 Connections



Pharad's **octane**<sup>®</sup> Dither-Free Bias Controller is a compact circuit for OEM applications that provides accurate and highly stable bias voltage control of optical modulators. As the bias point drifts over time, the Bias Controller automatically adjusts the bias voltage to maintain its set point. Non-dither based control in conjunction with two on-board photodiodes ensures unwanted dither tones do not impact link performance. The Bias Controller allows for the direct mounting of the optical modulator onto the small footprint circuit board and can be used in conjunction with both periodic and non-periodic transfer functions. Users can select a range of modulator bias voltages, in addition to the more conventional quadrature bias point of the modulator's transfer function characteristic. Onboard power and RS-232 connections allow simple operation with user supplied external optical couplers.

## SPECIFICATIONS

	Min	Typ	Max	Unit
<b>Input Optical Power (pre-modulator)</b>	-15	0	3	dBm
<b>Input Optical Power (post-modulator)</b>	-15	0	3	dBm
<b>Modulator Bias Phase Stability</b>		± 0.5	1.0	degree
<b>Reconfigurable Bias Phase<sup>1</sup></b>	20	90	160	degree
<b>Modulator DC Bias Voltage Range</b>	-12		+12	V
<b>Power Supply Voltage</b>		±12		VDC
<b>Operating Temperature</b>	0		70	°C
<b>Dimensions</b>	6.275 (L) × 3.25 (W) × 1.012 (H)			inches
<b>Communications</b>	RS-232			

<sup>1</sup>Quadrature = 90 degrees. Bias phase can be selected for positive or negative slope of modulator transfer characteristic.

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