

OMP1701

Optical multi-platform

Version 1.4



Product Description

The optical instrument host box supports optical components such as single-mode and multimode optical attenuators, optical switches, power meters, and Mux/Demux, with built-in power and communication interfaces (LAN/USB). Each component can be matched according to testing requirements.



Standard 4U Full Rack PXI chassis

Key Features

- 4U, Full rack
- Support 17 slots
- The width of each slot is about 20 mm, and the width of the chassis is about 448 mm
- Support plug-in optical switch
- Support plug-in optical power meter
- Support plug-in optical attenuator
- The designed power consumption of the chassis is 100 W

Technical Specification

Multi-mode optical attenuator

Technical Specifications	Operating wavelength	850nm
	Connectivity	FC/PC
	Insertion loss	<2.5dB
	Return loss	>30dB
	Attenuation range	0~40dB
	Channels	4
	Resolution	0.1 dB
	Accuracy	±0.15dB
	Max. input power	500mW
	Power monitoring mode	Input/Output
	Power monitoring range	+10~-50 dBm
	Power accuracy	≤±0.2dB (0 ~35dB) ≤±0.5dB (35 ~50dB)
	Operating temperature	0°C to 50°C
	Storage temperature	-20°C to +70°C

Single-mode optical attenuator

Technical Specifications	Operating wavelength	1270/1290/1310/1330/1295/1300/1305 /1490/1550/1625nm
	Attenuation range	0 ~40dB
	Resolution	0.01dB
	Power monitoring range	+20 ~ -50dBm
	Power accuracy	≤±0.2dB (0 ~20dB)

		$\leq \pm 0.4\text{dB}$ (20 ~ 40dB)
	Max. input power	500mW
	Insertion loss	$\leq 2.5\text{dB}$
	Return loss	$\geq 45\text{dB}$
	Connectivity	FC/PC
	Operating temperature	-5°C to + 60°C

Optical power meter

Technical Specifications	Sensor element	InGaAs
	Size	Diameter 2mm
	Power range	Type A: -70~+10 dBm, Type B: -50~+26 dBm
	Operating wavelength	850/1270/1290/1310/1330/1350/1370/1390/ 1410/1430/1450/1470/1490/1510/1530/1550/ 1570/1590/1610/1625/1650nm
	Accuracy	0.1dB
	Linearity	0.1dB
	Polarization loss	0.3dB
	Sample Rate	470 Hz
	Operating temperature	-10°C to +50°C
	Storage temperature	-20°C to +70°C

Single-mode 1x4 optical switch

Technical Specifications	Operating wavelength	1310/1550nm
	Connectivity	FC/PC
	Insertion loss	≤1.0dB
	Repeatability	<0.03 dB
	Return loss	≥50dB
	Crosstalk	≤−70dB
	Switch time	<12 ms
	Lifetime	>3x10 ⁷ cycles
	Operating temperature	−20°C to +70°C
	Storage temperature	−40°C to +85°C

Multi-mode 1x4 optical switch

Technical Specifications	Operating wavelength	850nm
	Connectivity	FC/PC
	Insertion loss	≤1.0dB
	Repeatability	≤0.03dB
	Return loss	≥30 dB
	Crosstalk	≤−70dB
	Switch time	≤12 ms

CWDM Demux

Technical Specifications	Wavelength range	1260~1620 nm
	Center wavelength	1271nm/1291/1311nm/1331nm
	Channel Spacing	20 nm
	Bandwidth	± 6.5 nm
	Transmission channel insertion loss	≤ 1.2 dB
	Reflection channel insertion loss	≤ 0.5 dB
	Transmission channel isolation	30 dB
	Reflection channel isolation	40 dB
	Insertion loss temperature sensitivity	≤ 0.005 nm/ $^{\circ}$ C
	Wavelength temperature shifting	≤ 0.002 nm/ $^{\circ}$ C
	Polarization dependent loss	≤ 0.2 dB
	Polarization mode dispersion	≤ 0.2 dB
	Ripple	≤ 0.5 dB
	Directivity	≥ 50 dB
	Return loss	≥ 45 dB
	Max. input power	300mW
	Operating Temperature	-5 $^{\circ}$ C to +70 $^{\circ}$ C
	Storage Temperature	-40 $^{\circ}$ C to +85 $^{\circ}$ C
Connectivity	FC/PC	

LWDM Demux

Technical Specifications	Channels	8
	Channel Wavelength	CH1/2 1273.54nm/1277.89nm
		CH3/4 1282.26nm/1286.66nm
		CH5/6 1295.56nm/1300.05nm
		CH7/8 1304.58nm/1309.14nm
	Insertion loss	≤ 2 dB
	Adjacent Isolation	≥ 25 dB
	Non-adjacent Isolation	≥ 35 dB
	Channel ripple	≤ 0.5 dB
	Temperature dependent loss	≤ 0.5 dB
	Polarization dependent loss	≤ 0.5 dB
	Polarization mode dispersion	≤ 0.2 ps
	Uniformity	≤ 1.0 dB
	Return loss	≥ 45 dB
	Directivity	≥ 50 dB
	Max. input power	≤ 500 mW
	Operating temperature	-10°C to +70°C
Storage temperature	-40°C to +85°C	
Connectivity	FC/APC	

Single-mode optical splitter

Parameter	Grade	P	A
	Operating wavelength	1290 or 1550 nm	
Operating bandwidth	±15 nm		
Typical excess loss	0.07 dB		0.1 dB
Insertion loss	50/50	≤3.6 dB	≤3.6 dB
	40/60	≤4.4/2.6 dB	≤4.7/2.8 dB
	30/70	≤5.7/1.9 dB	≤6.0/2.0 dB
	20/80	≤7.6/1.2 dB	≤8.0/1.3 dB
	10/90	≤11.5/0.7 dB	≤12/0.8 dB
	5/95	≤14.2/0.4 dB	≤14.8/0.5 dB
	2/98	≤18.5/0.25 dB	≤19.0/0.35 dB
	1/99	≤21.5/0.2 dB	≤22.0/0.3 dB
Polarization dependent loss	≤0.1 dB		≤0.15 dB
Directivity	≥55 dB		
Operating temperature	-40°C to +85 °C		

Multi-mode optical splitter

Parameter	Grade	P	A
	Operating wavelength	850nm	
Bandwidth	±40 nm		
Typical excess loss	0.4 dB		0.7 dB
Insertion loss	50/50	≤3.7/3.7 dB	≤4.0/4.0 dB
	40/60	≤4.7/2.7 dB	≤5.0/3.0 dB
	30/70	≤6.0/2.1 dB	≤6.3/2.4 dB
	20/80	≤7.8/1.4 dB	≤8.1/1.7 dB
	10/90	≤11.2/0.9 dB	≤11.6/1.2 dB
	5/95	≤14.5/0.7 dB	≤15.0/1.0 dB
	2/98	≤18.6/0.6 dB	≤19.4/0.9 dB

		1/99	$\leq 22.0/0.5$ dB	$\leq 22.8/0.8$ dB
	Uniformity (50/50)		≤ 0.5 dB	≤ 0.8 dB
	Directivity		≥ 40 dB	
	Operating temperature		-40°C to +85°C	

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*This information is subject to change without notice.