4 Channel DWDM Fiber Mux Demux LGX

Variants

MUX/DEMUX RX: C25-C28/ TX:C53-C56 Side A   MUX/DEMUX RX: C53-C56 TX:C25-C28 Side B   MUX/DEMUX RX: C21-C24/ TX:C57-C60 Side A   MUX/DEMUX: C57-C60/ TX:C21-C24 Side B   MUX/DEMUX RX: C25-C28/ TX:C21-C24 Side (B) MUX/DEMUX RX: C21-C24/ TX:C25-C28 side (A)

Details

4 Channel DWDM Fiber Mux Demux – Single Fiber (8 Wavelengths)

Product Overview

The 4 Channel DWDM Fiber Mux Demux is a single-fiber, bi-directional DWDM solution designed to transmit 4 independent services using 8 DWDM wavelengths over one optical fiber. It operates on C25–C28 and C53–C56 wavelengths, following ITU-T G.694.1 (100 GHz grid) standards, maximizing utilization of the C-band spectrum.
This solution is ideal for ISP backbone, data centers, cloud networks, broadcasting, finance, and government networks, where fiber resources are limited and high capacity is required.

Key Features

4 Channels over Single Fiber (Bi-Directional)
8 DWDM Wavelengths (C25–C28 / C53–C56)
ITU-T G.694.1 100 GHz Grid Compliant
Thin Film Filter (TFF) Technology
Low Insertion Loss ? 2.4 dB
High Channel Isolation (up to 45 dB)
Expansion (EXP) Port for Future Capacity Upgrade
Supports Custom DWDM Wavelength Design

Working Principle (Single Fiber BIDI)

MUX Side (Side-A)
Combines C25–C28 and C53–C56 wavelengths
Sends multiple services into one single fiber

DEMUX Side (Side-B)
Separates the same wavelengths at receiving end
Ensures stable point-to-point transmission

Expansion Port (EXP)
Allows cascading with another DWDM Mux/Demux
Increases bandwidth without adding new fiber

Supported Wavelengths

C25 – 1557.36 nm
C26 – 1556.55 nm
C27 – 1555.75 nm
C28 – 1554.94 nm
C53 – 1535.04 nm
C54 – 1534.25 nm
C55 – 1533.47 nm
C56 – 1532.68 nm

Optical Specifications

Channel Spacing: 100 GHz (0.8 nm)
Channel Passband: ±0.11 nm
Insertion Loss: ? 2.4 dB
Return Loss: ? 45 dB
Directivity: ? 45 dB
Polarization Dependent Loss: ? 0.3 dB
Polarization Mode Dispersion: ? 0.1 ps
Channel Isolation:
Adjacent ? 30 dB
Non-Adjacent ? 45 dB
Center Wavelength Accuracy: ± 0.05 nm

Mechanical & Environmental Specifications

Operating Temperature: –20 °C to +70 °C
Storage Temperature: –40 °C to +85 °C
Dimensions (HxWxD): 44 × 440 × 230 mm
Net Weight: Approx. 3.5 kg
Mounting Type: 19-inch 1U Rack Mount
Slot Support: 4 × LGX Plug-in Modules

Connector & Interface

Fiber Type: Single Mode OS2
Connector Type: LC-UPC (LC-APC optional)
Line Port: Single Fiber BIDI
EXP Port: Available for expansion

Application Areas

ISP & Telecom Backbone
Data Centers & IDC
Broadcasting & TV Networks
Cloud & Massive Data Transmission
Banking & Financial Networks
Government & Enterprise Networks