

Tunable Dispersion Compensator



Product Introduction

Accelink's Tunable Dispersion Compensator (TDC) is a full C-band chromatic dispersion compensator with low insertion loss, low phase ripple, low group delay ripple, low PDL and low PMD. It's colorless and in support of data transmission rates of 10Gb/s, 40Gb/s and beyond.

Features

- All DWDM Channels Compensation
- Low Phase Ripple & Group Delay Ripple
- Colorless
- Precise, High Resolution Control
- Continuous, Hitless Tuning
- Flexible Pass-Band & Dispersion
- I²C or RS232 Command Interface
- Small Size (90 x 70 x 16 mm)

Applications

- Dynamic compensation of 40&100Gb/s Networks
- 10Gb/s Dispersion Management
- Multi-Reach-Metro Regional, long - Haul, Submarine Networks
- Single-Channel or DWDM Networks
- Rapid Network Upgrades

Standards

- Telcordia GR-1312-CORE
- RoHS

Specifications

100G TDCM:

Parameters		Min.	Typ.	Max.	Unit
Wavelength Range		1527.216		1565.496	nm
Dispersion Tuning Range		±1200			ps/nm
Operation	Dispersion ≤700ps/nm	ITU ±20GHz			GHz

Bandwidth	$700\text{ps/nm} < \text{Dispersion} $	ITU $\pm 12.5\text{GHz}$			
	$\leq 1200\text{ps/nm}$				
Channel Spacing		100			GHz
Wavelength Shift Capability		50			GHz
Dispersion Setting Resolution		5			ps/nm
Absolute Dispersion Accuracy	$\pm 700\text{ps/nm}$	-25	± 20	25	ps/nm
	$\pm 1200\text{ps/nm}$	-60	± 30	60	ps/nm
Group Delay Ripple	$ \text{Dispersion} \leq 400\text{ps/nm}$		5	10	ps
	$ \text{Dispersion} > 400\text{ps/nm}$		5	15	ps
Insertion Loss			4	5.5	dB
Insertion Loss Ripple			0.3	1	dB
Insertion Loss Uniformity				1	dB
Return Loss		45	50		dB
Tuning Settling Time			15	30	s
PDL			0.1	0.2	dB
PMD				1	ps
Optical Power Handling				27	dBm
Power Consumption			4	7.5	W
Module Warm-Up Time				180	s

50G TDCM:

Parameters		Min.	Typ.	Max.	Unit
Wavelength Range		1527.216		1565.496	nm
Dispersion Tuning Range				± 2000	ps/nm
Operation Bandwidth	$ \text{Dispersion} \leq 700\text{ps/nm}$	ITU ± 17			GHz
	$700\text{ps/nm} < \text{Dispersion} \leq 1200\text{ps/nm}$	ITU ± 12.5			
	$120\text{ps/nm} < \text{Dispersion} \leq 1700\text{ps/nm}$	ITU ± 10			
	$1700\text{ps/nm} < \text{Dispersion} \leq 2000\text{ps/nm}$	ITU ± 9			
Channel Spacing		50			GHz
Wavelength Shift Capability		25			GHz
Dispersion Setting Resolution		10			ps/nm
Absolute Dispersion Accuracy	$ \text{Dispersion} \leq 700\text{ps/nm}$	-25	± 20	25	ps/nm
	$700\text{ps/nm} < \text{Dispersion} \leq 1200\text{ps/nm}$	-60	± 30	60	

	120ps/nm< Dispersion ≤1700ps/nm	-90		90	
	1700ps/nm< Dispersion ≤2000ps/nm	-90		90	
Group Delay Ripple			10	15	ps
Insertion Loss			4	5.5	dB
Insertion Loss Ripple			0.3	1	dB
Insertion Loss Uniformity				1	dB
Return Loss		45	50		dB
Tuning Settling Time			15	30	s
PDL			0.1	0.2	dB
PMD				1	ps
Optical Power Handling				27	dBm
Power Consumption			4	7.5	W
Module Warm-Up Time				180	s

Ordering Information:

TDCM- □-□-□-□-□-□



Connector: FC,SC,LC,MU/PC,UPC,APC

Fiber length: 1:1.0 Customer specify

Fiber Dia.:09: φ 0.9mm025: φ 0.25mm

Dispersion: 1200: ±1200ps/nm

Channel : 1:100G, 3:50G

Operation wavelength: C: C band