

CWDM multiplexers

for 8 ITU channels and 1 channel 1310 ± 40 nm, with SC/APC pigtails

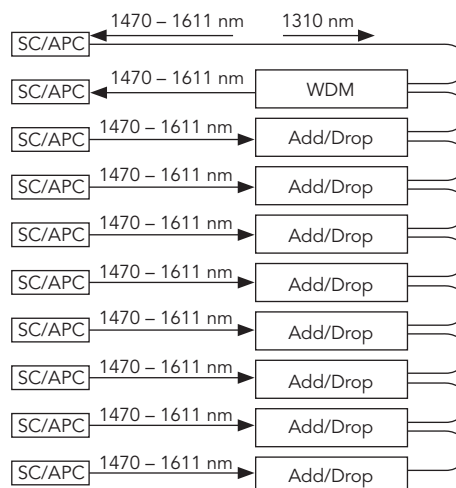


10450040
CWDM-B-MUX 1x9-SC/APC

- For combining the 8 ITU channels C11-C18 and retrieval of the channel 1310 nm
- 1 port for 1310, each 1 port for the 8 ITU channels C11 – C18 (1471/1491/1511/.../1611 nm), 1 COM-port
- Very low through loss, very low PDL
- Very high isolation, very high directivity
- Very high return loss
- Highly reliable and stable
- Qualified according Telcordia standard

Parameter	CWDM-B-MUX 1x9-SC/APC
Central wavelenghts [nm]	1310, 1471, 1491, 1511, 1531, 1551, 1571, 1591, 1611
Operating wavelenghts [nm]	1310 ± 40 & 1460 – 1620
Channel space [nm]	20
Channel bandwidth [nm]	$\lambda_c \pm 6,5$
Through loss for 1460 – 1620 nm* [dB]	$\leq 3,1$
Through loss for 1310 nm* [dB]	$\leq 0,7$
Channel flatness [dB]	$\leq 0,4$
Channel uniformity [dB]	$\leq 1,0$
Isolation	
Demux-adjacent channels [dB]	≥ 30
Demux-non-adjacent channels [dB]	≥ 40
Mux or reflection channels [dB]	≥ 15
Polarization dependent loss (PDL) [dB]	$\leq 0,15$
Polarization mode dispersion (PDM) [ps]	$\leq 0,1$
Directivity [dB]	≥ 55
Return loss [dB]	≥ 50
Maximum optical power [mW]	≤ 500
Operating temperature range [°C]	0 ... +70
Storage temperature range [°C]	-40 ... +85
Pigtail length, fiber type [m]	1,5 ($\pm 0,1$), Corning SMF-28e, 2 mm fiber
Dimensions [mm]	100 x 80 x 10
Order No.	10450040

* Plus connector loss



Optical CWDM demultiplexer module for 8 ITU channels and 1 channel 1310 ± 40 nm, with SC/APC pigtailed

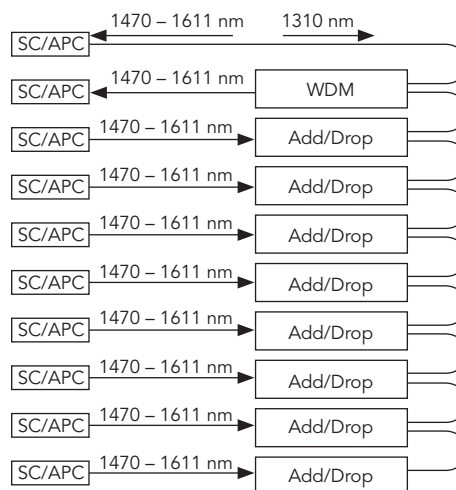


10450045
CWDM-B-DEMUX 1x9-SC/APC

- For separation of the 8 ITU channels C11-C18 and insertion of the channel 1310 nm
- 1 port for 1310, each 1 port for the 8 ITU channels C11 – C18 (1471/1491/1511/.../1611 nm), 1 COM-port
- Very low through loss, very low PDL
- Very high isolation, very high directivity
- Very high return loss
- Highly reliable and stable
- Qualified according Telcordia standard

Parameter	CWDM-B-DEMUX 1x9-SC/APC
Central wavelenghts [nm]	1310, 1471, 1491, 1511, 1531, 1551, 1571, 1591, 1611
Operating wavelenghts [nm]	1310 ± 40 & 1460 – 1620
Channel space [nm]	20
Channel bandwidth [nm]	$\lambda_c \pm 6,5$
Through loss for 1460 – 1620 nm* [dB]	≤ 3,5
Through loss for 1310 nm* [dB]	≤ 0,7
Channel flatness [dB]	≤ 0,4
Channel uniformity [dB]	≤ 1,0
Isolation	
Demux-adjacent channels [dB]	≥ 30
Demux-non-adjacent channels [dB]	≥ 40
Mux or reflection channels [dB]	≥ 15
Polarization dependent loss (PDL) [dB]	≤ 0,15
Polarization mode dispersion (PDM) [ps]	≤ 0,1
Directivity [dB]	≥ 55
Return loss [dB]	≥ 50
Maximum optical power [mW]	≤ 500
Operating temperature range [°C]	0 ... +70
Storage temperature range [°C]	-40 ... +85
Pigtail length, fiber type [m]	1,5 (±0,1), Corning SMF-28e, 2 mm fiber
Dimensions [mm]	100 x 80 x 10
Order No.	10450045

* Plus connector loss

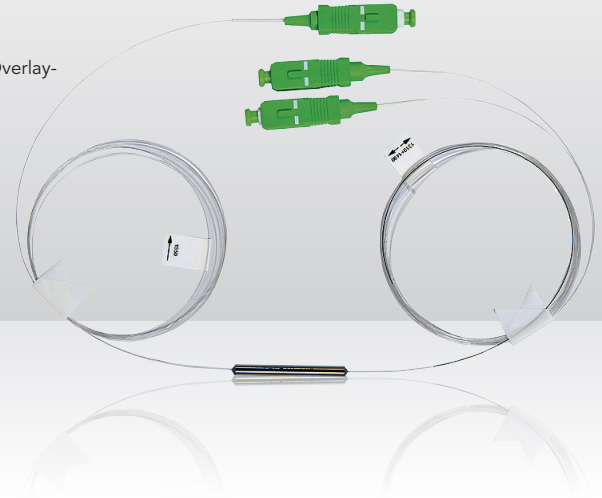


Optical CWDM multiplexer for GPON with RF Overlay



10450030
CWDM-B-GPON w/ RF-Overlay-SC/APC, box style

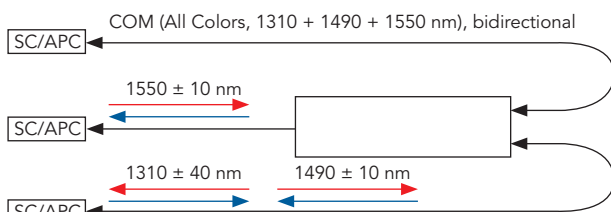
10450035
CWDM-B-GPON w/ RF-Overlay-SC/APC, tube style



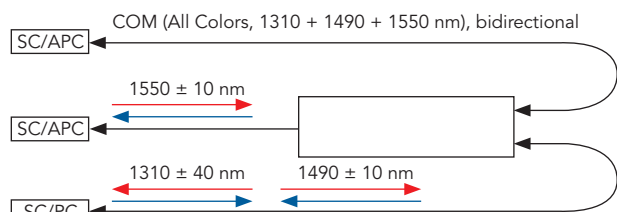
- For combining or separating the 3 wavelengths which are required for a GPON network architecture with RF Overlay (only forward transmission) respectively Active-Ethernet (P2P) with RF Overlay
- Usable as MUX (red signal direction) or DEMUX (blue signal direction) due to the bidirectional design
- 1 Port for 1310 & 1490 nm (GPON), 1 port for 1550 nm (RFoG forward way), 1 COM port
- Very low through loss, very low PDL
- Very high directivity, very high return loss
- Highly reliable and stable
- Qualified according Telcordia standard

Parameter	CWDM-B-GPON w/ RF-Overlay-SC/APC, box style	CWDM-R-GPON w/ RF-Overlay-SC/APC, tube style	CWDM-R-GPON w/ RF-Overlay-SC/PC-SC/APC, tube style
Pigtails	alle Anschlüsse SC/APC	alle Anschlüsse SC/APC	1310 & 1490 nm: SC/PC 1550 nm: SC/APC COM: SC/APC
Transmitted operating wavelength bandwidth [nm]	1550 ± 10	1550 ± 10	1550 ± 10
Reflected operating wavelength bandwidth [nm]	1310 ± 40 & 1490 ± 10	1310 ± 40 & 1490 ± 10	1310 ± 40 & 1490 ± 10
Transmitted through loss* [dB]	≤ 0,6	≤ 0,7	≤ 0,6
Channel flatness [dB]	≤ 0,4	≤ 0,4	≤ 0,4
Reflected through loss* [dB]	≤ 0,6	≤ 0,4	≤ 0,4
Isolation			
Transmitted channel [dB]	≥ 30	≥ 25	≥ 35
Reflected channel [dB]	≥ 15	≥ 20	≥ 20
Polarization dependent loss (PDL) [dB]	≤ 0,10	≤ 0,10	≤ 0,10
Directivity [dB]	≥ 55	≥ 55	≥ 55
Return loss [dB]	≥ 50	≥ 50	≥ 60
Maximum optical power [mW]	≤ 500	≤ 500	≤ 500
Operating temperature range [°C]	0 ... +70	-5 ... +70	-5 ... +70
Storage temperature range [°C]	-40 ... +85	-40 ... +85	-40 ... +85
Pigtail length, fiber type [m]	1,5 (±0,1), Corning SMF-28e, 2 mm fiber	1,5 (±0,1), Corning SMF-28e XB	1,5 (± 0,05), G657A1
Dimensions [mm]	100 x 80 x 10	Diameter 3,8 x 36	Diameter 5,5 x 60
Order No.	10450030	10450035	10450036

* Plus connector loss



10450030 & 10450035



10450036

Subject to technical changes. Version 2.0

Optical CWDM multiplexer module for GPON and RFOG (OLT), with SC/APC pigtails

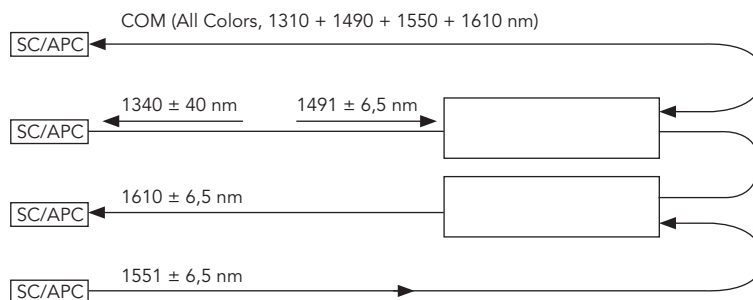


10450020
CWDM-B-GPON + RFOG-OLT-SC/APC,
box style

- For combination or separation of the 4 wavelengths which are required for a combined GPON and RFOG architecture
- Usage in headends and Optical Line Terminals (OLT)
- 1 port for 1310 & 1490 nm (GPON Tx & Rx),
1 port for 1550 nm (RFOG Tx),
1 port for 1610 nm (RFOG Rx),
1 COM port
- Very low through loss, very low PDL
- Very high isolation, very high directivity
- Very high return loss
- Highly reliable and stable
- Qualified according Telcordia standard

Parameter	CWDM-B-GPON + RFOG-OLT-SC/APC, box style
Central wavelenghts [nm]	1310, 1491, 1551, 1611
Operating wavelenghts [nm]	1310 ± 40 & 1460 – 1620
Channel space [nm]	20
Channel bandwidth [nm]	$\lambda_c \pm 6,5$
Transmission through loss* [dB]	≤ 1,2
Channel flatness [dB]	≤ 0,4
Channel uniformity [dB]	≤ 1,0
Isolation	
Demux-adjacent channels [dB]	≥ 30
Demux-non-adjacent channels [dB]	≥ 40
Mux or reflection channels [dB]	≥ 15
Polarization dependent loss (PDL) [dB]	≤ 0,15
Polarization mode dispersion (PDM) [ps]	≤ 0,1
Directivity [dB]	≥ 55
Return loss [dB]	≥ 50
Maximum optical power [mW]	≤ 500
Operating temperature range [°C]	0 ... +70
Storage temperature range [°C]	-40 ... +85
Pigtail length, fiber type [m]	1,5 (± 0,1), Corning SMF-28e, 2 mm fiber
Dimensions [mm]	100 x 80 x 10
Order No.	10450020

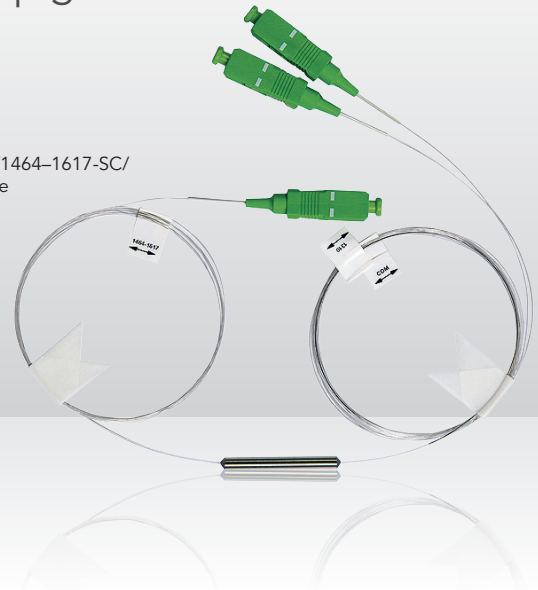
* Plus connector loss



Optical WDM multiplexers with SC/APC pigtails



10450010
WDM-B-1310/1464-1617-SC/
APC, box style



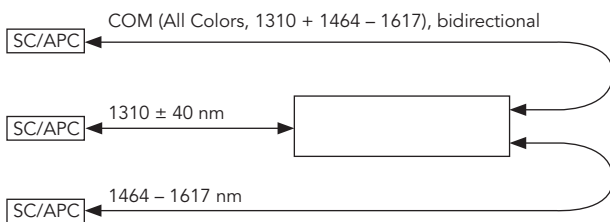
10450015
WDM-R-1310/1464-1617-SC/
APC, tube style

- To combine or separate wavelengths for forward and return path transmission
- Usage as MUX or DEMUX by bidirectional design
- 1 port for 1310 nm,
1 port for 1464 – 1617 nm,
1 COM port
- Very low through loss, very low PDL
- Very high directivity, very high return loss
- Highly reliable and stable
- Qualified according Telcordia standard

Parameter	WDM-B-1310/1464-1617-SC/APC, box style	WDM-R-1310/1464-1617-SC/APC, tube style
Transmitted operating wavelength bandwidth [nm]	1310 ± 40	1464 – 1617
Reflected operating wavelength bandwidth [nm]	1464 – 1617	1310 ± 40
Channel flatness [dB]	≤ 0,4	≤ 0,4
Transmitted through loss* [dB]	≤ 0,6	≤ 0,7
Reflected through loss* [dB]	≤ 0,6	≤ 0,4
Isolation		
Transmitted channel [dB]	≥ 30	≥ 25
Reflected channel [dB]	≥ 15	≥ 20
Polarization dependent loss (PDL) [dB]	≤ 0,10	≤ 0,10
Directivity [dB]	≥ 55	≥ 55
Return loss [dB]	≥ 50	≥ 50
Maximum optical power [mW]	≤ 500	≤ 500
Operating temperature range [°C]	0 ... +70	-5 ... +70
Storage temperature range [°C]	-40 ... +85	-40 ... +85
Pigtail length, fiber type [m]	1,5 (± 0,1), Corning SMF-28e, 2 mm fiber	1,5 (± 0,1), Corning SMF-28e XB acc. G657A, 900 µm loose tube
Dimensions [mm]	100 x 80 x 10	Durchmesser 3,8 x 36
Order No.	10450010	10450015

* Plus connector loss

Configuration box style



Configuration tube style

