Nebula Ethernet Optics for Access Networks

High Capacity Fiber Optic Solutions

Part Number **V-ADM1-C-ch**

Applications

- Single Wavelength Add & Drop on a CWDM fiber.
- Insertion of per-wavelength amplification.
- Protection rings architectures.

Features

- Low insertion loss on through path.
- Low add & drop insertion loss.
- No powering required.
- High directivity.

Transmission Characteristics

Parameter	Min	Max	Unit	Notes
Optical Operating Wavelength	1460	1620	nm	
Add/Drop Central Wavelength (ch)	1471	1611	nm	16 channels available in 20 nm steps
Pass Band @0.5dB	-6.5	+6.5	nm	centered about ch
Insertion Loss - Com In to Drop		0.8	dB	(1)
Insertion Loss - Add to Com Out		0.8	dB	(1)
Insertion Loss - Com In to Com Out		0.8	dB	(1)
Adjacent Channel Isolation	30		dB	
Non-Adjacent Channel Isolation	40		dB	
Thermal Stability Drift		5	pm/°C	
Uniformity		1.5	dB	
Directivity	50		dB	
Return Loss	45		dB	
Polarization Dependant Loss		0.1	dB	
Polarization Mode Dispersion		0.1	dB	
Power Handling		300	mW	

(1) V-ADM1 performance. Add 0.5 dB (approximately) for patch cord connector losses.

Environmental Characteristics

Parameter	Min	Max	Unit	Notes
Storage Temperature Range	-40	+85	°C	
Operating Temperature Range	0	+70	°C	Within spec. Device will not be not damaged unless Storage Temp Range exceeded.

Connectorization

Port	Connector Description
Line In	Dual LC - Left side
Line Out	Dual LC - Right side
Drop	Dual LC - Left side
Add	Dual LC - Right side

Schematic

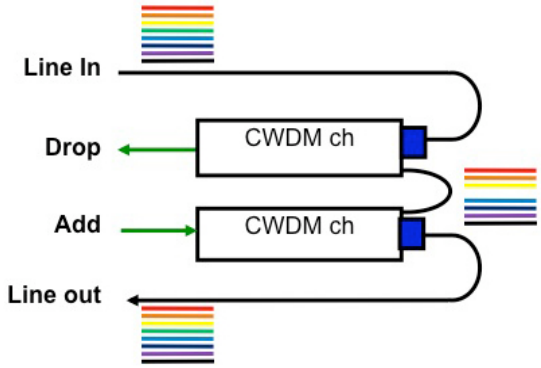

Figure 1 - Device Schematic

Figure 2 - Faceplate Connector Layout

Typical Applications

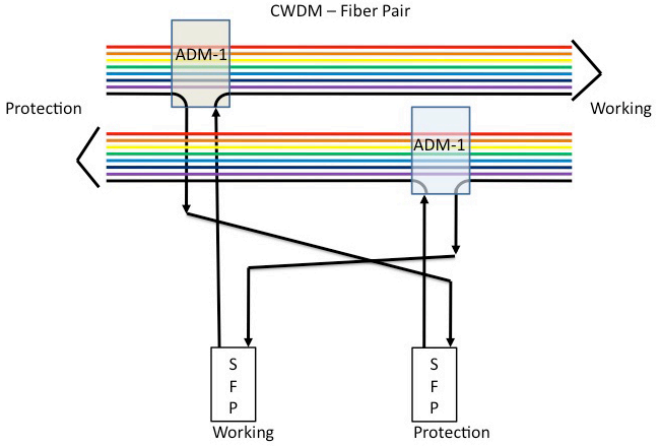

Figure 3 - Protected Fiber Pair

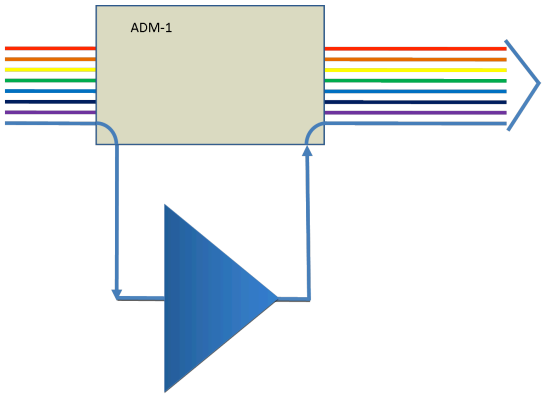

Figure 4 - Amplifying one Wavelength

Wavelength Selection

ch Code	Wavelength	Part #	Compatible Multiplexers					
		V-ADM1-C-ch	V-CWDM16	V-CWDM8	V-CWDM4	V-4WM	V-CWDM14	V-CWDM17
61	1611 nm	V-ADM1-C-61	√	√			√	√ (1)
59	1591 nm	V-ADM1-C-59	√	√			√	√ (1)
57	1571 nm	V-ADM1-C-57	√	√	√		√	√
55	1551 nm	V-ADM1-C-51	√	√	√	√(2)	√	√
53	1531 nm	V-ADM1-C-53	√	√	√		√	√
51	1511 nm	V-ADM1-C-51	√	√	√		√	√
49	1491 nm	V-ADM1-C-49	√	√		√	√	√
47	1471 nm	V-ADM1-C-47	√	√		√	√	√

(1) 1591 nm and 1611 nm are combined in one channel in this multiplexer.
(2) V-4WM supports wide 1550 lasers. 1511 nm to 1591 nm CWDM lasers all fit within this bandwidth.