

359B Series 1550 nm Zero Dispersion Modules



Applications

- Radar Testing/Calibration
- Signal Processing
- Phased Array Antennas
- Phase Noise Processing
- Antenna Site Diversity

Features

- Delays Up to 600 microseconds
- 120 km
- Small Size
- Flat RF Amplitude Response and Phase

The 359B Series Zero Dispersion Modules provide a rack mountable dispersion shifted fiber spool providing a total final output with no chromatic dispersion @ 1550 nm. These fiber spools provide precise delay time references for radar calibration applications. They can also be used in site diversity applications when system timing is critical. These spools can be used to mimic existing fiber in the ground as a transparent switch between the local and diverse site.

The 359X platform works with a wide range of fiber optic transport products for satellite and microwave communications from 1 MHz to 40 GHz. These units can be used to construct transparent inter- and intra-facility links from 1 meter to >100 km for RF and microwave signal transport, antenna remoting, video transport, electronic warfare systems and other high-dynamic-range applications.

Delay Length Specifications

Product	Size	Max Delay	Max. Length	Total Dispersion
359B - 1	1 RU	100 μ s	~20 km	~0
359B - 3	3 RU	350 μ s	~61 km	~0
359B - 5	5 RU	600 μ s	~120 km	~0

Optical Specifications

The 359B Series modules are designed to use multiple different times of fiber to operate, optical specifications given are averaged over length of entire coil

Parameter	Typical	Units
Attenuation @ 1550 nm	≤ 0.21	dB/km
Index of Refraction (IOR) @ 1550 nm	1.4684	
Zero Dispersion Wavelength	~1550	nm
Typical Total Dispersion @ 1550 nm	0	ps/nm-km

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Mechanical Specifications

Description	Value	Units
Body Dimensions		
1 RU	16.6 (421.6) x 1.72 (43.7) x 13 (330.2)	in (mm)
3 RU	16.6 (421.6) x 5.22 (132.6) x 18 (457.2)	
5 RU	16.6 (421.6) x 8.72 (221.5) x 18 (457.2)	
Faceplate Dimensions		
1 RU	19 (482.6) x 1.75 (44.5)	in (mm)
3 RU	19 (482.6) x 5.25 (133.4)	
5 RU	19 (482.6) x 8.75 (222.3)	
Storage Temperature	-60 to +85	°C
Operating Temperature	-40 to +85	°C

Ordering Information

Product Number
359B-WW-XXXXXX-YY-ZZ

When ordering replace "WW" with one of the Rack Unit Size Options
 When ordering replace "XXXXXX" with one of the Delay Options
 When ordering replace "YY" with one of the Connector Type Options
 When ordering replace "ZZ" with one of the Optional Features

Coil Type "B"	Rack Unit Size "WW"	Delay in μ S "XXXXXX"	Connector Type "YY"	Optional Features* "ZZ"
B = Zero Compensation Dispersion	1U = 19" x 1.75" (1 RU)	001000 = 10 μ s Delay	SA = SC/APC	P = Pigtail Leads
	3U = 19" x 5.25" (3 RU)	010000 = 100 μ s Delay	FA = FC/APC	B = Bulkhead
	5U = 19" x 8.75" (5 RU)	100000 = 1000 μ s Delay	LA = LC/APC EA = E2000/APC	PM = Midspan Breakout - Pigtail BM = Midspan Breakout - Bulkhead

Midspan Breakouts - For some applications, particularly coils greater than 50 km in length for 1550 nm applications, higher signal levels and more configurability is required. For these cases, midspan breakouts can be placed at every 50 km (about every 245 μ s) interval of the 359A Series Delay and Dispersion Compensation Modules to allow the insertion of optical amplification (EDFA).

Pigtail Leads - If preferred, the standard bulkhead connector input and output of the 359B Series Delay and Dispersion Compensation Modules can be replaced with a one meter long pigtail with a male connector on the end.