

# 40 & 48-Channel DWDM Passive Filter ISP (Indoor Use), Thin Film Versions

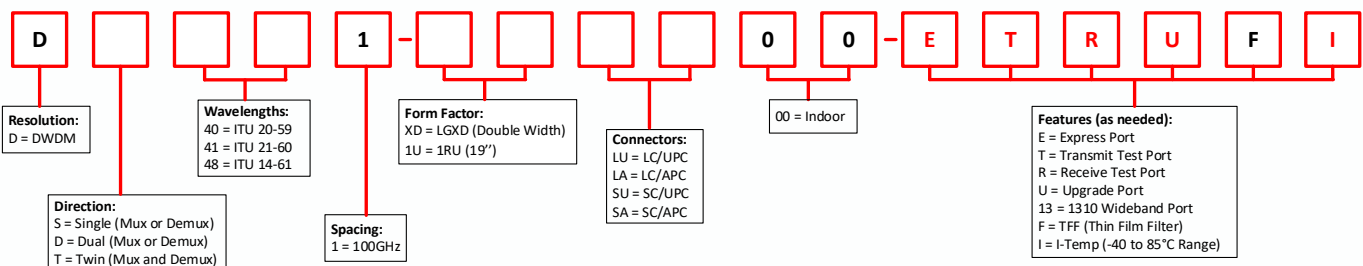
## Product Description:

40 & 48-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



## Part Number / Description Examples

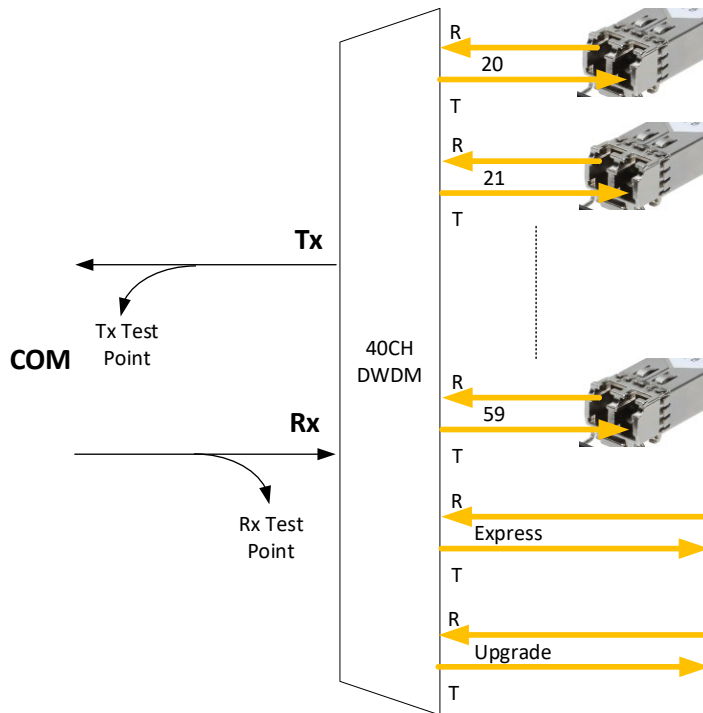
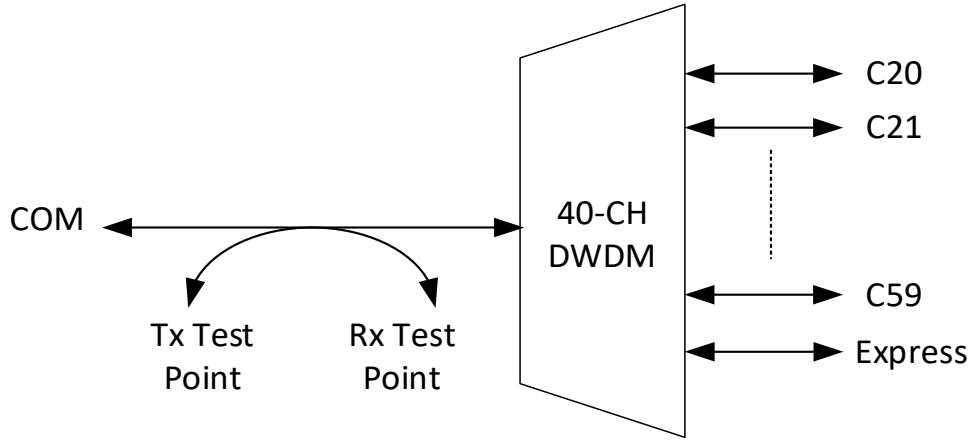
Part Number	Single Description
DS401-XDLU00-ETRUF	DWDM, Single (Mux or Demux), ITU 20-59, 100GHz grid, LGX double width, LC-UPC, with Express + Transmit Test + Receive Test + Upgrade ports, Thin Film Filter
DS401-1ULU00-ETRUF	DWDM, Single (Mux or Demux), ITU 20-59, 100GHz grid, 1RU 19" wide (include brackets), LC-UPC, with Express + Transmit Test + Receive Test + Upgrade ports, Thin Film Filter
DS411-1ULU00-ETRUF	DWDM, Single, (Mux or Demux), ITU 21-60, 100 GHz grid, 1RU 19" wide (include brackets), LC-UPC, with Express + Transmit Test + Receive Test + Upgrade ports, Thin Film Filter
DS481-XDLU00-ETRF	DWDM, Single (Mux or Demux), ITU 14-61, 100GHz grid, LGX double width, LC-UPC, with Express + Transmit Test + Receive Test ports, Thin Film Filter
Part Number	Dual Description
DD401-1ULU00-ETRUF	DWDM, Dual (Mux or Demux), ITU 20-59, 100GHz grid, 1RU 19" wide (include brackets), LC-UPC, with Express + Transmit Test + Receive Test + Upgrade ports, Thin Film Filter
DD411-1ULA00-ETRUF	DWDM, Dual (Mux or Demux), ITU 21-60, 100GHz grid, 1RU 19" wide (include brackets), LC-APC, with Express + Transmit Test + Receive Test + Upgrade ports, Thin Film Filter

Part Number	Twin Description
DT401-1ULU00-ETRUF	DWDM, Twin (Mux + Demux), ITU 20-59, 100GHz grid, 1RU 19" wide (include brackets), LC-UPC, with Express + Transmit Test + Receive Test + Upgrade ports, Thin Film Filter
DT411-1ULA00-ETRUF	DWDM, Twin (Mux + Demux), ITU 21-60, 100GHz grid, 1RU 19" wide (include brackets), LC-APC, with Express + Transmit Test + Receive Test + Upgrade ports, Thin Film Filter

## Optical Characteristics

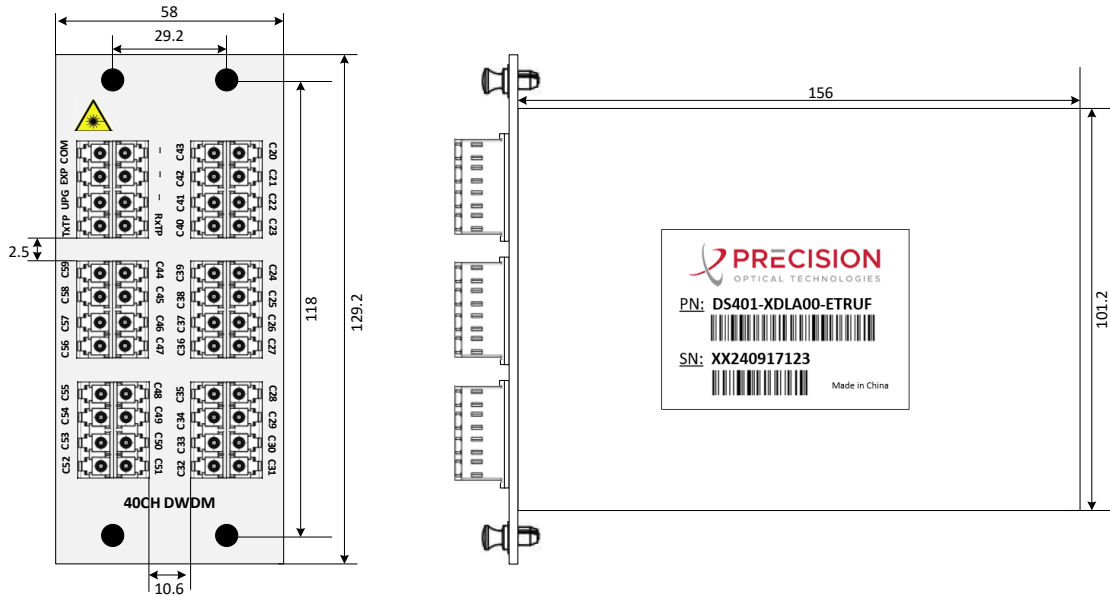
Parameter	Value	Unit
DWDM Passband @ -0.5dB	$\lambda_c \pm 0.125$	nm
DWDM passband insertion loss @ -0.5dB	< 4.5	dB
DWDM passband ripple @ -0.5dB	< 0.5	dB
Test port insertion loss (dB)	$20 \pm 2$	dB
Express insertion loss	< 1.5	dB
Express passband ripple	< 0.5	dB
Express passband	1260-1520 (1420-1520 w/ 1310 Port) 1570-1635	nm
Upgrade insertion loss	< 3.0	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	< 2.0	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)	0 to 70	°C
Industrial Temp	-40 to 85	
Operating humidity	5 to 95	%
Tensile strength pull strength (up to 10 seconds max)	> 20 <sup>3</sup>	N
Fiber type (all ports)	SMF-28e (G.657.A1)	

## Filter Optical Design

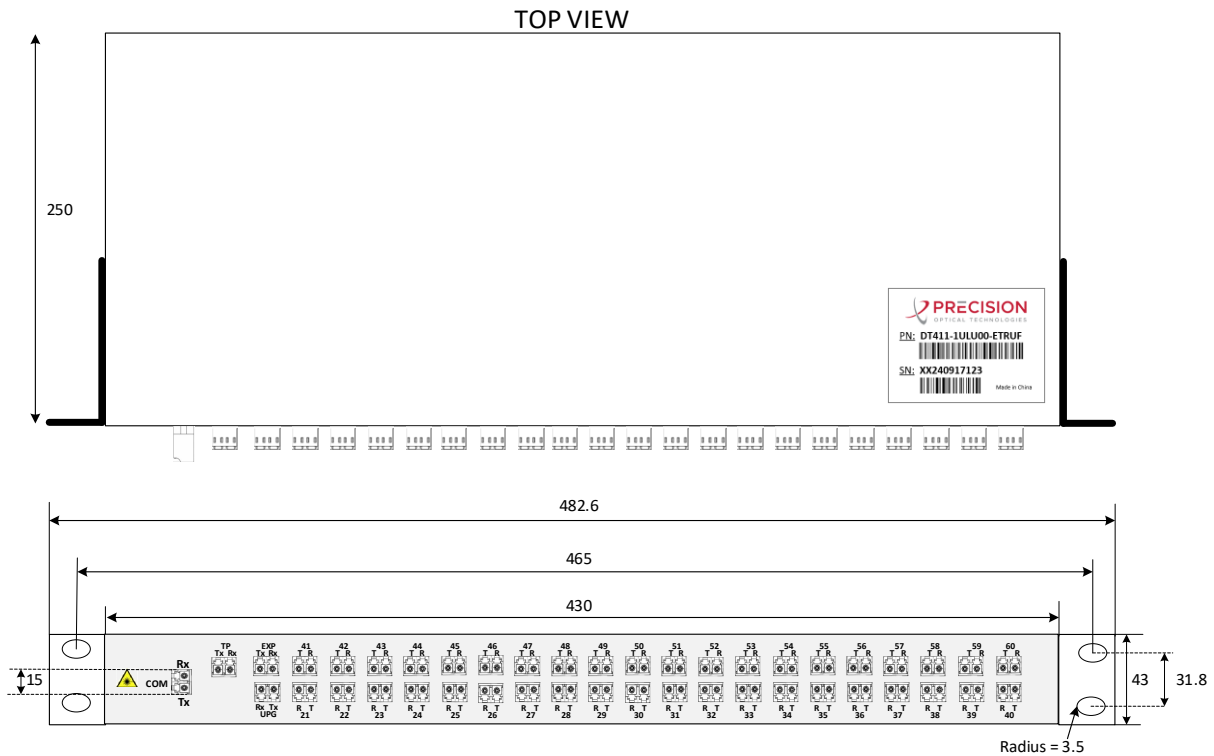


40-Channel DWDM Design (high level)

## Filter Physical Design

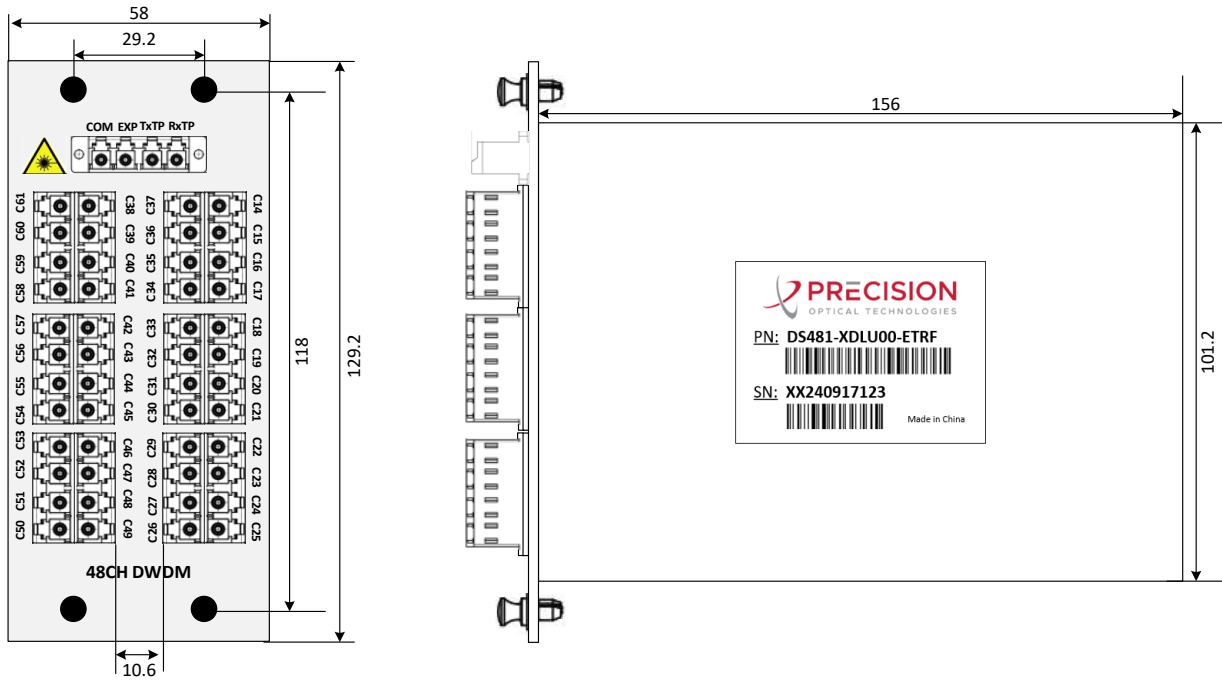


40-Channel DWDM External Design (mm)  
(DS401-XDLA00-ETRUF shown)



40-Channel 1RU DWDM External Design (mm)  
(DT411-1ULU00-ETRUF shown)

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**48-Channel DWDM External Design (mm)**  
(DS481-XDLU00-ETRF shown)