96-Channel DWDM Passive Filter

ISP (Indoor Use), AWG Versions

Product Description:

96-Channel ISP DWDM Arrayed-Waveguide Grating Filter with the following options:

- Express/Test Ports
- Single/Dual/Twin LGX Form Factor
- UPC/APC Connectors

Product Ordering Information

D		9	6	5	–					0	0	–	E	T	R	A

Resolution:
D = DWDM

Direction:
S = Single (Mux or Demux)
D = Dual (Mux or Demux)
T = Twin (Mux and Demux)

Wavelengths:
96 = ITU 13.5-61

Spacing:
5 = 50GHz

Form Factor:
1U = 1RU (19")
2U = 2RU (19")

Connectors:
LU = LC/UPC
LA = LC/APC
SU = SC/UPC
SA = SC/APC

00 = Indoor

Features (as needed):
E = Express Port
T = Transmit Test Port
R = Receive Test Port
13 = 1310 Wideband Port
A = AWG (Arrayed Waveguide Grating)

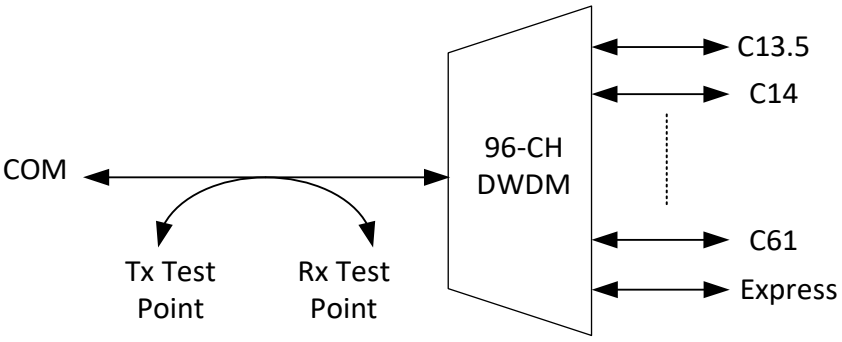
Part Number / Description Examples

Part Number	Description
DT965-2ULU00-ETRA	DWDM, Twin (Mux + Demux), ITU 13.5-61, 50GHz grid, 2RU 19” wide (includes brackets), LC-UPC, with Express + Transmit Test + Receive Test Ports, AWG

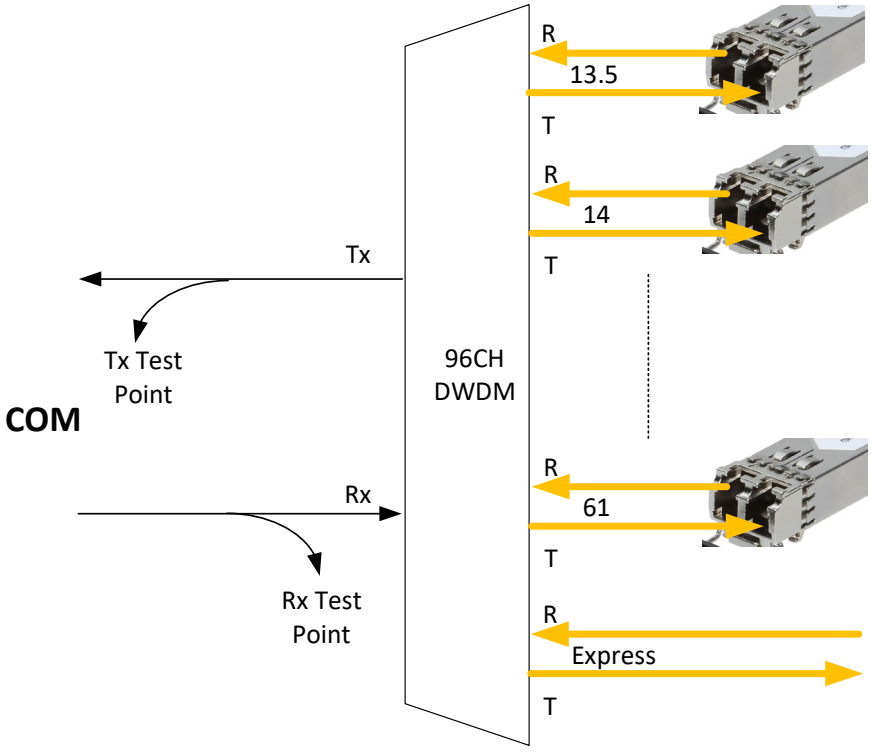
Optical Characteristics

Parameter	Value	Unit
DWDM Passband @ -0.5dB	$\lambda_c \pm 0.1$	nm
DWDM passband insertion loss @ -0.5dB	<6.8	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
1310 port insertion loss	< 1.5	dB
1310 port passband ripple	< 0.5	dB
1310 port passband	~1260-1360	dB
DWDM uniformity	< 2.0	dB
Isolation Adj (COM-DWDM)	> 25	dB
Isolation Non-Adj (COM-DWDM)	> 30	dB
Isolation Non-Adj (COM-EXP)	> 12	dB
DWDM directivity	> 50	dB
EXPRESS directivity	> 45	dB
Return loss	> 40	dB
Polarization dependent loss	< 0.5	dB
Polarization mode dispersion	< 0.5	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:	-5 to 65	°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

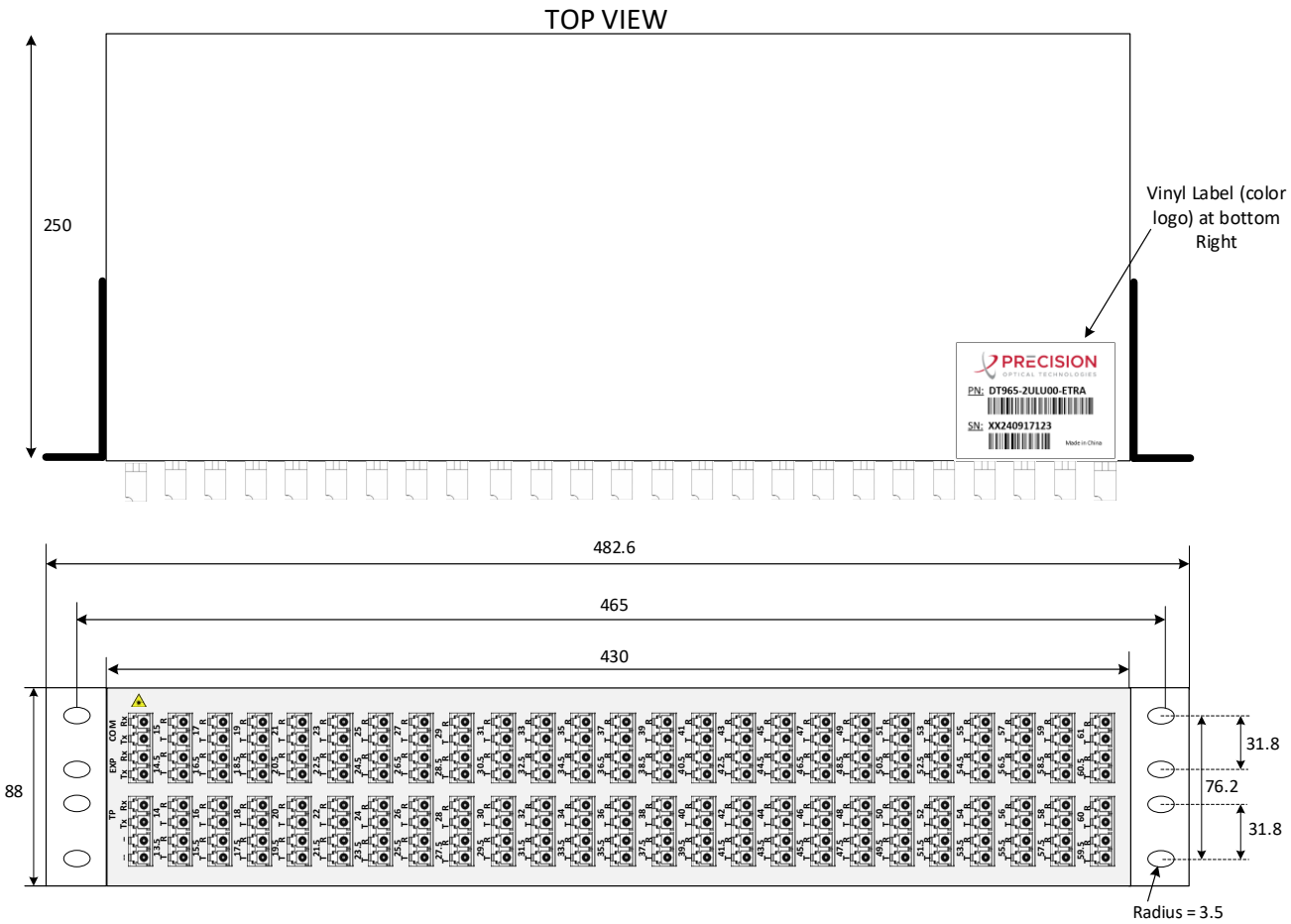


96-Channel DWDM Design (high level)



96-Channel Twin DWDM Design

Filter Physical Design



96-Channel DWDM External Design (mm)
(DT965-2ULU00-ETRA shown)