

Recommended Prices for Wavelength Division Multiplexers



Overview

Wavelength Division Multiplexers offered in 5 different series to meet customer density and performance requirements.

Key Takeaways

Wavelength division multiplexer (WDM) prices typically range from \$3–\$500 per unit depending on type, channel count, and supplier, with bulk orders offering significant discounts.

WDM modules vary widely in price based on technology type, channel count, and performance specifications. Coarse WDM (CWDM) modules, which support fewer channels (typically 8–16) and wider wavelength spacing, are generally more cost-effective, with prices starting around \$3–\$50 per unit for bulk orders of 1,000+ pieces. Dense WDM (DWDM) modules, designed for high-capacity long-haul networks with 40–96 channels and narrow spacing (50–100 GHz), are more expensive, often ranging from \$100 to \$500 per unit, depending on channel count, isolation, and insertion loss.

Factors Affecting WDM Pricing

- Channel Count and Spacing: Higher channel counts and narrower spacing (DWDM) require more precise manufacturing and temperature control, increasing costs.
- Insertion Loss and Isolation: Modules with low insertion loss (30 dB) are priced higher due to better signal integrity.

- **Modularity and Scalability:** Modular designs, such as cassette-type CWDMs, allow incremental upgrades and can affect total cost of ownership .
 - **Supplier and Region:** Asia-Pacific, particularly China, dominates manufacturing, offering lower unit costs, while North American suppliers often provide higher-density, premium modules .
 - **Compliance and Reliability:** ITU-T standard compliance (G.694.1 for DWDM, G.695 for CWDM) and Telcordia GR-1209-CORE certification can increase prices but ensure network reliability .
 - **Bulk Orders:** Minimum order quantities (MOQs) significantly reduce per-unit costs; for example, some suppliers offer \$3.88 per CWDM unit at 1,000+ units .
- Market Trends

The WDM market is projected to grow from \$12.5 billion in 2023 to \$24.8 billion by 2030, driven by hyperscale data centers, 5G deployments, and fiber-optic network expansions . Innovations such as athermal AWG modules and AI-integrated photonic processors are improving efficiency and reducing power consumption, which may influence pricing for next-generation modules .

Practical Guidance

- For metro networks or short-distance links, CWDM is cost-effective and sufficient.
- For long-haul or high-capacity backbones, DWDM is necessary despite higher costs.
- Always verify compatibility with existing infrastructure, check after-sales support, and consider total cost of ownership rather than just unit price . By understanding these factors, buyers can make informed decisions on WDM selection and budgeting for both CWDM and DWDM deployments.

Article Content

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Manufacturer of dense wavelength division (DWDM) multiplexers. Products include single fiber 40 channel DWDM

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DWDM Product Category Overview Overview: Dense Wavelength Division Multiplexing (DWDM) is a technology that increases fiber

Optical WDM Module Wavelength division multiplexing Prices

WDM Module Wavelength division multiplexing (WDM) WDM Module Wavelength division multiplexing (WDM) is a technology or

Wavelength Division Multiplexer Market Size, Share, Growth, 2034

The wavelength division multiplexer market size is projected to grow from \$5.25 billion in 2026 to \$8.82 billion by 2034, at

Understanding CWDM: Coarse Wavelength Division

Price Efficiency CWDM System Compared With Other Systems Due to simple structure and

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5 Basic Things You Need to Know About DWDM

DWDM is a subset of wavelength-division multiplexing (WDM) that typically uses the spectrum band within 1530nm

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Wavelength Division Multiplexer (WDM) Market: Global Analysis

High Spending on wavelength division multiplexers in the developed countries like United States and Canada

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Wavelength Division Multiplexing (WDM) is a technique in fiber-optic communication systems that enables multiple optical signals

CWDM Module Coarse Wavelength Division Multiplexing Prices

CWDM Module Coarse Wavelength Division Multiplexing Originally, the term coarse wavelength division multiplexing (CWDM) was

Wavelength Division Multiplexing (WDM) Equipment Market Size

The Wavelength Division Multiplexing (WDM) equipment market constitutes a critical segment within the broader

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