

SFW-D

Dense Wavelength Division Multiplexer (DWDM)

Description:

SFW-D series dense wavelength division multiplexer and demultiplexer (DWDM) modules are reliable solutions to multiservice applications. They multiply the capacity of existing singlemode fibers, based on 100 or 200 GHz channel spacing. The SFW-D are available in a variety of packaging options for standard configurations of 4, 8, 16, 32 and 40 channels. Custom devices can be configured to meet customer demands concerning channel counts, wavelength plan and packaging requirements.

Features:

- Wide channel bandwidth
- High adjacent channel isolation
- Low polarization dependent loss
- Low chromatic dispersion
- Customer solutions
- Compact size



Applications:

- Metro and long haul mux/demux
- OADM network nodes
- Original equipment manufacturer (OEM) applications

Technical specifications:

DWDM 100 Ghz	Center wavelengths refer to ITU 100 GHz grid specification
DWDM 4	30 (30, 29, 28, 27): 1553.33, 1554.13, 1554.94, 1555.75 nm
DWDM 6	31 (31, 30, 29, 28, 27, 26): 1552.52, 1553.33, 1554.13, 1554.94, 1555.75, 1556.55 nm
DWDM 8 / 16 / 32 / 40	
Add/Drop	On request

Feature	Specification					
Channel spacing, GHz	100					
Pass bandwidth, nm	> 0.25					
Pass band flatness, dB	0.5					
Channel number	2	4	8	16	32	40
Insertion Loss, dB (typ)	1.4	1.6	2.6	3.8	4.8	5.2
Insertion Loss, dB (max)	1.8	2.0	3.2	4.5	5.5	6.0
Channel uniformity, dB	≤0.5	≤1.0	≤1.0	≤1.0	≤1.0	≤1.0
PMD, ps	≤0.10	≤0.10	≤0.10	≤0.15	≤0.15	≤0.15
PDL, dB	≤0.10	≤0.15	≤0.20	≤0.25	≤0.30	≤0.30
Isolation – adjacent channel, dB	≥25 dB					
Isolation – non adjacent channel, dB	≥45 dB					
Return loss	≥45 dB					
Directivity	≥50 dB					
Operating temperature*, °C	-5 to +65					
Storage temperature*, °C	-40 to +85					

*) Conditioned by the cable type

Ordering Code:

SFW - DX-XX - XX - XXX - AAA

DX Channel spacing		XX Type	
D1	100 GHz	4M	4 channels mux
		4D	4 channels demux
		6M	6 channels mux
		6D	6 channels demux
On request:		8M	8 channels mux
D2	200 GHz	8D	8 channels demux
		AD	Add/Drop

Number of first channel according to ITU Grid
or on request

package version I (basic type)	
CM5	Cable type, metal box
FM5	Fiber type, metal box
package version II (optional)	
CAPM	OPTOKON cassette (up to 6 channels)
CAPD	OPTOKON double cassette (8 channels)
RM	Rack mounted unit (MCNP-1U)

AAA – input and output connectors	
Standard connector types:	
Code	Description
SPC	FC/SPC
UPC	FC/UPC
NPC	FC/APC (2.05 standard)
SSC	SC/SPC
USC	SC/USC
NSC	SC/APC
SE2	LSH (E2000)/SPC
NE2S	LSH (E2000)/APC standard
NE2P	LSH (E2000)/APC premium
SLC	LC/SPC
ULC	LC/UPC
NLC	LC/APC
SSL	ST/SPC
NC	no connectors

Note: standard cable length = 1 m

ITU Grid Channels (100 GHz Spacing)

Channel	Frequency (THz)	Wavelength (nm)	Channel	Frequency (THz)	Wavelength (nm)	Channel	Frequency (THz)	Wavelength (nm)
1	190,100	1577.03	26	192,600	1556.55	51	195,100	1536.61
2	190,200	1576.20	27	192,700	1555.75	52	195,200	1535.82
3	190,300	1575.37	28	192,800	1554.94	53	195,300	1535.04
4	190,400	1574.54	29	192,900	1554.13	54	195,400	1534.25
5	190,500	1573.71	30	193,000	1553.33	55	195,500	1533.47
6	190,600	1572.89	31	193,100	1552.52	56	195,600	1532.68
7	190,700	1572.06	32	193,200	1551.72	57	195,700	1531.90
8	190,800	1571.24	33	193,300	1550.92	58	195,800	1531.12
9	190,900	1570.42	34	193,400	1550.12	59	195,900	1530.33
10	191,000	1569.59	35	193,500	1549.32	60	196,000	1529.55
11	191,100	1568.77	36	193,600	1548.51	61	196,100	1528.77
12	191,200	1567.95	37	193,700	1547.72	62	196,200	1527.99
13	191,300	1567.13	38	193,800	1546.92	63	196,300	1527.22
14	191,400	1566.31	39	193,900	1546.12	64	196,400	1526.44
15	191,500	1565.50	40	194,000	1545.32	65	196,500	1525.66
16	191,600	1564.68	41	194,100	1544.53	66	196,600	1524.89
17	191,700	1563.86	42	194,200	1543.73	67	196,700	1524.11
18	191,800	1563.05	43	194,300	1542.94	68	196,800	1523.34
19	191,900	1562.23	44	194,400	1542.14	69	196,900	1522.56
20	192,000	1561.42	45	194,500	1541.35	70	197,000	1521.79
21	192,100	1560.61	46	194,600	1540.56	71	197,100	1521.02
22	192,200	1559.79	47	194,700	1539.77	72	197,200	1520.25
23	192,300	1558.98	48	194,800	1538.98	73	197,300	1519.48
24	192,400	1558.17	49	194,900	1538.19			
25	192,500	1557.36	50	195,000	1537.40			

Packaging variants:



SFW-D2 4M-30-CM5-NC

Block diagram of typical applications:

