


[CONTACT US](#)7910507-A [PRODUCTS](#)[APPLICATIONS](#)[MARKETS](#)[MEDIA ROOM](#)[COMPANY](#)[INVESTORS](#)[CAREERS](#)[CONTACT US](#)

This website uses cookies to make your browsing experience better. By using our site you consent to our use of cookies.

[Learn More](#)

AGREE

[HOME](#)

SEARCH

ENTER YOUR KEYWORDS

7910507-A



Displaying 1 result

[40G Intensity Modulator \(SD40\)](#)

40G Intensity Modulator SD40 Data Sheet [www.lumentum.com](#) 2 This leading edge 40G intensity modulator is a key building block for next generation optical communication networks The unique x-cut zero-chirp modulator enables leading uncompensated transmission distances and high channel counts in long- and ultra-long-

<https://resource.lumentum.com/s3fs-public/technical-library-items/sd40-ds-oc-ae.pdf>

This website uses cookies to make your browsing experience better. By using our site you consent to our use of cookies.

[Learn More](#)

AGREE

Products

[Optical Communications](#)[Commercial Lasers](#)[Diode Lasers](#)

Applications

[Optical Communications](#)[Commercial Lasers](#)[Diode Lasers](#)

Markets

[Cloud and Networking](#)[Advanced Manufacturing](#)[3D Sensing](#)

Media Room

[News Releases](#)[In The News](#)[Events](#)[Videos](#)[Awards and Recognition](#)

Company

[Leadership](#)[Corporate Responsibility](#)[Quality](#)[Office Locations](#)[Contact Us](#)

Investors

[Corporate Governance](#)[Financial News Releases](#)[Quarterly Results](#)[SEC Filings](#)[Events and Presentations](#)[Stock Information](#)[FAQs](#)

Careers

[Opportunities](#)[Working at Lumentum](#)[University Relations](#)

© 2020 Lumentum Operations LLC

[Legal](#)[Privacy Policy](#)[Sitemap](#)

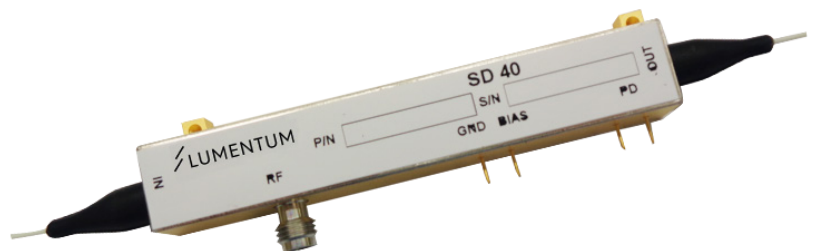
This website uses cookies to make your browsing experience better. By using our site you consent to our use of cookies.

[Learn More](#)

AGREE

40G Intensity Modulator

SD40



This leading edge 40G intensity modulator is a key building block for next generation optical communication networks. The unique x-cut, zero-chirp modulator enables leading uncompensated transmission distances, and high channel counts in long- and ultra-long-haul DWDM networks. Chirp-free signal generation provides high dispersion tolerance and minimum channel crosstalk. LiNbO_3 is also the technology of choice when optimum transmission quality is required on shorter reaches. Advanced process technologies are applied to achieve maximum feasible electro-optic bandwidth while maintaining the low drive voltage and low insertion loss of classical x-cut modulators. Well matched driver amplifiers are available through Lumentum recommended partners.

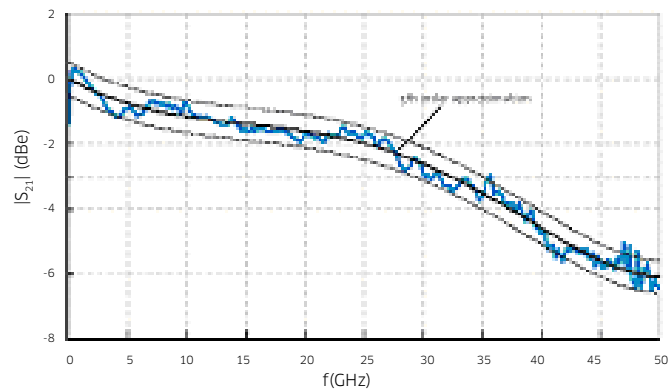
Key Features

- Titanium-indiffused waveguides
- X-cut, single drive
- C- and L-band operation
- Extended bandwidth for FEC
- Zero chirp, no spectral broadening
- Small footprint
- Low drive voltage, matched drivers available
- High extinction ratio
- Integrated photodiode
- Allows highest power into the fiber
- V connector

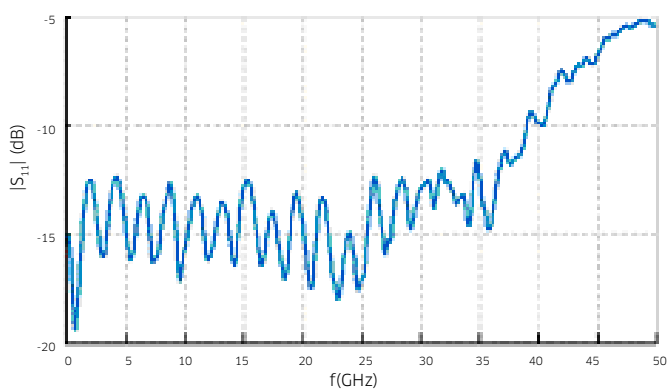
Applications

- Chirp-free external NRZ intensity modulation
- Terrestrial and submarine long- and ultra-long-haul systems
- WDM over C and L band
- Data encoder for double stage RZ modulators

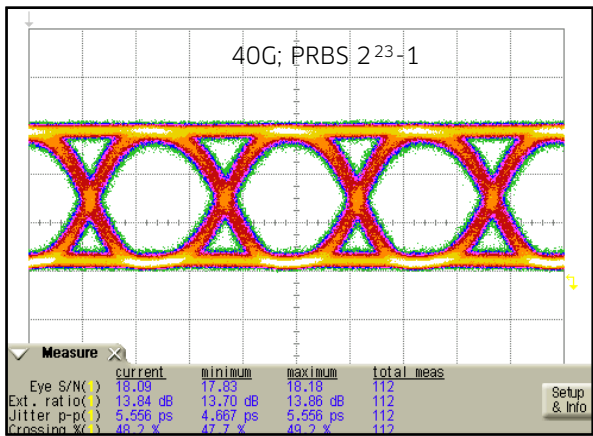
Performance Characteristics



Electro optical response



Electrical return loss



Eye diagram

Absolute Maximum Ratings

Parameter	Conditions	Min	Max	Unit
Maximum input power (electrical)			25	dBm
Maximum input power (optical)	CW		100	mW
Maximum operating temperature variation rate			1	°C/min
Storage temperature range		-40	+85	°C
Operating temperature range		0	+70	°C

Specifications

Parameters	Typical	Units
Optical		
Operating wavelength range	C and L band	
Insertion loss	3.2	dB
Extinction ratio (DC)	≤ -10	dB
Dynamic extinction ratio	≥ 12	dB
Optical return loss (without connectors)	≥ 45	dB
Chirp	± 0.1	
Electrical		
S_{21} electro-optic bandwidth (-3 dBe)	30	GHz
S_{11} return loss (V-Connector)	≤ -10	dB
RF V voltage (@ 1 kHz)	5.0	V
Bias V voltage (@ 1 kHz)	5.5	V
PRBS electrical drive voltage (V_{amp})	5.5	V
Input connector impedance	50	Ω
Photodiode responsivity	10^{-3}	A/W

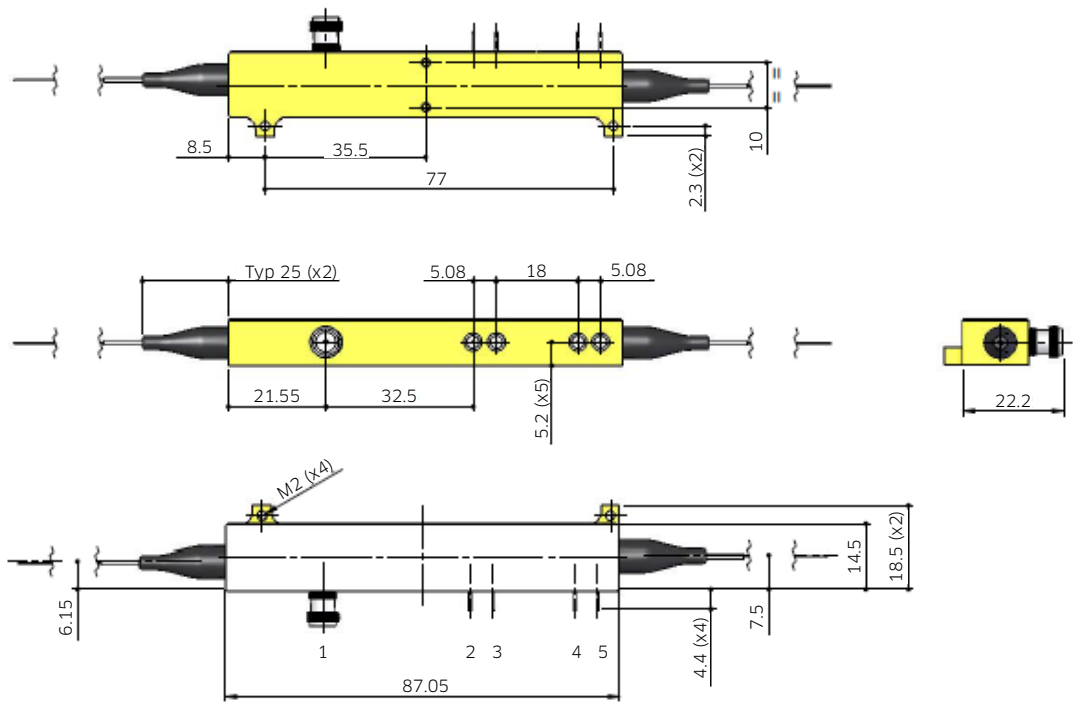
Where not specified, parameters are measured at 25 °C.

Pin-Out and Fiber Specifications

RF connector	V-Connector ¹ (GPPO on request)
Bias and PD connector	LEAD pins
Input fiber	Corning/Fujikura SM15P UV/UV250 (Panda fiber)
Output fiber	Corning/Fujikura SM15P UV/UV250 (Panda fiber)

Note 1. V-Connector is a registered trademark of the Anritsu Corporation.

Package Footprint



Pin #	Description
1	RF input
2	Ground
3	Bias
4	Photodiode cathode
5	Photodiode anode

Ordering Information:

For more information on this or other products and their availability, please contact your local Lumentum account manager or Lumentum directly at customer.service@lumentum.com.

Product Description	Part Number
40G intensity modulator, SD40	7910507-A

