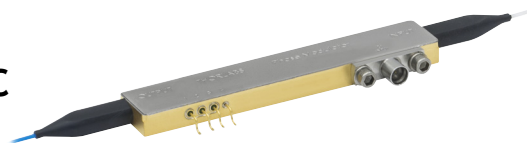


10 GHz Phase Modulator, FC/PC Connectors

LN65S-FC



Description

The LN65S-FC is a broadband LiNbO₃ z-cut phase modulator designed to support operation at 1550 nm. The electro-optic response (S₂₁) is smooth from DC to 15 GHz. The input fiber is polarization-maintaining (PM), and the output fiber is standard single mode fiber; both terminated with FC/PC connectors. The input FC/PC connector key is aligned to the slow axis of the PM fiber, which is in turn aligned with the extraordinary mode of the chip. The RF input connector is a field replaceable (full-detent) GPO-connector.

The LN65S-FC is supplied with an internal polarizer that is aligned with the extraordinary mode of the chip.

Specifications

LN65S-FC			
Optical Specifications	Min	Typical	Max
Operating Wavelength ^a	1525 nm	-	1605 nm
Optical Insertion Loss	-	3.0 dB	4.5 dB
Optical Return Loss	40 dB	-	-
Optical Input Power (Extraordinary Mode)	-	-	100 mW
Optical Input Power (Ordinary Mode)	-	-	10 mW ^b
RF Electrical Specifications	Min	Typical	Max
E/O Bandwidth (-3 dB)	-	10 GHz	-
Operating Frequency Range	DC to 15 GHz (Minimum)		
S ₁₁ (DC to 10 GHz)	-	-12 dB	-10 dB
RF Input Power	-	-	24 dBm
RF V _π (@ 10 GHz)	-	6.5 V	-
Environmental Specifications	Min	Typical	Max
Operating Temperature	0 °C	-	70 °C
Storage Temperature	-40 °C	-	85 °C

- The modulator is designed for use at the specified wavelengths. Using the modulator at other wavelengths may cause an increase in the optical loss that is not covered under warranty. In some cases, this loss can be temporary; for instance, the increase in loss caused by shorter wavelengths can usually be reversed by heating the modulator to 80 °C for an hour.
- Extra care should be taken while aligning the polarization state of the optical input to avoid excess optical power from being launched into the ordinary mode, which will be absorbed by the polarizer and can damage the modulator.

Mechanical Specifications	
Crystal Orientation	Z-Cut
RF Connector	Male SMP (GPO [†] Compatible), Full Detent
Fiber Type	Input: PANDA Polarization Maintaining Output: SMF-28 [†] Single Mode
Fiber Connectors	2.0 mm Narrow Key FC/PC
Fiber Lead Length	1.5 m (Typ.)
Fiber Jacket	Ø900 µm Loose Tube

[†]GPO and SMF-28 are registered trademarks of Corning Incorporated.

Mechanical Drawings

