

PowerBit™ XS10-Z

10 - 12.5 Gb/s Chirped Intensity Modulator for 3" MSA Transponders

Features:

- Ultra Small Form Factor for 3"-MSA Transponders
- Reliable Z-cut LiNbO₃ with Titanium Indiffused Waveguides
- C- and L-band Operation
- Integrated Polarizer for High Extinction Ratio
- Low Insertion Loss
- High Electro-Optic Bandwidth
- -0.7 chirp for extended Spans (< 2 dB penalty at 1600 ps/nm)
- Mechanically and electrically fully compatible with 0-chirp XS10-0
- Integrated Photodiode for Bias- and Powermonitoring
- Suitable for Pluggable TRx Solutions
- Large Bandwidth allows for sFEC

Applications:

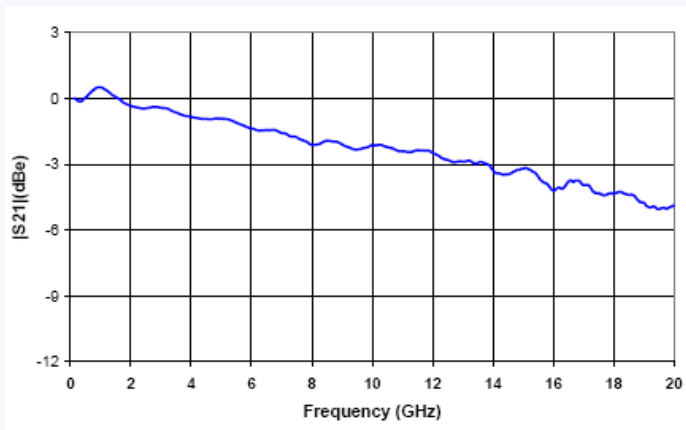
- 3"-MSA STM-64/OC-196 Transponders for Long and Ultra Long Haul Application
- Uncompensated Metro-Links up to 1600 ps/nm Dispersion Load (approx. 100 km)
- Ideal with Tunable Lasers



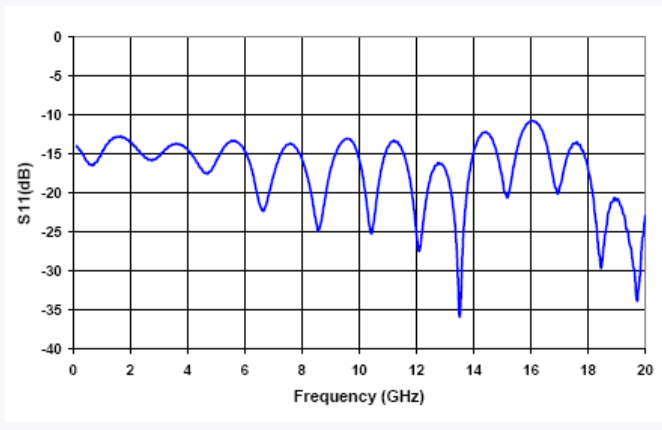
The XS10-Z is the pre-chirped ("Z-cut") member of the XS10-family, that supports SFF 3"-MSA Transponders with the superior performance of LiNbO₃ modulators. It combines the outstanding performance and reliability of the Oclaro standard Z-cut Lithium Niobate modulators with the ultra small form factor of the "XS10"-family, which is suitable also for pluggable transceivers.

Performance Characteristics

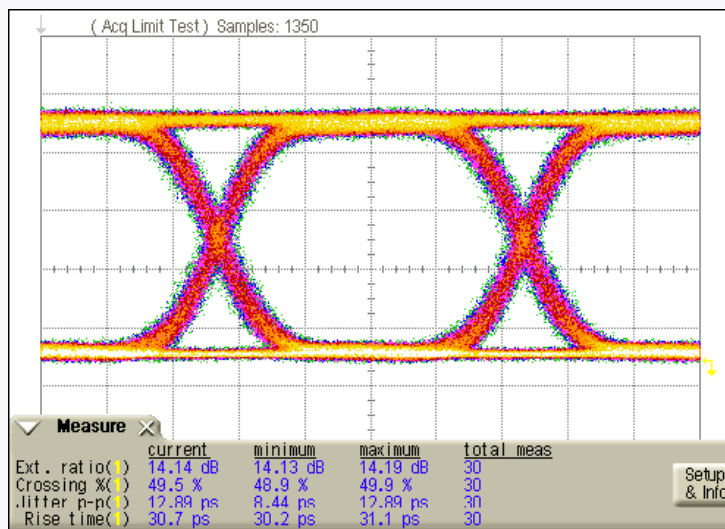
Electro Optical Response



Electrical Return Loss



Eye Pattern



Absolute Maximum Ratings

Parameter	Conditions	Min	Max	Unit
Maximum Input Power (Electrical)	RF Port		25	dBm
Maximum Input Power (Optical)			100	mW
Maximum Operating Temperature Variation Rate	CW		1	°C/min
Storage Temperature Range		-40	+85	°C
Operating Temperature Range		0	+70	°C

Specifications

Parameters		Units
Optical		
Operating Wavelengths Range	C- and L-Band	
Insertion Loss	4	dB
Extinction Ratio (DC), 0-chirp version	≥20	dB
Optical Return Loss (without connectors)	≥45	dB
Electrical		
S ₂₁ Electro Optic Bandwidth (-3 dBe)	12.5	GHz
S ₁₁ Electrical Return Loss	≤- 10	dB
RF V _π Voltage (@ 1 kHz)	4.0	V
Bias V _π Voltage (@1 kHz)	4.5	V
Dynamic Extinction Ratio	14	dB
10.7 Gb/s PRBS Electrical Drive Voltage (Vamp)	5.0	V

Note 1: Where not specified, parameters are measured at 25°C.

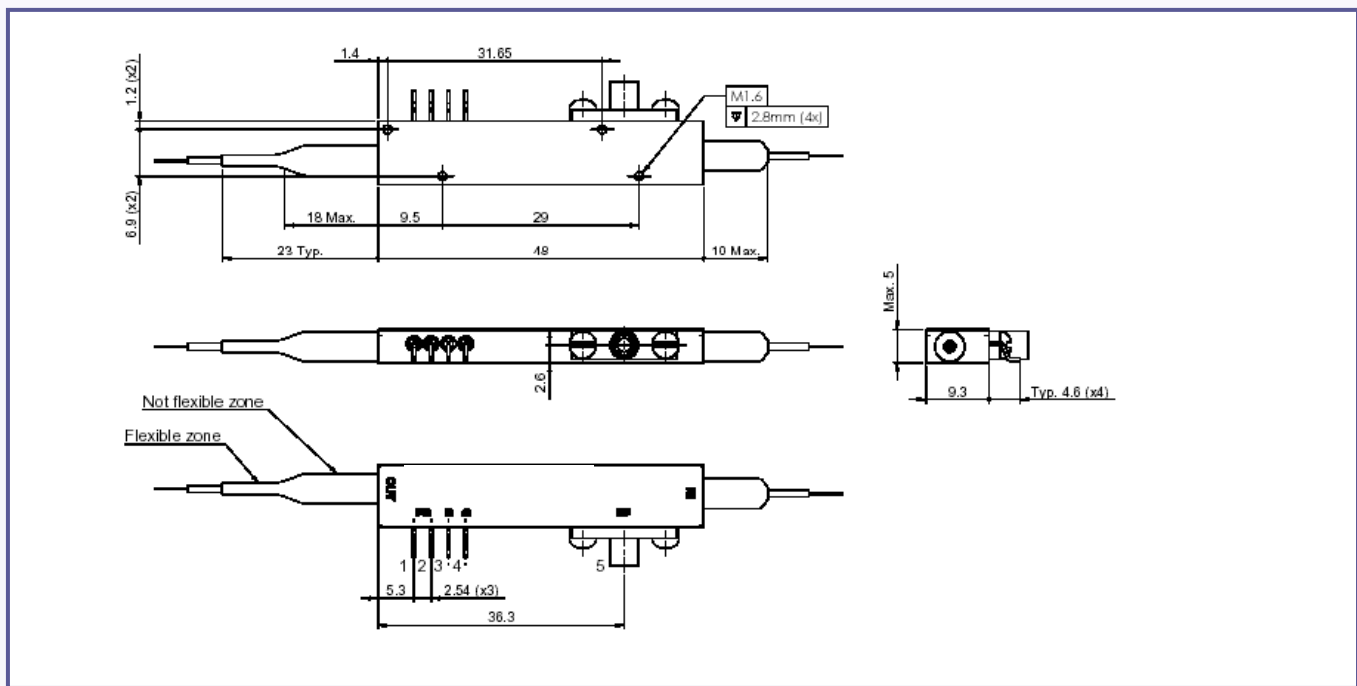
Note 2: Values presented are typical unless otherwise indicated.

Connector and Fiber Specifications

RF Input Port	GPO
Bias Connector	Solder pins
Input Fiber	Corning/Fujikura SM15P UV/UV400
Output Fiber	Corning SMF-28 [™] or single mode ITU-TG.652 ¹

Note 1: Other fibers, like "high bending", available on request.

Package Footprint (standard "F"-type)



Pin-Out

Pin #	Sym	Description
1	PD	Photodiode Cathode
2	PD	Photodiode Anode
3	B	Bias
4	G	Ground
5	RF	RF Input (GPO Male)

Ordering Information

Part Number
XS10-Z-13P-PS-yyzz-01

yy; zz	Input; Output Connectors		Ask for available connector types
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Contact Information

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Important Notice

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