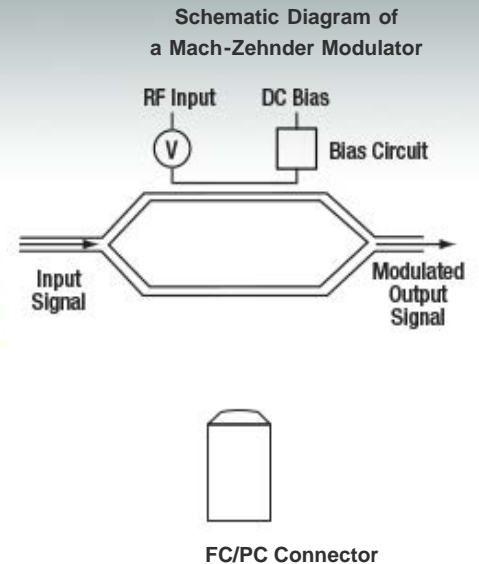


LN58S-FC - March 1, 2019

Item # 10202A-90-APC was discontinued on March 1, 2019. For informational purposes, this is a copy of the website content at that time and is valid only for the stated product.

20 GHz ANALOG INTENSITY MODULATOR

- ▶ 20 GHz Intensity Modulation
- ▶ Low Drive Voltage
- ▶ Ideal for Microwave Photonics



[Hide Overview](#)

OVERVIEW

Features

- Low Drive Voltage ($V_{\pi} < 3.9 \text{ V @ } 20 \text{ GHz}$)
- Excellent Analog Performance from DC to 20 GHz
- RF-Over-Fiber (RFOF) and Microwave Photonics Applications
- Long-Term Bias Stability
- Telcordia GR-468 Compliant
- C- and L-Band Operation*

The LN58S-FC is a high frequency analog intensity modulator for use in the 1525 nm to 1605 nm wavelength range. It offers a very low drive voltage, while supporting 20 GHz operating frequencies, thus making it ideal for fiber optic antenna remoting. Modulators that offer modulation in the frequency range of 1 to 100 GHz are often used as microwave optical links. A microwave optical link transmits data within the microwave frequency range, but in the optical domain. This high frequency analog transmission is also commonly referred to as RF since the 20 GHz frequency is within the super high frequency (SHF) RF range (3 to 30 GHz).

The LN58S-FC is a single-ended drive modulator based on Mach-Zehnder interferometric architecture, which uses titanium indiffused LiNbO_3 . The standard modulator has a PM input fiber and single mode output fiber pigtail, both terminated with FC/PC connectors. The PM input fiber is slow-axis aligned. For other fiber types or connectorization, please contact technical support. It is in a hermetically sealed package to offer high reliability and Telcordia GR-468 compliance. Please see the *Specs* tab for more information.

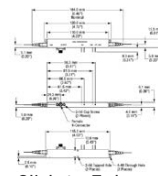
* The modulator is designed for use in the 1550 nm window (1525 nm - 1605 nm). Using the modulator at another wavelength (e.g., visible light) may cause a temporary increase in loss that is not covered under warranty. For instance, the increase in loss caused by shorter wavelengths can be reversed by heating

the modulator to 50 °C for an hour.

[Hide Specs](#)

S P E C S

Parameter	Min	Typical	Max
Optical			
Operating Wavelength ^a	1525 nm	-	1605 nm
Optical Insertion Loss	-	4.5 dB	5.5 dB
Optical Return Loss	40 dB	-	-
Optical On/Off Extinction Ratio (@ DC)	20 dB	-	-
Input Optical Power	-	-	100 mW ^b
Electrical			
RF Input Power	-	-	24 dBm
S11 (up to 20 GHz)	-	-12 dB	-10 dB
RF V _π @ 20 GHz	-	3.5 V	3.9 V
RF V _π @ 1 kHz	-	1.5 V	-
DC Bias V _π @ 1 kHz	-	1.5 V	-
Lifetime Specifications			
EOL ^c Insertion Loss Variation	-0.5 dB	-	0.5 dB
EOL ^c DC Bias Voltage	-5 V	-	5 V
Environmental			
Operating Case Temperature	0 °C	-	70 °C
Storage Temperature	-40 °C	-	85 °C
Mechanical			
RF Connection	Female K-Connector		
Bias Connection	Optional		
Fiber Type	Single Mode		
Fiber Lead Length	1.5 m		



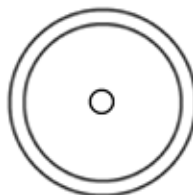
[Click to Enlarge LN58S-FC Mechanical Drawing](#)

- a The modulator is designed for use in the 1550 nm window. Using the modulator at another wavelength (e.g., visible light) may cause a temporary increase in loss that is not covered under warranty. For instance, the increase in loss caused by shorter wavelengths can be reversed by heating the modulator to 50 °C for an hour.
- b Maximum optical power to prevent damage and to provide a 25 year Telcordia lifetime.
- c End of Life

[Hide Pin Diagram](#)

P I N D I A G R A M

RF Input
Anritsu K Type Female





[Hide](#)

Part Number	Description	Price	Availability
LN58S-FC	20 GHz Low Vpi Analog Modulator, FC/PC Connectorized	\$5,652.23	Lead Time