



# DWDM specification guide

Singlemode devices

COMMScope®

# Table of contents

---

Overview.....	3
NG4 Central Office (DWDM MUX).....	4
NG4 Central Office (DWDM MUX) ordering information .....	5
NG4 Central Office (DWDM MUX) optical specifications .....	7
NG4 chassis solutions .....	8
LGX Central Office and OSP DWDM modules.....	9
LGX Central Office (DWDM MUX) ordering information .....	10
LGX Central Office (DWDM MUX) optical specifications.....	11
LGX OSP (DWDM DEMUX) ordering information.....	12
LGX OSP (DWDM DEMUX) optical specifications.....	13
LGX rack mounting solutions.....	14
FOSC A and D trays OSP (DWDM DEMUX).....	15
FOSC A and D tray OSP (DWDM DEMUX) ordering information.....	16
FOSC A and D tray OSP (DWDM DEMUX) optical specifications.....	17
Flat Pack OSP (DWDM DEMUX).....	18
Flat Pack OSP (DWDM DEMUX) ordering information.....	19
Flat Pack OSP (DWDM DEMUX) optical specification .....	20
FIST-FDASA2 Trays OSP (DWDM DEMUX).....	21
FIST-FDASA2 Tray OSP (DWDM DEMUX) ordering information.....	22
FIST-FDASA2 Tray OSP (DWDM DEMUX) optical specifications.....	22

# Overview

Installing new fiber is a costly and time-consuming way to support today's bandwidth-intensive applications. Network operators are seeking ways to adapt their existing fiber infrastructure to support new service, increase network capacity, and guarantee consistent performance. CommScope's WDM integrated solutions allow network operators to increase capacity on existing networks without adding fiber, reduce costs, improve performance, deploy faster, and accelerate return on investment.

Wavelength division multiplexing (WDM) is a technique that allows network operators to multiplex several optical carrier signals onto a single optical fiber by using different optical wavelengths (i.e., colors) of laser light. Each wavelength carries an individual signal that does not interfere with the other wavelengths. WDM enables bidirectional communications over one strand of fiber, as well as multiplication of capacity. No power or additional fiber is required—making WDM solutions quick and easy to install and maintain. WDM has become the preferred option in telecommunications because it enables the network to increase the bit rate and effective bandwidth without having to add fiber.

CommScope's WDM portfolio includes a variety of form factors, optimal for a wide range of ISP and OSP applications. For example, CommScope's LGX and NG4 ISP MUX modules can be paired with FOOSC, flat pack, FIST-FDASA2, or LGX OSP demux modules.

## Applications

- Commercial Ethernet services
- Wireless backhaul services
- Distributed access architectures (e.g., R-PHY)
- 40/100/400 GbE ready optics
- Single and dual fiber network architectures
- Existing fiber infrastructure expansion

## Features

- 4-, 8-, 10-, 20-, and 40-channel configurations
- Low pair loss when linking CO and OSP products
- 100 GHz DWDM ITU channel spacing (ITU-T G694.1)
- Options include express, upgrade, and test ports

CommScope's DWDM devices support network performance upgrades and increases the bandwidth available on your existing fiber network infrastructure.



# NG4 Central Office (DWDM MUX)

CommScope's single-height DWDM NG4 modules comply to GR-1209 and GR-1221 testing requirements. CommScope's triple-height DWDM NG4 modules comply to GR-63 testing requirements.

CommScope's NG4 DWDM modules are designed to multiplex 8, 16, 20, and 40 DWDM wavelengths with 100 GHz frequency spacing on the DWDM ITU grid (ITU-T G.694.1). DWDM module options include express port (for wavelengths outside the C-band), upgrade port (for additional DWDM wavelengths), and TX and RX test ports.

CommScope's central office DWDM modules are designed to be used with NG4access universal chassis', rack mount 1RU, and FACT element options and typically mated with compatible OSP DWDM products. The 40 channel NG4 module is designed to install into the NG4access universal chassis' only.



Single-Height NG4 VAM  
(8-, 16-, and 20-channel configurations)



Triple-Height NG4 VAM  
(40-channel configuration)



# NG4 Central Office (DWDM MUX) ordering information

MID	Description	Module Orientation (when installing into NG4 Chassis)	Number of Circuits
<b>8 channel with LC UPC connectors</b>			
NG4-VDKR2MDA200C1K	NG4 DWDM, LC/UPC connectors, RIGHT, 2 circuits, 8CH with starting ITU 20, UPG, EXP, 1% TX/RX Test Port	RIGHT	2
NG4-VDKR2MDA280C1K	NG4 DWDM, LC/UPC connectors, RIGHT, 2 circuits, 8CH with starting ITU 28, UPG, EXP, 1% TX/RX Test Port	RIGHT	2
NG4-VDKR2MDA360C1K	NG4 DWDM, LC/UPC connectors, RIGHT, 2 circuits, 8CH with starting ITU 36, UPG, EXP, 1% TX/RX Test Port	RIGHT	2
NG4-VDKR2MDA440C1K	NG4 DWDM, LC/UPC connectors, RIGHT, 2 circuits, 8CH with starting ITU 44, UPG, EXP, 1% TX/RX Test Port	RIGHT	2
NG4-VDKR2MDA520C1K	NG4 DWDM, LC/UPC connectors, RIGHT, 2 circuits, 8CH with starting ITU 52, UPG, EXP, 1% TX/RX Test Port	RIGHT	2
NG4-VDKL2MDA200C1K	NG4 DWDM, LC/UPC connectors, LEFT, 2 circuits, 8CH with starting ITU 20, UPG, EXP, 1% TX/RX Test Port	LEFT	2
NG4-VDKL2MDA280C1K	NG4 DWDM, LC/UPC connectors, LEFT, 2 circuits, 8CH with starting ITU 28, UPG, EXP, 1% TX/RX Test Port	LEFT	2
NG4-VDKL2MDA360C1K	NG4 DWDM, LC/UPC connectors, LEFT, 2 circuits, 8CH with starting ITU 36, UPG, EXP, 1% TX/RX Test Port	LEFT	2
NG4-VDKL2MDA440C1K	NG4 DWDM, LC/UPC connectors, LEFT, 2 circuits, 8CH with starting ITU 44, UPG, EXP, 1% TX/RX Test Port	LEFT	2
NG4-VDKL2MDA520C1K	NG4 DWDM, LC/UPC connectors, LEFT, 2 circuits, 8CH with starting ITU 52, UPG, EXP, 1% TX/RX Test Port	LEFT	2
<b>8 channel with LC APC connectors</b>			
NG4-VDMR2MDA200C1K	NG4 DWDM, LC/APC connectors, RIGHT, 2 circuits, 8CH with starting ITU 20, UPG, EXP, 1% TX/RX Test Port	RIGHT	2
NG4-VDMR2MDA280C1K	NG4 DWDM, LC/APC connectors, RIGHT, 2 circuits, 8CH with starting ITU 28, UPG, EXP, 1% TX/RX Test Port	RIGHT	2
NG4-VDMR2MDA360C1K	NG4 DWDM, LC/APC connectors, RIGHT, 2 circuits, 8CH with starting ITU 36, UPG, EXP, 1% TX/RX Test Port	RIGHT	2
NG4-VDMR2MDA440C1K	NG4 DWDM, LC/APC connectors, RIGHT, 2 circuits, 8CH with starting ITU 44, UPG, EXP, 1% TX/RX Test Port	RIGHT	2
NG4-VDKR2MDA520C1K	NG4 DWDM, LC/APC connectors, RIGHT, 2 circuits, 8CH with starting ITU 52, UPG, EXP, 1% TX/RX Test Port	RIGHT	2
NG4-VDML2MDA200C1K	NG4 DWDM, LC/APC connectors, LEFT, 2 circuits, 8CH with starting ITU 20, UPG, EXP, 1% TX/RX Test Port	LEFT	2
NG4-VDML2MDA280C1K	NG4 DWDM, LC/APC connectors, LEFT, 2 circuits, 8CH with starting ITU 28, UPG, EXP, 1% TX/RX Test Port	LEFT	2
NG4-VDML2MDA360C1K	NG4 DWDM, LC/APC connectors, LEFT, 2 circuits, 8CH with starting ITU 36, UPG, EXP, 1% TX/RX Test Port	LEFT	2
NG4-VDML2MDA440C1K	NG4 DWDM, LC/APC connectors, LEFT, 2 circuits, 8CH with starting ITU 44, UPG, EXP, 1% TX/RX Test Port	LEFT	2
NG4-VDML2MDA520C1K	NG4 DWDM, LC/APC connectors, LEFT, 2 circuits, 8CH with starting ITU 52, UPG, EXP, 1% TX/RX Test Port	LEFT	2

- Module orientation required for NG4access universal chassis' only. (As viewed from rear of chassis)
- LEFT orientation standard for FACT NG4 Chassis.
- 40 channel NG4 module installs into NG4access universal chassis' only.
- Please contact your local sales or customer service representative if required configuration is not listed above.

## NG4 Central Office (DWDM MUX) ordering information (continued)

MID	Description	Module Orientation (when installing into NG4 Chassis)	Number of Circuits
<b>16 channel with LC APC connectors</b>			
NG4-VDML1MSA200C2K	NG4 DWDM, LC/APC connectors, LEFT, 1 circuit, 16CH with starting ITU 20, UPG, EXP, 1% TX and RX Test Ports	LEFT	1
NG4-VDML1MSA360C2K	NG4 DWDM, LC/APC connectors, LEFT, 1 circuit, 16CH with starting ITU 36, UPG, EXP, 1% TX and RX Test Ports	LEFT	1
<b>20 channel with LC APC connectors</b>			
NG4-VDML1MYA200C1K	NG4 DWDM, LC/APC connectors, LEFT, 1 circuit, 20CH with starting ITU 20, UPG, EXP, 1% TX/ RX Test Port	LEFT	1
NG4-VDML1MYA400C1K	NG4 DWDM, LC/APC connectors, LEFT, 1 circuit, 20CH with starting ITU 40, UPG, EXP, 1% TX/RX Test Port	LEFT	1
<b>40 channel with LC APC connectors</b>			
NG4-VDML1MQA200C2K	NG4 DWDM, LC/APC connectors, LEFT, 1 circuit, 40CH with starting ITU 20, UPG, EXP, 1% TX and RX Test Ports	LEFT	1
NG4-VDMR1MQA200C2K	NG4 DWDM, LC/APC connectors, RIGHT, 1 circuit, 40CH with starting ITU 20, UPG, EXP, 1% TX and RX Test Ports	RIGHT	1

- Module orientation required for NG4access universal chassis' only. (As viewed from rear of chassis)
- LEFT orientation standard for FACT NG4 Chassis.
- 40 channel NG4 module installs into NG4access universal chassis' only.
- Please contact your local sales or customer service representative if required configuration is not listed above.

# NG4 Central Office (DWDM MUX) optical specifications

	8 Channel	16 Channel	20 Channel	40 Channel
Channel Spacing	0.8 nm	0.8 nm	0.8 nm	0.8 nm
Operating Wavelength	ITU 16 to 63	ITU 16 to 63	ITU 16 to 63	ITU 16 to 63
Passband @ 0.5 dB	CW $\pm$ 0.125 nm	CW $\pm$ 0.125 nm	CW $\pm$ 0.125 nm	CW $\pm$ 0.125 nm
Ripple within Passband DWDM Channel	$\leq$ 0.5 dB	$\leq$ 0.5 dB	$\leq$ 0.5 dB	$\leq$ 0.5 dB
Tx and Rx port IL	25.5 dB Combined Tx/RX Test Port	18.2-21.5 dB	25.4 dB Combined Tx/RX Test Port	18.2-21.5 dB
EXP Port Passband	1260~1520 and 1570~1635	1260~1520 and 1570~1635	1260~1520 and 1570~1635	1260~1520 and 1570~1635
EXP Port IL (dB)	$\leq$ 3.0 dB	$\leq$ 1.5 dB	$\leq$ 1.5 dB	$\leq$ 1.5 dB
Upgrade Port Passband	ITU 16 to 63 Except DWDM channels in module	ITU 16 to 63 Except DWDM channels in module	ITU 16 to 63 Except DWDM channels in module	ITU 16 to 63 Except DWDM channels in module
Upgrade Port IL (dB)	$\leq$ 2.8 dB	$\leq$ 4.0 dB	$\leq$ 4.0 dB	$\leq$ 4.35 dB
DWDM Channel Port Uniformity	$\leq$ 2.0 dB	$\leq$ 2.0 dB	$\leq$ 2.0 dB	$\leq$ 2.0 dB
Isolation (Adjacent Channels)	$\geq$ 30 dB	$\geq$ 30 dB	$\geq$ 30 dB	$\geq$ 30 dB
Isolation (Non-adjacent Channels)	$\geq$ 45 dB	$\geq$ 45 dB	$\geq$ 45 dB	$\geq$ 45 dB
EXP / UPG Isolation	$\geq$ 12 dB	$\geq$ 12 dB	$\geq$ 12 dB	$\geq$ 12 dB
DWDM Port Directivity (CH to CH) except UPG Port	$\geq$ 50 dB	$\geq$ 50 dB	$\geq$ 55 dB	$\geq$ 55 dB
EXP / UPG Directivity	$\geq$ 45 dB	$\geq$ 45 dB	$\geq$ 45 dB	$\geq$ 45 dB
Return Loss	$\geq$ 45 dB	$\geq$ 45 dB	$\geq$ 45 dB	$\geq$ 45 dB
PDL	$\leq$ 0.3 dB	$\leq$ 0.3 dB	$\leq$ 0.3 dB	$\leq$ 0.3 dB
PMD	$\leq$ 0.15 ps	$\leq$ 0.15 ps	$\leq$ 0.15 ps	$\leq$ 0.15 ps
IL Thermal Stability	$\leq$ 0.005 dB/ $^{\circ}$ C	$\leq$ 0.005 dB/ $^{\circ}$ C	$\leq$ 0.005 dB/ $^{\circ}$ C	$\leq$ 0.005 dB/ $^{\circ}$ C
Wavelength Thermal Stability	$\leq$ 0.001 nm/ $^{\circ}$ C	$\leq$ 0.001 nm/ $^{\circ}$ C	$\leq$ 0.001 nm/ $^{\circ}$ C	$\leq$ 0.001 nm/ $^{\circ}$ C
Max Input Power	300 mW (24.8 dBm)	300 mW (24.8 dBm)	300 mW (24.8 dBm)	300 mW (24.8 dBm)
Operating Temperature	-20 $^{\circ}$ C to +65 $^{\circ}$ C (indoor)	-20 $^{\circ}$ C to +65 $^{\circ}$ C (indoor)	-20 $^{\circ}$ C to +65 $^{\circ}$ C (indoor)	-20 $^{\circ}$ C to +65 $^{\circ}$ C (indoor)
Operating Humidity	5% to 95% RH	5% to 95% RH	5% to 95% RH	5% to 95% RH
DWDM Channel Port IL (dB)	$\leq$ 3.8 dB	$\leq$ 4.2 dB	$\leq$ 4.7dB	$\leq$ 6.35 dB
Connector type	LC/UPC and LC/APC	LC/APC	LC/APC	LC/APC

Optical specifications include connector loss.

# NG4 chassis solutions

## NG4 access universal chassis

### Features:

- Single 4RU and 2RU chassis for all applications
- One single-high VAM per access tray loaded from rear side of chassis/frame
- Up to 24 single-high VAMs per 4RU universal chassis. Up to 12 single-high VAMs per 2RU universal chassis
- Can be deployed as a standalone 19"/23" chassis in standard racks
- 4RU: 19.1 x 19.73 x 6.93 inch (Width x Depth x Height)
- 2RU: 19.1 x 19.73 x 3.48 inch (Width x Depth x Height)



MID	Description	Color
NG4-CH100000	NG4-CH10000: 4RU NG4 CHASSIS W/O ADAPTERS	Black
760242618	NG4-CH100000-2B: 2RU NG4 CHASSIS W/O ADAPTERS	Black

## NG4 1RU Chassis - All Front Access

### Features:

- 3 trays per chassis
- Chassis accepts single high standard NG4 modules (front connectors only)
- 6 modules per 1RU chassis
- 19-in. or 23-in. rack mount options
- 19.1 x 13.5 x 1.75 inch (Width x Depth x Height)



MID	Description	Color
760240294	EHD-1U-NG4VAM	Black

## FACT NG4 Chassis

### Features:

- The FACT NG4 element includes two trays
- Each element can accommodate two single-height NG4 VAM modules
- 524 x 283 x 30.95 mm (Width x Depth x Height)



MID	Description
760239975	FACT-1ENG4

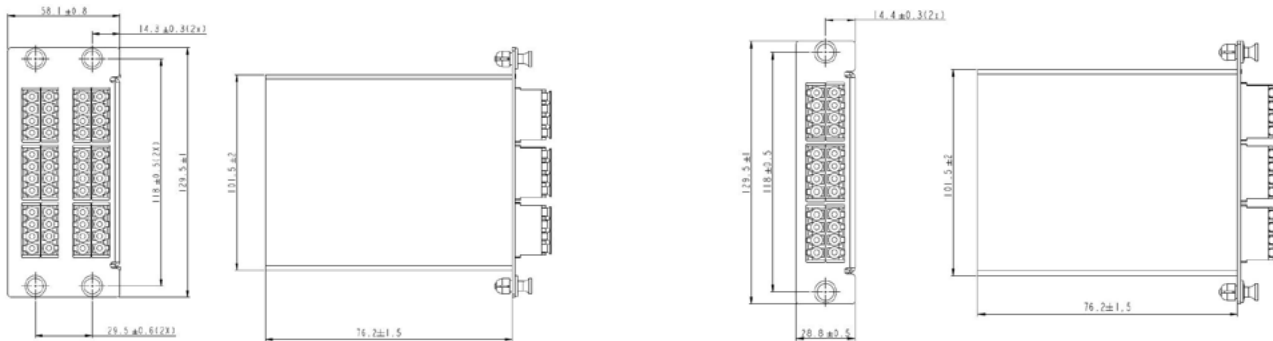


# LGX Central Office and OSP DWDM modules

CommScope's DWDM LGX modules comply to relevant IEC 61753-1, GR-1209 and GR-1221 testing requirements.

CommScope's 3-inch-deep DWDM modules are designed to multiplex and demultiplex 4, 8, 10, 20 and 40 DWDM wavelengths with 100 GHz frequency spacing on the DWDM ITU grid (ITU-T G.694.1). DWDM module options include express port (for wavelengths outside the C-band), upgrade port (for additional DWDM wavelengths), and TX and RX test ports. OTDR service available on 40 and 20-channel modules. OSP DWDM modules include an auxiliary port that combines both the upgrade and express port to pass wavelengths outside of the C-band and additional DWDM wavelengths.

CommScope's central office DWDM modules are designed to be used with LGX chassis options and typically mated with compatible OSP DWDM products.



Double-width LGX module  
(40-channel configuration)



Single-width LGX module  
(4-, 8-, 10- and 20-channel  
configurations)

# LGX Central Office (DWDM MUX) ordering information

## ISP - LGX MUX

MID	Descriptive part number	Description
<b>8 channel</b>		
LX1BDM182011UE5X	3-in BLK LGX, 8-channel DWDM (20-27) LC APC upgrade/express	Single-width LGX DWDM MUX module 8-channel (ITU20-27), TX and RX test ports, upgrade and express ports, LC/APC
LX1BDM182811UE5X	3-in BLK LGX, 8-channel DWDM (28-35) LC APC upgrade/express	Single-width LGX DWDM MUX module 8-channel (ITU28-35), TX and RX test ports, upgrade and express ports, LC/APC
LX1BDM183611UE5X	3-in BLK LGX, 8-channel DWDM (36-43) LC APC upgrade/express	Single-width LGX DWDM MUX module 8-channel (ITU36-43), TX and RX test ports, upgrade and express ports, LC/APC
LX1BDM184411UE5X	3-in BLK LGX, 8-channel DWDM (44-51) LC APC upgrade/express	Single-width LGX DWDM MUX module 8-channel (ITU44-51), TX and RX test ports, upgrade and express ports, LC/APC
LX1BDM185211UE5X	3-in BLK LGX, 8-channel DWDM (52-59) LC APC upgrade/express	Single-width LGX DWDM MUX module 8-channel (ITU52-59), TX and RX test ports, upgrade and express ports, LC/APC
<b>10 channel</b>		
LX1BDM1A2011UE5X	3-in BLK LGX, 10-channel DWDM (20-29) LC APC upgrade/express	Single-width LGX DWDM MUX module 10-channel (ITU20-29), TX and RX test ports, upgrade and express ports, LC/APC
LX1BDM1A3011UE5X	3-in BLK LGX, 10-channel DWDM (30-39) LC APC upgrade/express	Single-width LGX DWDM MUX module 10-channel (ITU30-39), TX and RX test ports, upgrade and express ports, LC/APC
LX1BDM1A4011UE5X	3-in BLK LGX, 10-channel DWDM (40-49) LC APC upgrade/express	Single-width LGX DWDM MUX module 10-channel (ITU40-49), TX and RX test ports, upgrade and express ports, LC/APC
LX1BDM1A5011UE5X	3-in BLK LGX, 10-channel DWDM (50-59) LC APC upgrade/express	Single-width LGX DWDM MUX module 10-channel (ITU50-59), TX and RX test ports, upgrade and express ports, LC/APC
<b>20 channel</b>		
LX1BDM1D2011UE50	3-in BLK LGX, 20-channel DWDM (20-39) LC/APC OTDR	Single-width LGX DWDM MUX module 20-channel (ITU20-39), TX and RX test ports, upgrade and express ports, OTDR ports, LC/APC
LX1BDM1D4011UE50	3-in BLK LGX, 20-channel DWDM (40-59) LC APC OTDR	Single-width LGX DWDM MUX module 20-channel (ITU40-59), TX and RX test ports, upgrade and express ports, OTDR ports, LC/APC
<b>40 channel</b>		
LX2BDM1G2011UE50	3-in BLK LGX, 40-channel DWDM (20-59) LC APC OTDR	Double-width LGX DWDM MUX module 40-channel (ITU20-59), TX and RX test ports, upgrade and express ports, OTDR ports, LC/APC

Please contact your local sales or customer service representative if required configuration is not listed above.

# LGX Central Office (DWDM MUX) optical specifications

	8 channel	10 channel	20 channel	40 channel
Channel spacing	0.8 nm	0.8 nm	0.8 nm	0.8 nm
Operating wavelength	ITU 16 to 63	ITU 16 to 63	ITU 16 to 63	ITU 16 to 63
Passband @ 0.5 dB	CW ± 0.125 nm	CW ± 0.125 nm	CW ± 0.125 nm	CW ± 0.125 nm
Ripple within passband DWDM channel	≤ 0.5 dB	≤ 0.5 dB	≤ 0.5 dB	≤ 0.5 dB
Tx and Rx port IL	18.2~21.5 dB	18.2~21.5 dB	18.2~21.5 dB	18.2~21.5 dB
EXP port passband	1260~1520 and 1570~1635	1260~1520 and 1570~1635	1260~1520 and 1570~1620	1260~1520 and 1570~1620
EXP port IL (dB)	≤ 2 dB	≤ 2 dB	≤ 2 dB	≤ 2 dB
OTDR port passband	N/A	N/A	1640-1650 nm	1640-1650 nm
Upgrade port passband	ITU 16 to 63 Except DWDM channels in module	ITU 16 to 63 Except DWDM channels in module	ITU 16 to 63 Except DWDM channels in module	ITU 16 to 63 Except DWDM channels in module
Upgrade port IL (dB)	≤ 2.5 dB	≤ 3.5 dB	≤ 4 dB	≤ 4.9 dB
DWDM channel port uniformity	≤ 2 dB	≤ 2 dB	≤ 2 dB	≤ 2 dB
Isolation (adjacent channels)	≥ 30 dB	≥ 30 dB	≥ 30 dB	≥ 30 dB
Isolation (non-adjacent channels)	≥ 45 dB	≥ 45 dB	≥ 45 dB	≥ 45 dB
EXP/UPG isolation	≥ 12 dB	≥ 12 dB	≥ 12 dB	≥ 12 dB
DWDM port directivity (CH to CH) except UPG port	≥ 55 dB	≥ 55 dB	≥ 55 dB	≥ 55 dB
EXP/UPG directivity	≥ 45 dB	≥ 45 dB	≥ 45 dB	≥ 45 dB
Return loss	≥ 45 dB	≥ 45 dB	≥ 45 dB	≥ 45 dB
PDL	≤ 0.25 dB	≤ 0.25 dB	≤ 0.30 dB	≤ 0.25 dB
PMD	≤ 0.15 ps	≤ 0.15 ps	≤ 0.15 ps	≤ 0.15 ps
IL thermal stability	≤ 0.005 dB/°C	≤ 0.005 dB/°C	≤ 0.005 dB/°C	≤ 0.005 dB/°C
Wavelength thermal stability	≤ 0.001 nm/°C	≤ 0.001 nm/°C	≤ 0.001 nm/°C	≤ 0.001 nm/°C
Max input power	300 mW (24.8 dBm)	300 mW (24.8 dBm)	300 mW (24.8 dBm)	300 mW (24.8 dBm)
Operating temperature	-40°C to +85°C	-40°C to +85°C	-40°C to +85°C	-40°C to +85°C
Operating humidity	5% to 95% RH	5% to 95% RH	5% to 95% RH	5% to 95% RH
DWDM channel port IL (dB)	≤ 3.3 dB	≤ 3.5 dB	≤ 5.4 dB	≤ 6.7 dB
Connector type	LC/APC	LC/APC	LC/APC	LC/APC

Optical specifications include connector loss.

# LGX OSP (DWDM DEMUX) ordering information

## OSP - LGX DMUX

MID	Descriptive part number	Description
<b>4 channel</b>		
LX1BDD142011XPXX	3-in BLK LGX, 4-channel DWDM (20-23) upgrade/express LCAPC	Single-width LGX DWDM demux module 4-channel (ITU20-23), upgrade/express port
LX1BDD142411XPXX	3-in BLK LGX, 4-channel DWDM (24-27) upgrade/express LCAPC	Single-width LGX DWDM demux module 4-channel (ITU24-27), upgrade/express port
LX1BDD142811XPXX	3-in BLK LGX, 4-channel DWDM (28-31) upgrade/express LCAPC	Single-width LGX DWDM demux module 4-channel (ITU28-31), upgrade/express port
LX1BDD143211XPXX	3-in BLK LGX, 4-channel DWDM (32-35) upgrade/express LCAPC	Single-width LGX DWDM demux module 4-channel (ITU32-35), upgrade/express port
LX1BDD143611XPXX	3-in BLK LGX, 4-channel DWDM (36-39) upgrade/express LCAPC	Single-width LGX DWDM demux module 4-channel (ITU36-39), upgrade/express port
LX1BDD144011XPXX	3-in BLK LGX, 4-channel DWDM (40-43) upgrade/express LCAPC	Single-width LGX DWDM demux module 4-channel (ITU40-43), upgrade/express port
LX1BDD144411XPXX	3-in BLK LGX, 4-channel DWDM (44-47) upgrade/express LCAPC	Single-width LGX DWDM demux module 4-channel (ITU44-47), upgrade/express port
LX1BDD144811XPXX	3-in BLK LGX, 4-channel DWDM (48-51) upgrade/express LCAPC	Single-width LGX DWDM demux module 4-channel (ITU48-51), upgrade/express port
LX1BDD145211XPXX	3-in BLK LGX, 4-channel DWDM (52-55) upgrade/express LCAPC	Single-width LGX DWDM demux module 4-channel (ITU52-55), upgrade/express port
LX1BDD145611XPXX	3-in BLK LGX, 4-channel DWDM (56-59) upgrade/express LCAPC	Single-width LGX DWDM demux module 4-channel (ITU56-59), upgrade/express port
<b>8 channel</b>		
LX1BDD182011XPXX	3-in BLK LGX, 8-channel DWDM (20-27) upgrade/express LCAPC	Single-width LGX DWDM demux module 8-channel (ITU20-27), upgrade/express port
LX1BDD182811XPXX	3-in BLK LGX, 8-channel DWDM (28-35) upgrade/express LCAPC	Single-width LGX DWDM demux module 8-channel (ITU28-35), upgrade/express port
LX1BDD183611XPXX	3-in BLK LGX, 8-channel DWDM (36-43) upgrade/express LCAPC	Single-width LGX DWDM demux module 8-channel (ITU36-43), upgrade/express port
LX1BDD184411XPXX	3-in BLK LGX, 8-channel DWDM (44-51) upgrade/express LCAPC	Single-width LGX DWDM demux module 8-channel (ITU44-51), upgrade/express port
LX1BDD185211XPXX	3-in BLK LGX, 8-channel DWDM (52-59) upgrade/express LCAPC	Single-width LGX DWDM demux module 8-channel (ITU52-59), upgrade/express port
<b>10 channel</b>		
LX1BDD1A2011XPXX	3-in BLK LGX, 10-channel DWDM (20-29) upgrade/express LCAPC	Single-width LGX DWDM demux module 10-channel (ITU20-29), upgrade/express port
LX1BDD1A3011XPXX	3-in BLK LGX, 10-channel DWDM (30-39) upgrade/express LCAPC	Single-width LGX DWDM demux module 10-channel (ITU30-39), upgrade/express port
LX1BDD1A4011XPXX	3-in BLK LGX, 10-channel DWDM (40-49) upgrade/express LCAPC	Single-width LGX DWDM demux module 10-channel (ITU40-49), upgrade/express port
LX1BDD1A5011XPXX	3-in BLK LGX, 10-channel DWDM (50-59) upgrade/express LCAPC	Single-width LGX DWDM demux module 10-channel (ITU50-59), upgrade/express port
<b>20 channel</b>		
LX1BDD1D2011XPXX	3-in BLK LGX, 20-channel DWDM (20-39) upgrade/express LCAPC	Single-width LGX DWDM demux module 20-channel (ITU20-39), upgrade/express port
LX1BDD1D4011XPXX	3-in BLK LGX, 20-channel DWDM (40-59) upgrade/express LCAPC	Single-width LGX DWDM demux module 20-channel (ITU40-59), upgrade/express port
<b>40 channel</b>		
LX2BDD1G2011XPXX	3-in BLK LGX, 40-channel DWDM (20-59) upgrade/express LCAPC	Double-width LGX DWDM demux module 40-channel (ITU20-59), upgrade/express port

Please contact your local sales or customer service representative if required configuration is not listed above.

# LGX OSP (DWDM DEMUX) optical specifications

	4 channel	8 channel	10 channel	20 channel	40 channel
Channel spacing	0.8 nm	0.8 nm	0.8 nm	0.8 nm	0.8 nm
Operating wavelength	ITU 16 to 63	ITU 16 to 63	ITU 16 to 63	ITU 16 to 63	ITU 16 to 63
Passband @ 0.5 dB	CW $\pm$ 0.125 nm	CW $\pm$ 0.125 nm	CW $\pm$ 0.125 nm	CW $\pm$ 0.125 nm	CW $\pm$ 0.125 nm
Ripple within passband DWDM CH	$\leq$ 0.5 dB	$\leq$ 0.5 dB	$\leq$ 0.5 dB	$\leq$ 0.5 dB	$\leq$ 0.5 dB
Upgrade/express port passband	1260~1520 and (ITU16~63) and 1570~1650 except DWDM CH	1260~1520 and (ITU16~63) and 1570~1650 except DWDM CH	1260~1520 and (ITU16~63) and 1570~1650 except DWDM CH	1260~1520 and (ITU16~63) and 1570~1650 except DWDM CH	1260~1520 and (ITU16~63) and 1570~1650 except DWDM CH
Upgrade/express port IL (dB)	$\leq$ 2.4 dB	$\leq$ 2.7 dB	$\leq$ 3 dB	$\leq$ 3.7 dB	$\leq$ 3.7 dB
DWDM channel port uniformity	$\leq$ 2 dB	$\leq$ 2 dB	$\leq$ 2 dB	$\leq$ 2 dB	$\leq$ 2 dB
Isolation (adjacent channels)	$\geq$ 30 dB	$\geq$ 30 dB	$\geq$ 30 dB	$\geq$ 30 dB	$\geq$ 30 dB
Isolation (non-adjacent channels)	$\geq$ 45 dB	$\geq$ 45 dB	$\geq$ 45 dB	$\geq$ 45 dB	$\geq$ 45 dB
Upgrade/express isolation	$\geq$ 12 dB	$\geq$ 12 dB	$\geq$ 12 dB	$\geq$ 12 dB	$\geq$ 12 dB
DWDM port directivity (CH to CH) except upgrade/express port	$\geq$ 55 dB	$\geq$ 55 dB	$\geq$ 55 dB	$\geq$ 55 dB	$\geq$ 55 dB
Upgrade/express directivity	$\geq$ 45 dB	$\geq$ 45 dB	$\geq$ 45 dB	$\geq$ 45 dB	$\geq$ 45 dB
Return loss	$\geq$ 45 dB	$\geq$ 45 dB	$\geq$ 45 dB	$\geq$ 45 dB	$\geq$ 45 dB
PDL	$\leq$ 0.25 dB	$\leq$ 0.25 dB	$\leq$ 0.25 dB	$\leq$ 0.30 dB	$\leq$ 0.30 dB
PMD	$\leq$ 0.15 ps	$\leq$ 0.15 ps	$\leq$ 0.15 ps	$\leq$ 0.15 ps	$\leq$ 0.15 ps
IL thermal stability	$\leq$ 0.005 dB/ $^{\circ}$ C	$\leq$ 0.005 dB/ $^{\circ}$ C	$\leq$ 0.005 dB/ $^{\circ}$ C	$\leq$ 0.005 dB/ $^{\circ}$ C	$\leq$ 0.005 dB/ $^{\circ}$ C
Wavelength thermal stability	$\leq$ 0.001 nm/ $^{\circ}$ C	$\leq$ 0.001 nm/ $^{\circ}$ C	$\leq$ 0.001 nm/ $^{\circ}$ C	$\leq$ 0.001 nm/ $^{\circ}$ C	$\leq$ 0.001 nm/ $^{\circ}$ C
Max input power	300 mW (24.8 dBm)	300 mW (24.8 dBm)	300 mW (24.8 dBm)	300 mW (24.8 dBm)	300 mW (24.8 dBm)
Operating temperature	-40 $^{\circ}$ C to +85 $^{\circ}$ C	-40 $^{\circ}$ C to +85 $^{\circ}$ C	-40 $^{\circ}$ C to +85 $^{\circ}$ C	-40 $^{\circ}$ C to +85 $^{\circ}$ C	-40 $^{\circ}$ C to +85 $^{\circ}$ C
Operating humidity	5% to 95% RH	5% to 95% RH	5% to 95% RH	5% to 95% RH	5% to 95% RH
DWDM channel port IL (dB)	$\leq$ 2.2 dB	$\leq$ 3 dB	$\leq$ 3 dB	$\leq$ 4.6 dB	$\leq$ 6.7 dB
Connector	LC/APC	LC/APC	LC/APC	LC/APC	LC/APC

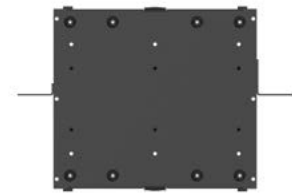
Optical specifications include connector loss.

# LGX rack mounting solutions

## 4RU back-to-back chassis

### Features:

- The LGX 4RU back-to-back chassis holds 14 single-width LGX modules per side or seven dual-width LGX modules per side
- Maximum density of 28 single-width LGX modules or 14 dual-width LGX modules
- 19-in. or 23-in. rack mount
- 2.5-in., 5-in., or 8-in. recess mounting options
- Dimensions (H x W x D): 6.9 x 17 x 15 inches
- LGX pass-through module: Pass-through modules (qty. 2 required) can be mounted anywhere in chassis to allow cables from rear modules to pass to front of chassis.



Description	Color	CommScope part number
LGX 4RU back-to-back chassis Ships equipped with 2 pass-through modules (MID: LGX-PASSTHRU-3BK)	Black	FBPS-LGX-4RU-BLK

## 3RU chassis

### Features:

- Maximum density of 14 single-width LGX modules or 7 dual-width LGX modules
- 19-in. rack mount
- Dimensions (H x W x D): 132.5 x 482 x 235 mm



Description	Color	CommScope part number
FPS-OCM-I-F-BLK	Black	760252747

## 1RU chassis

### Features:

- Holds three single-width LGX modules
- 19-inch rack mount
- Dimensions (H x W x D): 1.7 x 18.9 x 8.9 inches / 44 x 481 x 225 mm



Description	Color	CommScope part number
LGX 1RU chassis—FPS-OCM-K-F-BLK	Black	760250917

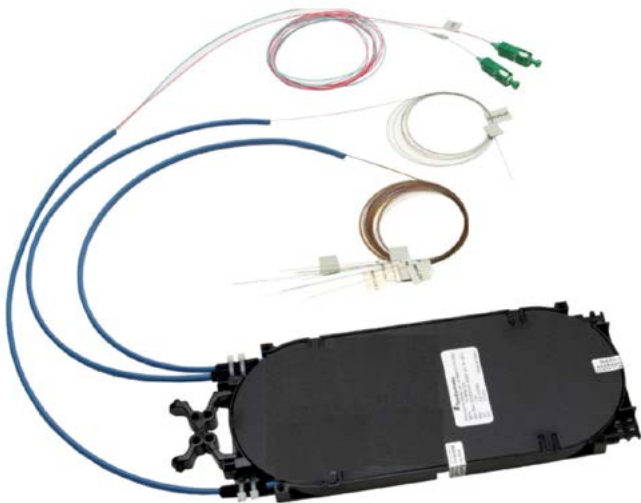


# FOSC A and D trays OSP (DWDM DEMUX)

CommScope's DWDM FOSC trays comply to GR-1209 and GR-1221 testing requirements.

CommScope's DWDM FOSC trays are designed to demultiplex 4, 8, 10, 20 and 40 DWDM wavelengths with 100 GHz frequency spacing on the DWDM ITU grid (ITU-T G.694.1). DWDM FOSC trays include an auxiliary port for wavelengths outside the C-band and for additional DWDM wavelengths, 250  $\mu$ m fiber, and no connectors. All channel configurations are designed into FOSC A tray. 40-channel configuration is designed into both FOSC A tray (two-tray design) and FOSC D tray.

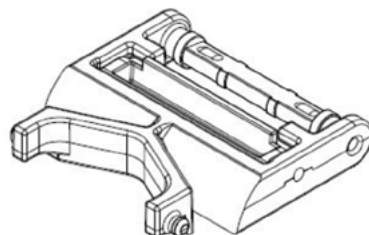
CommScope's OSP DWDM FOSC trays are designed to be field-installable into FOSC closures and BUDI wall boxes (FOSC A tray only). OSP FOSC trays are typically mated with compatible central office DWDM modules. Contact CommScope sales representative for further FOSC closure and BUDI wall box product information.



**FOSC A tray**  
(4, 8, 10, 20 and 40 channel configurations)



**FOSC D tray**  
(40 channel configuration)



**FOSC tray adapter**  
(Part Number 760242191)

# FOSC A and D tray OSP (DWDM DEMUX) ordering information

## OSP-FOSC tray DEMUX

MID	Descriptive Part #	Description
<b>4 channel</b>		
FSCADD142011XPXX	Demux, DWDM 4-channel 20-23 field-installable (tray mount) COM, EXP	FOSC A tray demux 4-channel (ITU20-23), upgrade/express port, 1 fiber system/circuit
FSCADD142411XPXX	Demux, DWDM 4-channel 24-27 field-installable tray mount	FOSC A tray demux 4-channel (ITU24-27), upgrade/express port, 1 fiber system/circuit
FSCADD142811XPXX	Demux, DWDM 4-channel 28-31 field-installable tray mount	FOSC A tray demux 4-channel (ITU28-31), upgrade/express port, 1 fiber system/circuit
FSCADD143211XPXX	Demux, DWDM 4-channel 32-35 field-installable tray mount	FOSC A tray demux 4-channel (ITU32-35), upgrade/express port, 1 fiber system/circuit
FSCADD143611XPXX	Demux, DWDM 4-channel 36-39 field-installable tray mount	FOSC A tray demux 4-channel (ITU36-39), upgrade/express port, 1 fiber system/circuit
FSCADD144011XPXX	Demux, DWDM 4-channel 40-43 field-installable (tray mount) COM, EXP	FOSC A tray demux 4-channel (ITU40-43), upgrade/express port, 1 fiber system/circuit
FSCADD144411XPXX	Demux, DWDM 4-channel 4 4-47 field-installable (tray mount) COM, EXP	FOSC A tray demux 4-channel (ITU44-47), upgrade/express port, 1 fiber system/circuit
FSCADD144811XPXX	Demux, DWDM 4-channel 48-51 field-installable tray mount	FOSC A tray demux 4-channel (ITU48-51), upgrade/express port, 1 fiber system/circuit
FSCADD145211XPXX	Demux, DWDM 4-channel 52-55 field-installable tray mount	FOSC A tray demux 4-channel (ITU52-55), upgrade/express port, 1 fiber system/circuit
FSCADD145611XPXX	Demux, DWDM 4-channel 56-59 field-installable tray mount	FOSC A tray demux 4-channel (ITU56-59), upgrade/express port, 1 fiber system/circuit
<b>8 channel</b>		
FSCADD182011XPXX	Demux, DWDM 8-channel 20-27 field-installable tray mount	FOSC A tray demux 8-channel (ITU20-27), upgrade/express port, 1 fiber system/circuit
FSCADD182811XPXX	Demux, DWDM 8-channel 28-35 field-installable tray mount	FOSC A tray demux 8-channel (ITU28-35), upgrade/express port, 1 fiber system/circuit
FSCADD183611XPXX	Demux, DWDM 8-channel 36-43 field-installable tray mount	FOSC A tray demux 8-channel (ITU36-43), upgrade/express port, 1 fiber system/circuit
FSCADD184411XPXX	Demux, DWDM 8-channel 44-51 field-installable tray mount	FOSC A tray demux 8-channel (ITU44-51), upgrade/express port, 1 fiber system/circuit
FSCADD185211XPXX	Demux, DWDM 8-channel 52-59 field-installable tray mount	FOSC A tray demux 8-channel (ITU52-59), upgrade/express port, 1 fiber system/circuit
<b>10 channel</b>		
FSCADD1A2011XPXX	Demux, DWDM 10-channel 20-29 field-installable tray mount	FOSC A tray demux 10-channel (ITU20-29), upgrade/express port, 1 fiber system/circuit
FSCADD1A3011XPXX	Demux, DWDM 10-channel 30-39 field-installable tray mount	FOSC A tray demux 10-channel (ITU30-39), upgrade/express port, 1 fiber system/circuit
FSCADD1A4011XPXX	Demux, DWDM 10-channel 40-49 field-installable tray mount	FOSC A tray demux 10-channel (ITU40-49), upgrade/express port, 1 fiber system/circuit
FSCADD1A5011XPXX	Demux, DWDM 10-channel 50-59 field-installable tray mount	FOSC A tray demux 10-channel (ITU50-59), upgrade/express port, 1 fiber system/circuit
<b>20 channel</b>		
FSCADD1D2011XPXX	Demux, DWDM 20-channel 20-39 field-installable (tray mount) COM, EXP	FOSC A tray demux 20-channel (ITU20-39), upgrade/express port, 1 fiber system/circuit
FSCADD1D4011XPXX	Demux, DWDM 20-channel 40-59 field-installable (tray mount) COM, EXP	FOSC A tray demux 20-channel (ITU40-59), upgrade/express port, 1 fiber system/circuit
<b>40 channel</b>		
988743-000	FOSC-OC-6DQD1204NN2T-U23	FOSC A tray demux 40-channel (ITU20-59), upgrade and express port, TX and RX test ports, 1 fiber system/circuit, 2 cascaded 20 channel FOSC A Trays
39862W-000	FOSC-OC-3DQD1204NN2T-U23	FOSC D tray demux 40-channel (ITU20-59), upgrade and express port, TX and RX test ports, 1 fiber system/circuit

Please contact your local sales or customer service representative if required configuration is not listed above.

## FOSC tray adapter

The FOSC tray adapter allows for the use of FOSC A Tray into a FOSC C or D size splice closure.

MID	Descriptive part number	Description
760242191	FOSC-ACC-A/B-TO-C/D-HNG	FOSC Tray Adapter

# FOSC A and D tray OSP (DWDM DEMUX) optical specifications

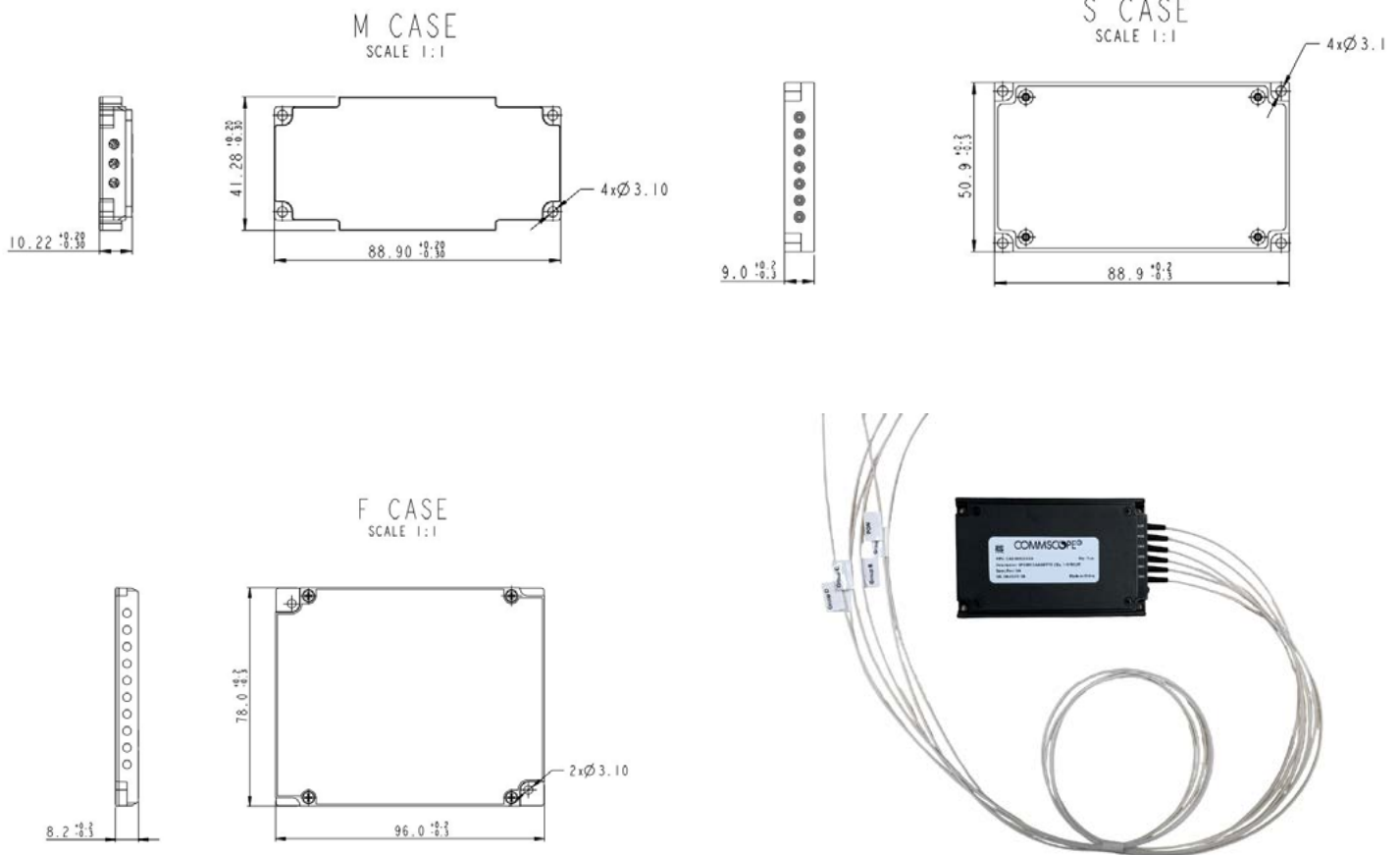
	4 channel	8 channel	10 channel	20 channel	40 channel
Channel spacing	0.8 nm	0.8 nm	0.8 nm	0.8 nm	0.8 nm
Operating wavelength	ITU 16 to 63	ITU 16 to 63	ITU 16 to 63	ITU 16 to 63	ITU 16 to 63
Passband @ 0.5 dB	CW ± 0.125 nm	CW ± 0.125 nm	CW ± 0.125 nm	CW ± 0.125 nm	CW ± 0.125 nm
Ripple within passband DWDM CH	≤ 0.5 dB	≤ 0.5 dB	≤ 0.5 dB	≤ 0.5 dB	≤ 0.5 dB
TX test port IL	N/A	N/A	N/A	N/A	18.2 – 21.5 dB (1260-1635nm)
RX test port IL	N/A	N/A	N/A	N/A	18.2 – 21.5 dB (1260-1635nm) *Including connectors
Express port passband	N/A	N/A	N/A	N/A	1260-1520 & 1570-1635nm
Express port (IL)	N/A	N/A	N/A	N/A	≤ 1.0 dB
Upgrade port passband	N/A	N/A	N/A	N/A	1527.1-1564.81nm
Upgrade port IL (dB)	N/A	N/A	N/A	N/A	≤ 4.35 dB
Upgrade/express port passband (auxiliary port)	1260~1520 and (ITU16~63) and 1570~1650 except DWDM CH	1260~1520 and (ITU16~63) and 1570~1650 except DWDM CH	1260~1520 and (ITU16~63) and 1570~1650 except DWDM CH	1260~1520 and (ITU16~63) and 1570~1650 except DWDM CH	N/A
Upgrade/express port IL (dB)	≤ 2.2 dB	≤ 2.5 dB	≤ 3.1 dB	≤ 3.5 dB	N/A
Isolation (adjacent channels)	≥ 30 dB	≥ 30 dB	≥ 30 dB	≥ 30 dB	≥ 30 dB
Isolation (non-adjacent channels)	≥ 45 dB	≥ 45 dB	≥ 45 dB	≥ 45 dB	≥ 45 dB
Upgrade/express isolation	≥ 12 dB	≥ 12 dB	≥ 12 dB	≥ 12 dB	≥ 12 dB
DWDM port directivity (CH to CH) except upgrade/express port	≥ 55 dB	≥ 55 dB	≥ 55 dB	≥ 55 dB	≥ 55 dB
Upgrade/express directivity	≥ 45 dB	≥ 45 dB	≥ 45 dB	≥ 45 dB	≥ 45 dB
Return loss	≥ 45 dB	≥ 45 dB	≥ 45 dB	≥ 45 dB	≥ 45 dB
PDL	≤ 0.25 dB	≤ 0.25 dB	≤ 0.25 dB	≤ 0.30 dB	≤ 0.30 dB
PMD	≤ 0.15 ps	≤ 0.15 ps	≤ 0.15 ps	≤ 0.15 ps	≤ 0.15 ps
IL thermal stability	≤ 0.005 dB/°C	≤ 0.005 dB/°C	≤ 0.005 dB/°C	≤ 0.005 dB/°C	≤ 0.005 dB/°C
Wavelength thermal stability	≤ 0.001 nm/°C	≤ 0.001 nm/°C	≤ 0.001 nm/°C	≤ 0.001 nm/°C	≤ 0.001 nm/°C
Max input power	300 mW (24.8 dBm)	300 mW (24.8 dBm)	300 mW (24.8 dBm)	300 mW (24.8 dBm)	300 mW (24.8 dBm)
Operating temperature	-40°C to +85°C (outdoor)	-40°C to +85°C (outdoor)	-40°C to +85°C (outdoor)	-40°C to +85°C (outdoor)	-40°C to +85°C (outdoor)
Operating humidity	5% to 95% RH	5% to 95% RH	5% to 95% RH	5% to 95% RH	5% to 95% RH
Tensile strength	> 5 Newtons	> 5 Newtons	> 5 Newtons	> 5 Newtons	> 5 Newtons
DWDM channel port IL (dB)	≤ 2.0 dB	≤ 2.8 dB	≤ 3.0 dB	≤ 4.4 dB	≤ 6.35 dB
Fiber	250 microns	250 microns	250 microns	250 microns	250 microns

# Flat Pack OSP (DWDM DEMUX)

CommScope's DWDM flat packs comply to GR-1209 and GR-1221 testing requirements.

CommScope's DWDM flat packs are designed to demultiplex 4, 8, 10, and 20 DWDM wavelengths with 100 GHz frequency spacing on the DWDM ITU Grid (ITU-T G.694.1). DWDM flat packs include an auxiliary port for wavelengths outside the C-band and for additional DWDM wavelengths, 250µm fiber, and no connectors. CommScope's DWDM flat pack ships with a holder to install onto FOSC trays (NOVUX tray holder coming in 2023).

CommScope's OSP DWDM flat packs ship with a holder to field install into various closures and wall box solutions. OSP flat packs are typically mated with compatible Central Office DWDM modules.



Example of S CASE  
(10 channel configurations)



Example of S CASE installed onto FOSC D Tray

# Flat Pack OSP (DWDM DEMUX) ordering information

## OSP-cassette demux 250 µm

MID	Descriptive part number	Description
<b>4 channel</b>		
FPMDD42011NN20PX	FPMDD42011NN20PX	Cassette, DWDM demux 4-channel (ITU 20-23), upgrade/express port, 250 micron, 2 meters, no connectors, M-Case
FPMDD42411NN20PX	FPMDD42411NN20PX	Cassette, DWDM demux 4-channel (ITU 24-27), upgrade/express port, 250 micron, 2 meters, no connectors, M-Case
FPMDD42811NN20PX	FPMDD42811NN20PX	Cassette, DWDM demux 4-channel (ITU 28-31), upgrade/express port, 250 micron, 2 meters, no connectors, M-Case
FPMDD43211NN20PX	FPMDD43211NN20PX	Cassette, DWDM demux 4-channel (ITU 32-35), upgrade/express port, 250 micron, 2 meters, no connectors, M-Case
FPMDD43611NN20PX	FPMDD43611NN20PX	Cassette, DWDM demux 4-channel (ITU 36-39), upgrade/express port, 250 micron, 2 meters, no connectors, M-Case
FPMDD44011NN20PX	FPMDD44011NN20PX	Cassette, DWDM demux 4-channel (ITU 40-43), upgrade/express port, 250 micron, 2 meters, no connectors, M-Case
FPMDD44411NN20PX	FPMDD44411NN20PX	Cassette, DWDM demux 4-channel (ITU 44-47), upgrade/express port, 250 micron, 2 meters, no connectors, M-Case
FPMDD44811NN20PX	FPMDD44811NN20PX	Cassette, DWDM demux 4-channel (ITU 48-51), upgrade/express port, 250 micron, 2 meters, no connectors, M-Case
FPMDD45211NN20PX	FPMDD45211NN20PX	Cassette, DWDM demux 4-channel (ITU 52-55), upgrade/express port, 250 micron, 2 meters, no connectors, M-Case
FPMDD45611NN20PX	FPMDD45611NN20PX	Cassette, DWDM demux 4-channel (ITU 56-59), upgrade/express port, 250 micron, 2 meters, no connectors, M-Case
<b>8 channel</b>		
FPMDD82011NN20PX	FPMDD82011NN20PX	Cassette, DWDM demux 8-channel (ITU 20-27), upgrade/express port, 250 micron, 2 meters, no connectors, M-Case
FPMDD82811NN20PX	FPMDD82811NN20PX	Cassette, DWDM demux 8-channel (ITU 28-35), upgrade/express port, 250 micron, 2 meters, no connectors, M-Case
FPMDD83611NN20PX	FPMDD83611NN20PX	Cassette, DWDM demux 8-channel (ITU 36-43), upgrade/express port, 250 micron, 2 meters, no connectors, M-Case
FPMDD84411NN20PX	FPMDD84411NN20PX	Cassette, DWDM demux 8-channel (ITU 44-51), upgrade/express port, 250 micron, 2 meters, no connectors, M-Case
FPMDD85211NN20PX	FPMDD85211NN20PX	Cassette, DWDM demux 8-channel (ITU 52-59), upgrade/express port, 250 micron, 2 meters, no connectors, M-Case
<b>10 channel</b>		
FPSDDA2011NN20PX	FPSDDA2011NN20PX	Cassette, DWDM demux 10-channel (ITU 20-29), upgrade/express port, 250 micron, 2 meters, no connectors, S-Case
FPSDDA3011NN20PX	FPSDDA3011NN20PX	Cassette, DWDM demux 10-channel (ITU 30-39), upgrade/express port, 250 micron, 2 meters, no connectors, S-Case
FPSDDA4011NN20PX	FPSDDA4011NN20PX	Cassette, DWDM demux 10-channel (ITU 40-49), upgrade/express port, 250 micron, 2 meters, no connectors, S-Case
FPSDDA5011NN20PX	FPSDDA5011NN20PX	Cassette, DWDM demux 10-channel (ITU 50-59), upgrade/express port, 250 micron, 2 meters, no connectors, S-Case
<b>20 channel</b>		
FPFDDD2011NN20PX	FPFDDD2011NN20PX	Cassette, DWDM demux 20-channel (ITU 20-39), upgrade/express port, 250 micron, 2 meters, no connectors, F-Case
FPFDDD4011NN20PX	FPFDDD4011NN20PX	Cassette, DWDM demux 20-channel (ITU 40-59), upgrade/express port, 250 micron, 2 meters, no connectors, F-Case

Please contact your local sales or customer service representative if required configuration is not listed above.

# Flat Pack OSP (DWDM DEMUX) optical specification

	4 Channel	8 Channel	10 Channel	20 Channel
Channel spacing	0.8 nm	0.8 nm	0.8 nm	0.8 nm
Operating wavelength	ITU 16 to 63	ITU 16 to 63	ITU 16 to 63	ITU 16 to 63
Passband @ 0.5 dB	CW $\pm$ 0.125 nm	CW $\pm$ 0.125 nm	CW $\pm$ 0.125 nm	CW $\pm$ 0.125 nm
Ripple within passband DWDM CH	$\leq$ 0.5 dB	$\leq$ 0.5 dB	$\leq$ 0.5 dB	$\leq$ 0.5 dB
Upgrade/express port passband	1260~1520 and (ITU16~63) and 1570~1650 except DWDM CH	1260~1520 and (ITU16~63) and 1570~1650 except DWDM CH	1260~1520 and (ITU16~63) and 1570~1650 except DWDM CH	1260~1520 and (ITU16~63) and 1570~1650 except DWDM CH
Upgrade/express port IL (dB)	$\leq$ 2.2 dB	$\leq$ 2.5 dB	$\leq$ 3.1 dB	$\leq$ 3.5 dB
Isolation (adjacent channels)	$\geq$ 30 dB	$\geq$ 30 dB	$\geq$ 30 dB	$\geq$ 30 dB
Isolation (non-adjacent channels)	$\geq$ 45 dB	$\geq$ 45 dB	$\geq$ 45 dB	$\geq$ 45 dB
Upgrade/express isolation	$\geq$ 12 dB	$\geq$ 12 dB	$\geq$ 12 dB	$\geq$ 12 dB
DWDM port directivity (CH to CH) except upgrade/express port	$\geq$ 55 dB	$\geq$ 55 dB	$\geq$ 55 dB	$\geq$ 55 dB
Upgrade/express directivity	$\geq$ 45 dB	$\geq$ 45 dB	$\geq$ 45 dB	$\geq$ 45 dB
Return loss	$\geq$ 45 dB	$\geq$ 45 dB	$\geq$ 45 dB	$\geq$ 45 dB
PDL	$\leq$ 0.25 dB	$\leq$ 0.25 dB	$\leq$ 0.25 dB	$\leq$ 0.30 dB
PMD	$\leq$ 0.15 ps	$\leq$ 0.15 ps	$\leq$ 0.15 ps	$\leq$ 0.15 ps
IL thermal stability	$\leq$ 0.005 dB/ $^{\circ}$ C	$\leq$ 0.005 dB/ $^{\circ}$ C	$\leq$ 0.005 dB/ $^{\circ}$ C	$\leq$ 0.005 dB/ $^{\circ}$ C
Wavelength thermal stability	$\leq$ 0.001 nm/ $^{\circ}$ C	$\leq$ 0.001 nm/ $^{\circ}$ C	$\leq$ 0.001 nm/ $^{\circ}$ C	$\leq$ 0.001 nm/ $^{\circ}$ C
Max input power	300 mW (24.8 dBm)	300 mW (24.8 dBm)	300 mW (24.8 dBm)	300 mW (24.8 dBm)
Operating temperature	-40 $^{\circ}$ C to +85 $^{\circ}$ C (outdoor)	-40 $^{\circ}$ C to +85 $^{\circ}$ C (outdoor)	-40 $^{\circ}$ C to +85 $^{\circ}$ C (outdoor)	-40 $^{\circ}$ C to +85 $^{\circ}$ C (outdoor)
Operating humidity	5% to 95% RH	5% to 95% RH	5% to 95% RH	5% to 95% RH
Tensile strength	> 5 Newtons	> 5 Newtons	> 5 Newtons	> 5 Newtons
DWDM channel port IL (dB)	$\leq$ 2 dB	$\leq$ 2.8 dB	$\leq$ 3.0 dB	$\leq$ 4.4 dB
Fiber	250 microns	250 microns	250 microns	250 microns



# FIST-FDASA2 Trays OSP (DWDM DEMUX)

CommScope's FIST-FDASA2 DWDM trays comply to relevant IEC 61753-1 testing requirements.

CommScope's FIST-FDASA2 DWDM trays are designed to demultiplex 8 DWDM wavelengths with 100 GHz frequency spacing on the DWDM ITU grid (ITU-T G.694.1). DWDM trays include an upgrade path to add, drop, or pass-through C-band DWDM channels not already in use, i.e., only channels that reside in the band 1530-1565 nm.

CommScope's FIST FDASA2 DWDM trays are designed to be used with FIST-GSS shelves, BUDI wall mount closures, and FIST closures (FIST-GCO2, FIST-GCOG2, FIST-MSA, FIST-EDSA). DWDM trays are typically mated with compatible central office DWDM products.



8mm Height FDASA2 Tray  
(8 channel configurations)

# FIST-FDASA2 Tray OSP (DWDM DEMUX) ordering information

## OSP – FIST-FDASA2 DEMUX

MID	Descriptive part number	Description
<b>8 channel</b>		
760254988	FIST-FDASA2-BD1201NN-R	FIST-FDASA2 Tray, 8ch Demux, ITU 20-27, Upgrade, 250um no connectors, RIGHT side, single demux circuit
760254987	FIST-FDASA2-BD1281NN-R	FIST-FDASA2 Tray, 8ch Demux, ITU 28-35, Upgrade, 250um no connectors, RIGHT side, single demux circuit
760254989	FIST-FDASA2-BD1361NN-R	FIST-FDASA2 Tray, 8ch Demux, ITU 36-43, Upgrade, 250um no connectors, RIGHT side, single demux circuit
760254986	FIST-FDASA2-BD1441NN-R	FIST-FDASA2 Tray, 8ch Demux, ITU 44-51, Upgrade, 250um no connectors, RIGHT side, single demux circuit
760249454	FIST-FDASA2-BD1521NN-R	FIST-FDASA2 Tray, 8ch Demux, ITU 52-59, Upgrade, 250um no connectors, RIGHT side, single demux circuit

Please contact your local sales or customer service representative if required configuration is not listed above.

# FIST-FDASA2 Tray OSP (DWDM DEMUX) optical specifications

	8 Channel
Channel Spacing	0.8 nm
Operating Wavelength	ITU 16 to 63
Passband @ 0.5 dB	CW $\pm$ 0.125 nm
Upgrade Port Passband	ITU 16 to 63 Except DWDM channels in module
Ripple within Passband DWDM Channel	$\leq$ 0.5 dB
All Port Insertion Loss (dB)	$\leq$ 1.7 dB
DWDM Channel Port Uniformity	$\leq$ 2.0 dB
Isolation (Adjacent Channels)	$\geq$ 30 dB
Isolation (Non-adjacent Channels)	$\geq$ 45 dB
Directivity	$\geq$ 50 dB
Return Loss	$\geq$ 50 dB
PDL	$\leq$ 0.15 dB
PMD	$\leq$ 0.15 ps
IL Thermal Stability	$\leq$ 0.005 dB/ $^{\circ}$ C
Wavelength Thermal Stability	$\leq$ 0.001 nm/ $^{\circ}$ C
Max Input Power	300 mW (24.8 dBm)
Operating Temperature	-40 $^{\circ}$ C to +85 $^{\circ}$ C (indoor)
Operating Humidity	5% to 95% RH
Connector type	No Connector
Fiber Length	1.9 – 2.6 meter

CommScope pushes the boundaries of communications technology with game-changing ideas and ground-breaking discoveries that spark profound human achievement. We collaborate with our customers and partners to design, create and build the world's most advanced networks. It is our passion and commitment to identify the next opportunity and realize a better tomorrow. Discover more at [commscope.com](https://commscope.com)

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CO-117322.1-EN (09/23)