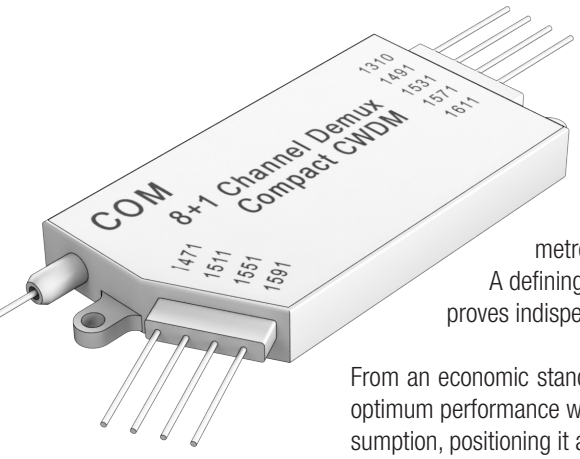
SANWA TECHNOLOGIES

CCWDM Module

Compact Coarse Wave Division Multiplexing: A Game Changer in Metro Network Transmission



In the ever-evolving landscape of communication networks, the continual expansion of metro networks necessitates solutions that are compact yet high-performing without compromising on cost-effectiveness. The Compact Coarse Wavelength Division Multiplexer (CCWDM) serves as a beacon in this context.

Boasting a condensed form factor, the CCWDM reduces insertion loss compared to its conventional counterparts. Beyond its physical advantages, it skillfully resolves the persistent challenge of fiber shortage, ensuring a clear and uninterrupted flow of multiple services. The implications are profound: metro networks that are more efficient, streamlined, and characterized by minimal disruptions.

A defining feature of CCWDM is its ability to become operational in an impressively short timeframe. This agility proves indispensable in bustling metro contexts where deploying services swiftly isn't just a luxury, but a necessity.

From an economic standpoint, when the scales of cost and performance are balanced, CCWDM consistently tilts in favor of optimum performance without commanding a premium price. This value proposition is accentuated by its minimal power consumption, positioning it as the ideal solution for modern metro transmissions.

Metro network designers are already harnessing the potential of CCWDM. Its adaptability with metro network aggregation and access layers heralds a versatile tool in the repertoire of network architects. But its virtues extend beyond mere efficiency. By consuming less power, CCWDM contributes to sustainable initiatives, adding an eco-friendly feather to its cap.

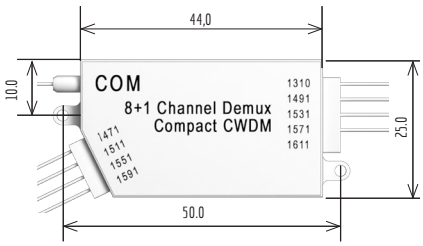
Peering into the horizon, it's evident that CCWDM will underpin the foundations of future metro network transmissions. Its compactness ensures that as networks burgeon, integrating CCWDM remains a hassle-free affair, thus crafting networks that are forward-thinking yet rooted in real-world practicalities.

To sum up, CCWDM is emblematic of innovative engineering, where a compact design marries impeccable performance. Embracing this low-cost, high-yield transmission solution isn't just about economic prudence. It's a step toward an era of judicious and sustainable network management, tuned perfectly to the rhythms of contemporary metropolitan terrains.

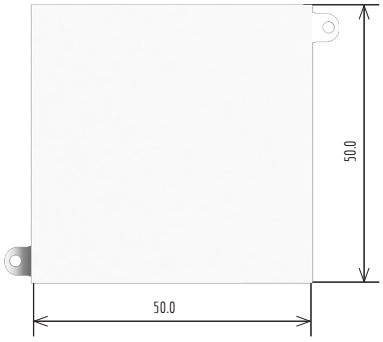
PACKAGE INFORMATION

Fiber Length	1m, or others on request	
Fiber Type	G657A/Customize	
Pigtail Type	900um Loose Tube	
Dimensinons(mm)	Metal box L44×L25×H6	L50×L50×H6

DIMENSIONS (UNIT:MM)
FOR 4CH / 8CHBOX



DIMENSIONS (Unit:mm)
for 16Ch /18CHBOX



The Precision and Potential of CCWDM in Metropolitan Networking

At the heart of CCWDM is the operating wavelength range of 1260 to 1620 nm, a full range that provides a wide playing field for data transmission, favoring high-speed, high-capacity networks that are robust and resilient to modern metropolitan networking needs.

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Channel wavelengths play their part in this large configuration, bouncing between 1270 and 1610 nm and 1271 and 1611 nm, playing in harmony with the operating wavelength. This duality ensures the provision of a finely tuned configuration that can adapt to a variety of needs and specifications, promising not only service delivery but also optimization of the very fabric of metropolitan networks.

PARAMETERS	4CH	8CH	16CH/18CH	UNIT
OperatingWavelength	1260-1620			nm
Channel Wavelength	1270~1610/1271~1611			nm
Channel Spacing)	20			nm
OperatingBandwidth	>13			nm
UPGWavelength	1310+/-50or 1260~1457.5		NA	nm
Pass bandInsertionLoss	≤1.2	≤1.5	≤2.7	dB
Adjacent Isolation	≥30			dB
Non-Adjacent Isolation	≥40			dB
UPG Isolation	≥15			dB
Ripple	≤0.3			dB
ReturnLoss	≥45			dB
Directivity	≥50			dB
Insertion Loss Temperature Sensitivity	≤0.5			dB
Wavelength Temperature Shifting	≤0.002			nm/°C
Polarization Dependent Loss	≤0.2			dB
Polarization Mode Dispersion	≤0.2			ps
Max Optical Power	300			mW
Operating Temperature	-40~+85			°C
Storage Temperature	-40~+85			°C

Channel spacing is at 20 nm, a deliberate choice that strikes a balance between efficiency and reliability, working diligently to minimize overlap and prevent interference between channels.
However, it is the operating bandwidth, which boasts a capacity of more than 13 nm, that weighs heavily in ensuring system reliability. Each channel has a robust bandwidth to facilitate a clear and reliable communication channel, creating a solid ground for the success of CCWDM technology.

The foresight extends further into the future with the Upgrade Port (UPG) wavelength, which sits comfortably around the 1310 nm region with a generous +/-50 nm tolerance, or offers a wider range from 1260 to 1457.5 nm. This range indicates an open door to future expansions, a preparation to smoothly integrate upcoming advances.

UPG Isolation is a pivotal metric in WDM systems, especially those like CCWDM that aim for adaptability and scalability, ensuring that metro networks remain versatile and resilient amidst evolving demands.