

SFW-C Coarse Wavelength Division Multiplexer (CWDM)

Description:

SFW-C series coarse wavelength division multiplexer and demultiplexer (CWDM) modules are reliable, cost effective solutions to multiservice applications. They multiply the capacity of existing singlemode fibers, by combining up to 16 ITU-T G.694.2 compatible (20 nm) channels in metropolitan, access and enterprise networks and for Cable TV applications. They are a low cost approach for systems that use uncooled laser sources, and are an alternative to more expensive DWDM components based on 100 GHz or 200 GHz channel spacing.

Features:

- High port isolation
- Custom defined specifications
- Low insertion loss
- Low polarization dependent loss
- Transmission with high directivity
- Wide spectral channels
- Environmentally stable
- Wide range of packaging types – min. bend radius protection



Applications:

- Optical networks
- Telecommunication systems
- Data communication systems
- CATV

Technical specifications:

Feature	Specification	Feature	Specification
Channel spacing	20 nm	PDL	≤ 0.1 dB
Pass bandwidth	Typ. 14 nm	Max. optical power	300 mW
Pass band flatness	0.3 dB	Operating temperature (Conditioned by the cable type)	-10 to +70 °C
Min Isolation	≥ 40 dB non-adjacent channel ≥ 30 dB adjacent channel	Storage temperature (Conditioned by the cable type)	-40 to +85 °C
Return loss	≥ 50 dB	Package dimensions	Refer to ord. code
Directivity	≥ 50 dB		
WARNING	This product should never be installed in an optical network handling above Class I emissions		

Insertion loss (dB)* (without connectors)													
4 Channels		CWDM 4 + E		CWDM 6 CH		CWDM 6 + E		CWDM 8 CH		CWDM 8 + E		CWDM 16 + E	
Typ.	M+D	Typ.	M+D	Typ.	M+D	Typ.	M+D	Typ.	M+D	Typ.	M+D	Typ.	M+D
1.5	2.5	1.7	3.0	2.1	3.7	2.3	4.1	2.5	4.5	2.7	4.9	4.8	8.8

*) M+D: Insertion loss Multiplexer+ Demultiplexer

Ordering Code:
(2x)¹ SFW-C - N - XXX - YYY - ZZZ/ZZZ⁴ - XXX:W(+E)⁵

N - number of channels
1 – 16 number of channels

XXX - type of device
M MUX
D DEMUX
M+D² MUX+DEMUX
AD ADD
DR DROP
A+D ADD+DROP

Sum (Σ) / Wavelength (λ) connector types
UPC FC/UPC
NPC FC/APC
USC SC/UPC
NSC SC/APC
NE2S E2000/APC standard
NE2P E2000/APC premium
ULC LC/UPC
NLC LC/APC
USL ST/UPC
NC no connectors

Package version I (basic)³
CM1 Cable type, metal box (up to 3 ports), 100x15x9 mm
CM3 Cable type, metal box (up to 5 ports), 100x80x10 mm
CM4 Cable type, metal box (up to 9 ports), 140x110x10 mm
CM5 Cable type, metal box, 140x110x20 mm
Package version II (optional)
CAPM OPTOKON cassette (up to 8A1 with duplex adaptor)
RM 19" Rack mount unit (swing out shelf - MCNP type)
PJ 19" Rack mount unit (fixed frame – OFPJ)
WM Wall mount box (MPIC-4)

W Wavelengths shortcut list

27	1270 nm	45	1450 nm
29	1290 nm	47	1470 nm
31	1310 nm	49	1490 nm
33	1330 nm	51	1510 nm
35	1350 nm	53	1530 nm
37	1370 nm	55	1550 nm
39	1390 nm	57	1570 nm
41	1410 nm	59	1590 nm
43	1430 nm	61	1610 nm
E1	Expand port, 1310 ± 7 nm		
E2	Expand port, 1310 ± 50 nm		

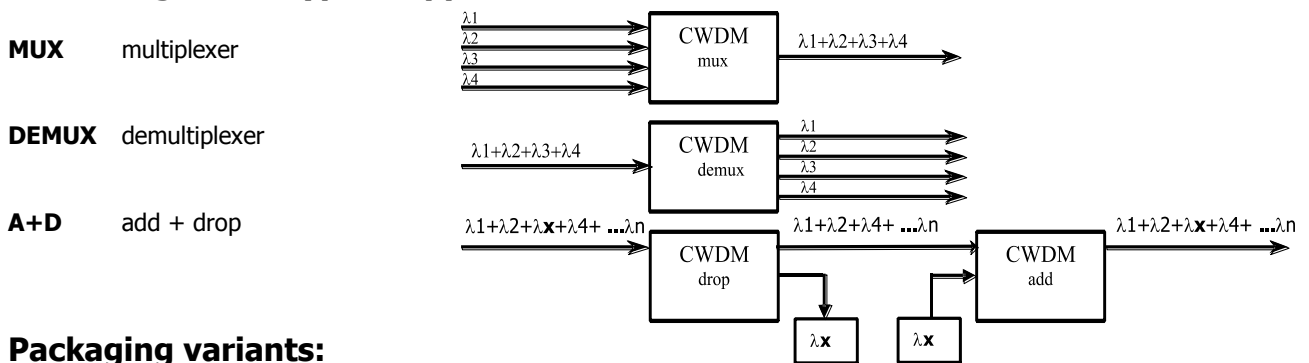
Note:

- 1) Application – „2x“ = 2fiber variant, no digit = 1fiber variant
- 2) MUX and DEMUX in one pack, only for 2fiber variant
- 3) 2.8 mm cable diameter, standard outputs length – 1 m
- 4) First "Z" defines Σ connector/second "Z" defines λ connectors other connector types on request
- 5) enumerate wavelengths by type of device in format - **XXX:W** (XXX = type of device, W = wavelength)

Examples:

AD:31,41,51 DR:31,41,51
M:31,33,35,37 D:31,33,35,37
M+D: 31,49,51,55
M:47,49,51,53 +E2

Block diagram of typical applications



Packaging variants:

