

PowerBit™ F10-Z

10-12.5 Gb/s Chirped Intensity Modulator

Features:

- -0.7 Chirp for Extended Spans (< 2 dB Penalty at 1600 ps/nm)
- Fully Compatible with F10-0 (both Mechanically and Electrically)
- Low Drive Voltage
- C- and L-band Operation
- Enhanced E/O Bandwidth for up to 12.5 Gb/s Modulation Speed (sFEC)
- Low Insertion Loss
- High Dynamic Extinction Ratio
- Integrated Polarizer
- Integrated Monitor Photodiode
- Surface Mountable with Gull-Wing DC Pins
- GPO RF Connector

Applications:

- External Intensity Modulation up to 12.5 Gb/s (NRZ and Electrical RZ)
- Uncompensated Metro-Links up to 1600 ps/nm Dispersion Load (approx. 100 km)
- SDH/SONET-DWDM Systems
- Long Reach 12.5 Gb/s MSA Transponders with sFEC



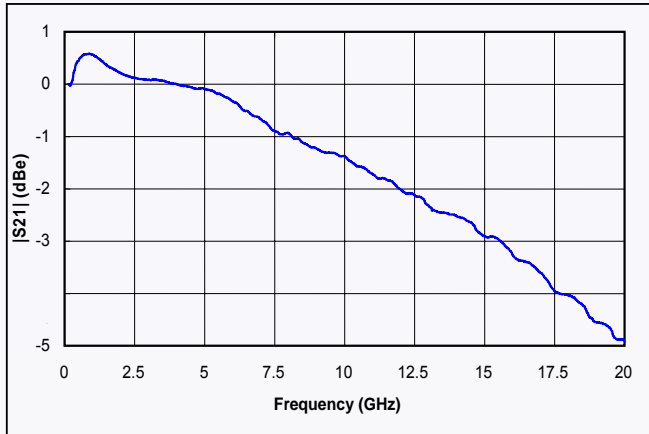
Oclaro' F10-Z is a pre-chirped, Z-cut single-drive external modulator for applications up to 12.5 Gb/s that require highest levels of performance and reliability.

The F10-Z modulator uses Oclaro's standard F10 package for 4" 300-pin MSA transponders, making it a very cost-effective solution. The electrical and mechanical interface of the F10-Z is fully compatible with existing transponder designs that support Oclaro F10 X-cut modulators.

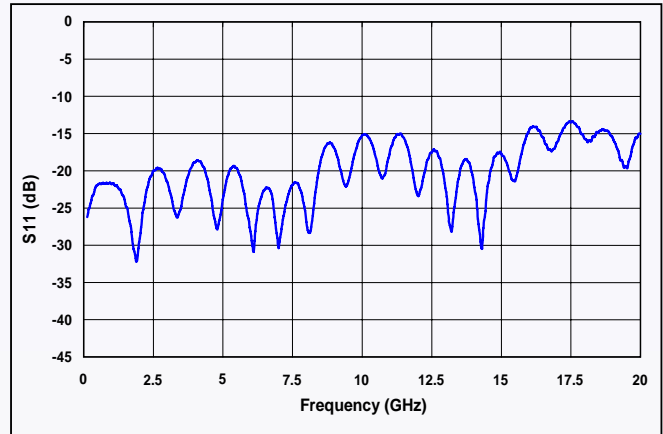
Suitable driver amplifiers are available through Oclaro recommended vendors.

Performance Characteristics

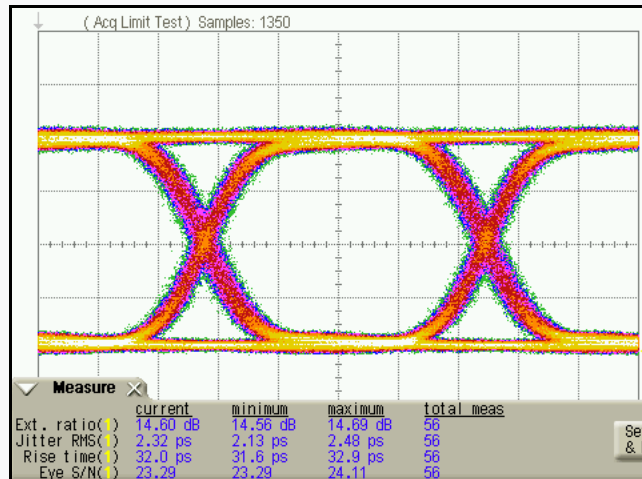
Electro Optical Response



Electrical Return Loss



Eye Diagram (Back to Back)



Absolute Maximum Ratings

Parameter	Conditions	Min	Max	Unit
Input Power (Electrical)	RF-Port / AC Coupled		25	dBm
Input Power (Optical)	CW		100	mW
Operating Temperature Variation Rate			1	°C/min
Storage Temperature Range		-40	85	°C
Operating Temperature Range		-5	75	°C

Specifications

Parameters		Units
Optical		
Operating Wavelength	C+L	
Insertion Loss	3.5	dB
Chirp*	-0.7	
Opt. Return Loss	≤ -45	dB
Electrical		
S ₂₁ Electro Optical Bandwidth (-3 dBe)	≥ 11	GHz
S ₁₁ Electrical Return Loss	≤ -10	dB
RF V _π Voltage (@ 1 kHz)	3.5	V
Bias V _π Voltage (@ 1 kHz)	≤ 5.0	V
PRBS Electrical Drive Voltage (Vamp)	4.7	V
RF Input Impedance	50	Ω
Photodiode Responsiveness (referred to output power)	≥ 1	mA/Watt
Photodiode Linearity	± 10%	

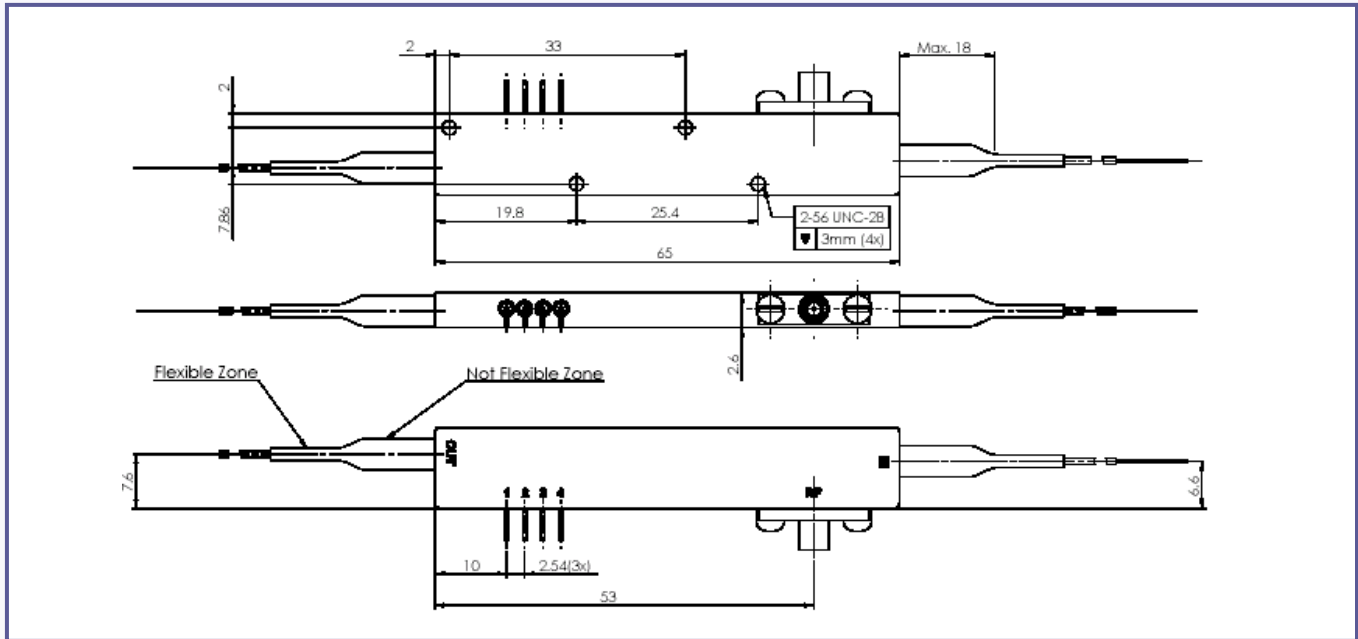
Note 1: Values presented are typical unless otherwise indicated.

Connector and Fiber Specifications

RF input port	GPO
Bias and PD Connector	Lead Pins (gull wing or straight)
Input fiber	Corning/Fujikura SM15P UV/UV400
Output fiber	Corning SMF-28 ¹

Note 1. Other configurations available on request.

Package Footprint (standard "F"-type)



Ordering Information

Part Number	
Pre-chirped (-0.7)	F10-Z-13P-Px-yyzz-01

Pre-chirped	See dedicated datasheet or ask for further information		
yy; zz	Input; Output Connectors	NC = No Connectors FP = FC/PC FA = FC/APC SP = SC/PC SA = SC/APC	Other connector s available upon request; all connectors on PM fiber are polarization maintaining
x	Output fiber	S = SMF, P= PMF	Ask about PMF Availability

Contact Information

Worldwide Headquarters

2584 Junction Avenue
 San Jose
 CA 95134
 USA

Tel: +1 408 919 1500
 Fax: +1 408 919 1501

www.oclaro.com
sales@oclaro.com

Important Notice

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