4-Channel DWDM Passive Filter

ISP (Indoor Use)

Product Description:

4-Channel ISP DWDM Thin Film Filter with the following options:

- Upgrade/Express/Test Ports
- Single/Dual/Twin LGX Form Factor
- UPC/APC Connectors
- Industrial Temperature Hardened

Product Ordering Information

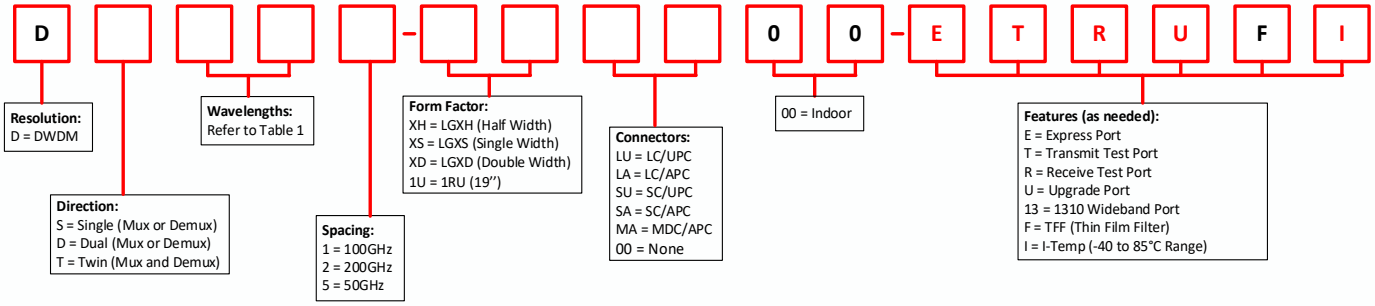


Table 1

Channel Designation		
4A = ITU 20-23	5A = ITU 21-24	6A = ITU 21, 23, 25, 27
4B = ITU 24-27	5B = ITU 25-28	
4C = ITU 28-31	5C = ITU 29-32	
4D = ITU 32-35	5D = ITU 33-36	
4E = ITU 36-39	5E = ITU 37-40	
4F = ITU 40-43	5F = ITU 41-44	
4G = ITU 44-47	5G = ITU 45-48	
4H = ITU 48-51	5H = ITU 49-52	
4I = ITU 52-55	5I = ITU 53-56	
4J = ITU 56-59	5J = ITU 57-60	

Part Number / Description Examples

Part Number	Single LGX Description
DS4x1-XSLA00-ETRUF	DWDM, Single (Mux or Demux), ITU 4A/4B/4C/4D/4E/4F/4G/4H/4I/4J, 100GHz grid, LGX single width, LC-APC, with Transmit/Receive Test ports, Express port, Upgrade port, Thin Film Filter
DS5x1-XSLU00-ETRUF	DWDM, Single (Mux or Demux), ITU 5A/5B/5C/5D/5E/5F/5G/5H/5I/5J, 100GHz grid, LGX single width, LC-UPC, with Transmit/Receive Test ports, Express port, Upgrade port, Thin Film Filter

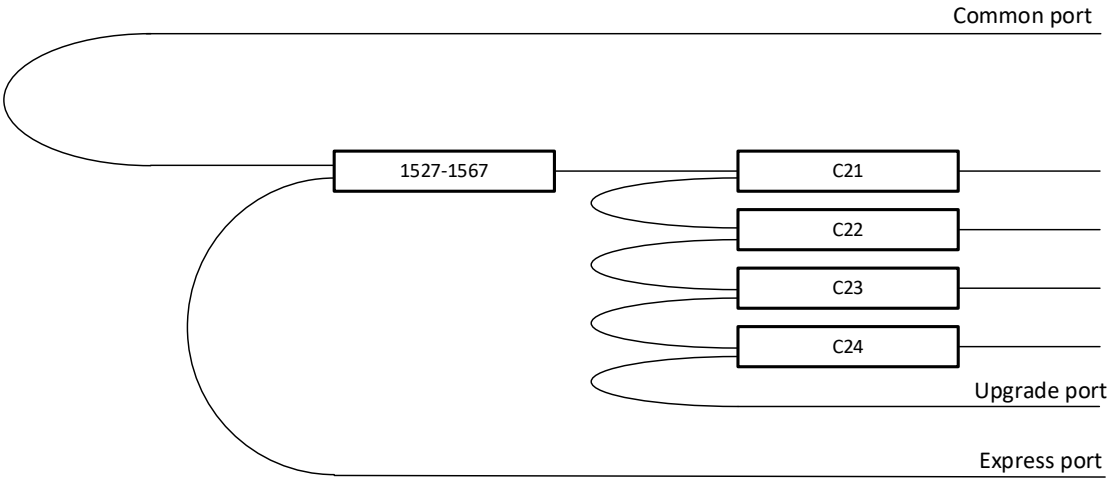
Part Number	Dual LGX Description
DD4x1-XSLA00- ETRUFI	DWDM, Dual (Mux or Demux), ITU 4A/4B/4C/4D/4E/4F/4G/4H/4I/4J, 100GHz grid, LGX single width, LC-APC, with Express port, Thin Film Filter, I-Temp
DD5x1-XSLU00- ETRUFI	DWDM, Dual (Mux or Demux), ITU 5A/5B/5C/5D/5E/5F/5G/5H/5I/5J, 100GHz grid, LGX single width, LC-UPC, with Express port, Thin Film Filter, I-Temp

Part Number	Twin LGX Description
DT4x1-XSLA00- ETRUFI	DWDM, Twin (Mux + Demux), ITU 4A/4B/4C/4D/4E/4F/4G/4H/4I/4J, 100GHz grid, LGX single width, LC-APC, with Express + Transmit Test + Receive Test + Upgrade ports, Thin Film Filter, I-Temp
DT5x1-XSLU00- ETRUFI	DWDM, Dual (Mux + Demux), ITU 5A/5B/5C/5D/5E/5F/5G/5H/5I/5J, 100GHz grid, LGX single width, LC-UPC, with Express port, Thin Film Filter, I-Temp
DT6A2-XSLU00- ETRUF	DWDM, Twin (Mux + Demux), ITU 21, 23, 25, & 27, 200GHz grid, LGX single-width, LC-UPC, with Express ports, Transmit/Receive Test ports, Upgrade ports, Thin Film Filter

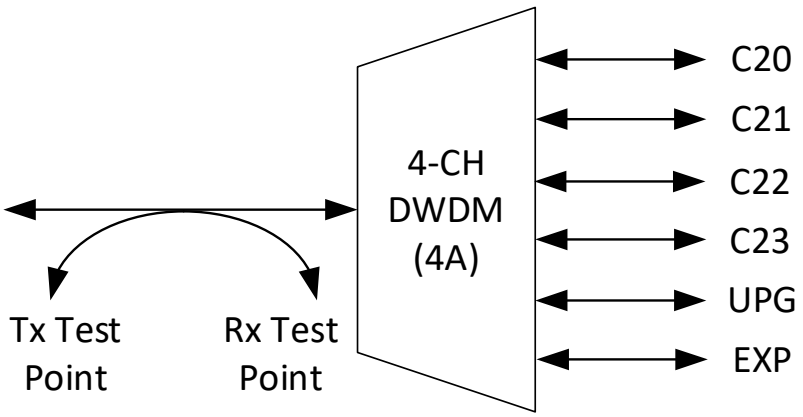
Optical Characteristics

Parameter	Value	Unit
DWDM Passband @ -0.5dB	$\lambda_c \pm 0.125$	nm
DWDM passband insertion loss @ -0.5dB	< 2.5	dB
DWDM passband ripple @ -0.5dB	< 0.5	dB
Test port insertion loss (dB)	20 ± 2	dB
Express insertion loss	< 1.5	dB
Express passband ripple	< 0.5	dB
Express passband	1260-1520 (1420-1520 w/ 1310 Port) 1570-1635	nm
Upgrade insertion loss	< 2.5	dB
Upgrade passband	Any ITU wavelengths within ITU 14 to 62 that is not being designated on the front plate	nm
1310 port insertion loss	< 1.5	dB
1310 port passband ripple	< 0.5	dB
1310 port passband	~1260-1360	dB
DWDM uniformity	< 1.5	dB
Isolation Adj (COM-DWDM)	> 30	dB
Isolation Non-Adj (COM-DWDM)	> 45	dB
Isolation Non-Adj (COM-EXP)	> 12	dB
DWDM directivity	> 50	dB
EXPRESS directivity	> 45	dB
Return loss	> 45	dB
Polarization dependent loss	< 0.2	dB
Polarization mode dispersion	< 0.15	ps
IL thermal stability	< 0.005	dB/°C
Wavelength thermal stability	< 0.001	nm/°C
Maximum input power	300 / 24.8	mW/dBm
Operating Temperature: Commercial Temp (standard) Industrial Temp	 0 to 70 -40 to 85	°C
Operating humidity	5 to 95	%
Tensile strength pull strength (up to 10 seconds max)	> 20[3]	N
Fiber type (all ports)	SMF-28e (G.657.A1)	

Filter Optical Design

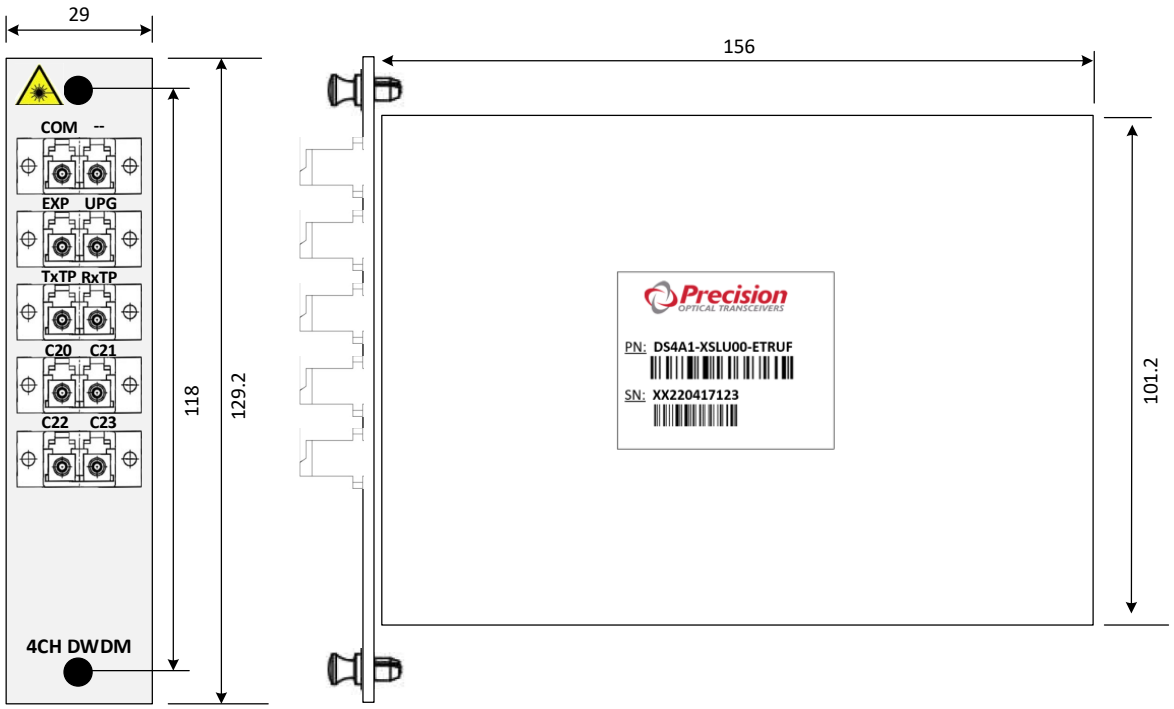


4-Channel DWDM Design Example



4-Channel DWDM Design (high level)

Filter Physical Design



4-Channel DWDM External Design (mm)
(DS4A1-XSLU00-ETRUF shown)