

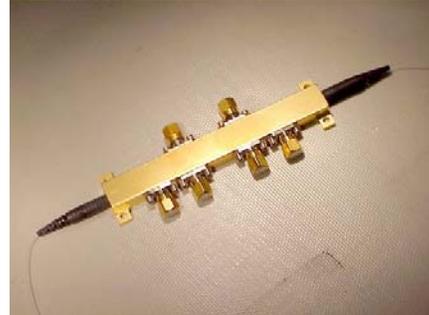
Mach-10™ 060: Dual Parallel Modulator

7.1.2.SP.0060 Rev C

Preliminary Model

Description

COVEGA's Dual-Parallel Modulator is part of the Mach-10™ product line, a family of high performance, Telcordia compliant external optical modulators with industry leading long-term stability. The modulator consists of two Mach Zehnder Interferometers (MZI's) in parallel and is designed for quadrature modulation (QPSK or 4QAM) and single side-band suppressed carrier (SSB-SC) transmission. The Dual-Parallel Modulator is fabricated using titanium-indiffused lithium niobate substrates. Each MZI has an independently controlled bias section to achieve maximum performance.



Applications

- ✓ (D) QPSK Transmission for Telecom
- ✓ SSB-SC Transmission for Telecom

Features

- Dual, parallel MZIs on a single x-cut lithium niobate chip
- Separate DC bias for both MZIs
- High Reliability - Long-Term Bias Stability
- Hermetic Packaging

Ordering Information

Mach-10 060-10-X-X-X					
Part #	Bandwidth	Output Fiber Type	Input Connector	Output Connector	
060	10 = 10 GHz	S = SMF*	S = SC/PC*	S = SC/PC*	
		P = PMF	B = Bare Fiber	B = Bare Fiber	
			F = FC/uPC	F = FC/uPC	
			L = LC/PC	L = LC/PC	
			A = FC/aPC	A = FC/aPC	
			M = Mu	M = Mu	
* Default options unless otherwise specified					

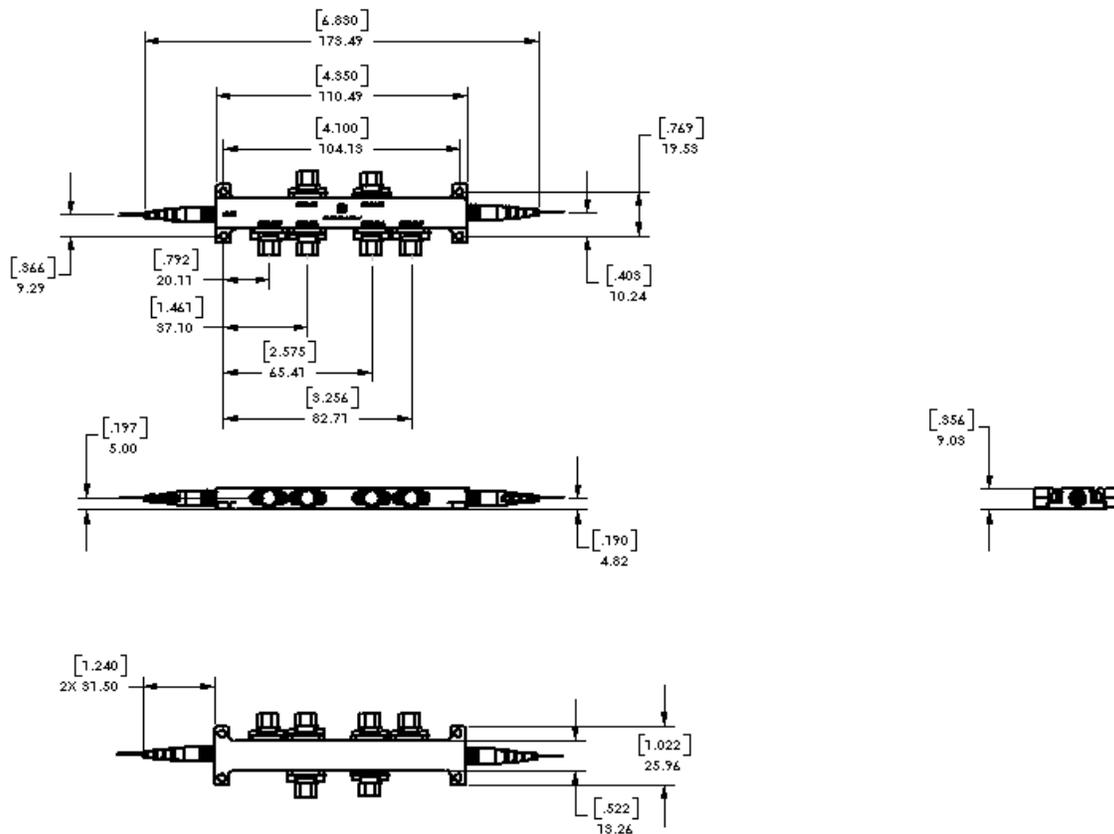
Mach-10™ 060

Specifications

Parameter		Min	Typ	Max	
Operating Case Temperature	T_{CASE}	0		70	C
Operating Wavelength	λ	1525		1575	nm
Optical Insertion Loss (Connectorized)	I.L.		5.5	7.0	dB
Insertion Loss Variation (EOL)	Δ I.L.	-0.5		0.5	dB
Optical Return Loss		40			dB
Optical Extinction Ratio (@ DC) per MZI	E.R.	20			dB
V_{π} RF Ports (@ DC)			6.5	7.5	V
V_{π} RF Ports (@ 1GHz)			6.5	7.5	V
V_{π} Bias Ports (@ DC)			4.5	5.5	V
RF Port S11			-12	-10	dB
Bandwidth (-3 dB with Linear Fit)		10			GHz

SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

Packaging



Dimensions in mm unless otherwise specified; Tolerances are ± 0.05 (decimals) ± 1 (angles)