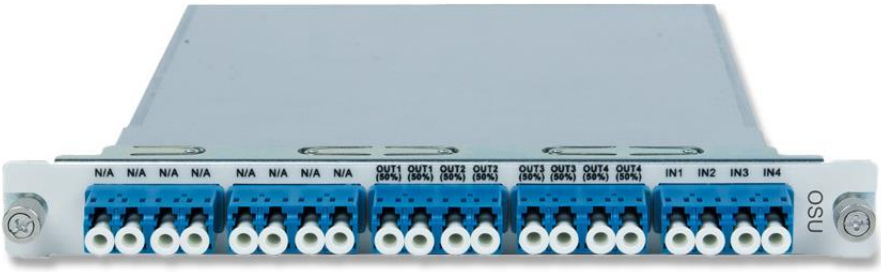
OSU Optical Splitter Unit

CWDM/DWDM System



Specification

The OSU optical splitter unit is a splitter based on planar optical waveguide technology. It is mainly used for communication trunk, MAN, LAN, private network, DPI, FTTX of PON, etc. Our 1*N, 2*N planar waveguide optical splitters are small and cost effective. They support a wide wavelength range (1260-1620nm) and can provide customers with low insertion loss and low polarization dependent loss.

Functions and features

- Supporting single-mode and multi-mode, various network applications.
- Supporting single window and multiple windows, optional splitting ratio.
- Supporting PLC and FBT technology, low insertion loss, low polarization dependent loss.
- Pure passive without power supply, non-power supply debugging, transparent transmission.
- Supporting SNMP-based unified network management platform, network management mode CLI, WEB, NetRiver (graphical interface).

GLITEL Stropkov, s.r.o.
Cintorínska 557/73
09101 Stropkov
Slovak Republic

IČO: 31671659
DIČ: 2020526332
IČ DPH: SK2020526332
OR OS Prešov, odd. Sro, vl. Č 1065/P

Slovenská sporiteľňa, a. s.
A/C No: 0104682560/0900
BIC: GIBASKBX
IBAN: SK2909000000000104682560

Tel: +421547428136
Email: glitel@glitel.sk
Web: www.glitel.sk

Parameters

System Parameter		Technical Index
Wavelength range		Single mode: 1260nm~1650nm, Multimode: 850nm.
Insertion Loss	1/2	Single mode: 50%: ≤ 3.50dB, Multimode: 50%: ≤ 4.10dB.
	1/3	Single mode: 33.3%: ≤ 5.40dB, Multimode: 33.3%: ≤ 5.80dB.
	1/4	Single mode: 25%: ≤7.00dB, Multimode: 25%: ≤7.60dB.
	1/8	Single mode: 12.5%: ≤10.30dB, Multimode: 12.5%: ≤11.10dB.
	1/16	Single mode: 6.25%: ≤13.50dB, Multimode: 6.25%: ≤14.20dB.
	1/32	Single mode: 3.125%: ≤17.00dB, Multimode: 3.125%: ≤17.70dB.
	1/64	Single mode: 1.563%: ≤20.50dB, Multimode: 1.563%: ≤21.20dB.
	60:40	Single mode: 60%: ≤2.70 dB / 40%: ≤4.70dB, Multimode: 60%: ≤3.20 dB / 40%: ≤5.20dB.
	70:30	Single mode: 70%: ≤1.90 dB / 30%: ≤6.00dB, Multimode: 70%: ≤2.50dB / 30%: ≤6.50dB.
	80:20	Single mode: 80%: ≤1.20 dB / 20%: ≤7.90dB, Multimode: 80%: ≤1.40dB / 20%: ≤9.00dB.
	90:10	Single mode: 90%: ≤0.80dB / 10%: ≤11.60dB, Multimode: 90%: ≤1.30 dB / 10%: ≤12.00dB.
	70:15:15	Single mode: 70%: ≤1.90dB / 15%: ≤9.00dB, Multimode: 70%: ≤2.50dB / 15%: ≤10.50dB.
	80:10:10	Single mode: 80%: ≤1.20dB / 10%: ≤11.60dB, Multimode: 80%: ≤1.20dB / 10%: ≤12.00dB.
	70:10:10:10	Single mode: 70%: ≤1.90dB / 10%: ≤11.60dB, Multimode: 70%: ≤2.50dB / 10%: ≤12.00dB.
	60:20:10:10	Single mode: 60%: ≤2.70dB / 20%: ≤7.90dB / 10%: ≤11.60dB, Multimode: 60%: ≤3.20dB / 20%: ≤9.00dB / 10%: ≤12.00dB.

System Parameter	Technical Index	
Polarization dependent loss(PDL)	≤0.15dB.	
Return loss	≥55dB.	
Directivity	≥55dB.	
Network management mode	CLI, NetRiver, WEB.	
Product dimension	Single card: 177(W)*20(H)*225(D)(mm). Chassis unit: 482(W)*177(H)*250(D)(mm).	
Environmental requirements	Working temperature	-10℃ ~ 70℃.
	Storage temperature	-40℃ ~ 80℃.
	Relative humidity	5%~95% no condensation.
Safety and EMC	Compliance with FCC, UL, CE, TUV, CSA standards.	
Power consumption	<2W.	

Networking Applications

Optical multiplexing and demultiplexing equipment is widely used to solve the problem of insufficient optical cable resources in transmission. Fabricated by thin film filter (TFF) technology and planar lightwave circuit (PLC) technology, multiple optical carrier signals are multiplexed onto a single-core optical fiber for transparent transmission, supporting dual-fiber bidirectional, single-fiber bidirectional, single-fiber single unidirectional and other types.

Application 1: Dual-fiber Bidirectional

The dual-fiber bidirectional multiplexes multiple optical carrier signals onto the two-core optical fiber for transmission, thereby realizing the use of the two-core optical fiber to transmit multiple services, thus greatly reducing the investment cost and saving the cable laying time.

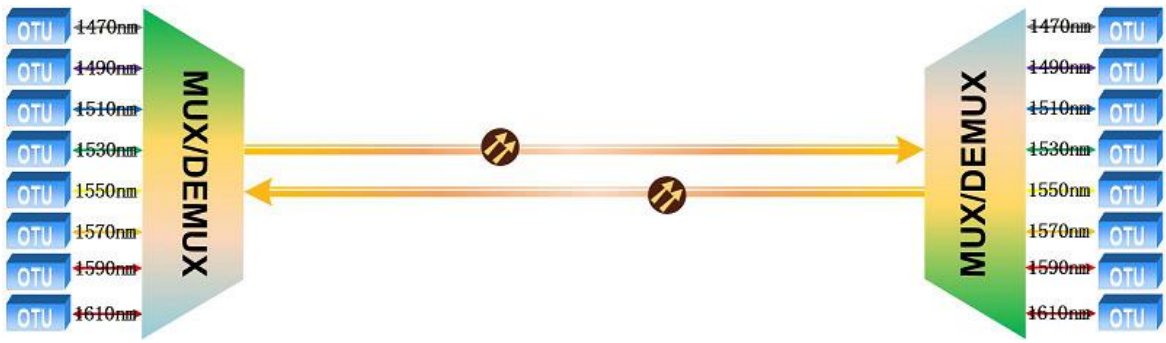


Figure 1: Multiplexing/Demultiplexing Dual-fiber Bidirectional Application

Application 2: Single-fiber Bidirectional

The single-fiber unidirectional uses the optical reversible characteristic to multiplex multiple optical carrier signals onto a single-core optical fiber for transmission, thereby realizing multi-channel transmission by using one-core optical fiber, thus greatly reducing investment cost and saving cable laying time.

Figure 2: Multiplexing/Demultiplexing Single-fiber Bidirectional Application

Application 3: Smooth Upgrade

The smooth upgrade is to access the splitter through the expansion port of the splitter in the original WDM system to achieve smooth upgrade and expansion without affecting the original service.

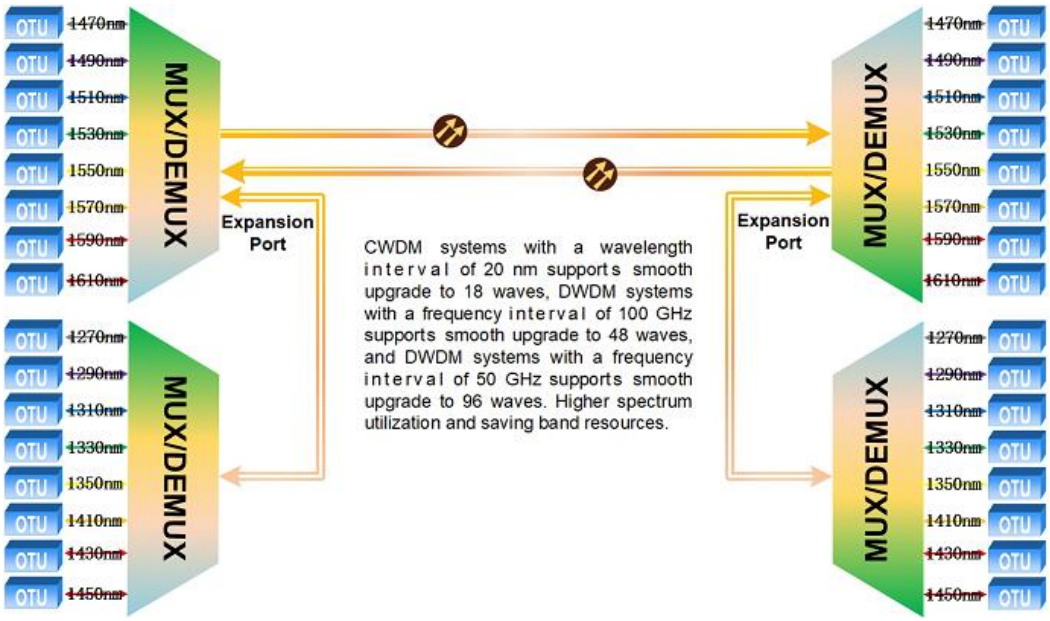


Figure 3: Multiplexing/Demultiplexing Smooth Upgrade Application