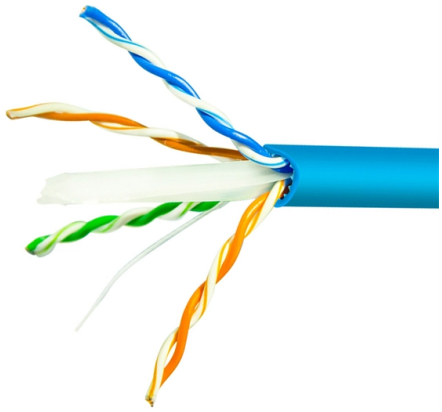
Compatible Low-Loss Optical Modulators from Australian Suppliers



Overview

Optical Modulation Explore our intensity modulators, ensuring unmatched stability across operational conditions, and phase modulators with high photo-refra.

Key Takeaways

Australian suppliers such as Lastek, Thorlabs, Exail, and EOSPACE provide high-performance low-loss optical modulators, including lithium niobate ($LiNbO_3$) phase, intensity, and I/Q modulators suitable for telecommunications, photonics, and research applications. Key Suppliers and Products1. Lastek (Australia) Lastek distributes a wide range of photonics and optical components in Australia, including products from Thorlabs and Omega Optical.

They offer fiber-coupled lithium niobate modulators for wavelengths such as 830 nm and 1060 nm, with low optical insertion loss (≤5 dB for intensity modulators, ≤4 dB for phase modulators) and high-speed modulation capabilities. Lastek also provides access to custom configurations, including connector types and wavelength specifications, making them a versatile local source for low-loss modulators. 2.

Thorlabs Thorlabs manufactures $LiNbO_3$ electro-optic modulators with Mach-Zehnder interferometer designs for intensity modulation and X-cut waveguides for phase modulation. These modulators support high-speed operation up to 40 GHz and cover a broad wavelength range (800–2000 nm). They are designed for low insertion loss, high polarization extinction, and compatibility with polarization-maintaining fibers, suitable for laboratory and industrial systems.

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3. Exail Exail specializes in lithium niobate modulators for phase, intensity, and I/Q applications. Their modulators operate from low frequencies up to 40 Gbps/40 GHz and cover wavelengths from 800 nm to 2000 nm.

Exail modulators are engineered for robustness and reliability in demanding environments, including laser, quantum, sensing, and space applications. They also offer custom development for specific wavelength and performance requirements. 4.

EOSPACE EOSPAC

E produces high-performance $LiNbO_3$ integrated optical circuits with exceptionally low insertion loss and broad bandwidth. Their modulators are suitable for next-generation optical telecommunications, research, and aerospace applications.

EOSPAC

E focuses on phase modulators, polarization controllers, and custom integrated optical circuits, providing solutions for low-loss, high-frequency photonic systems.

Considerations for Selection

Modulation Type: Choose between intensity (amplitude), phase, or I/Q modulators depending on your application. Wavelength Range: Ensure compatibility with your laser source (common ranges: 800–2000 nm). Insertion Loss: Low-loss modulators typically have ≤5 dB insertion loss for intensity modulators and ≤4 dB for phase modulators.

Bandwidth: High-speed applications may require modulators capable of tens of GHz. Connector and Fiber Type: Polarization-maintaining fibers and FC/PC or FC/APC connectors are standard; custom options are available. Local Support: Australian distributors like Lastek provide local technical support, faster shipping, and easier integration with domestic research or industrial projects.

By sourcing from these suppliers, you can access low-loss, high-performance optical modulators with local support in Australia, suitable for telecommunications, photonics research, and advanced industrial applications.

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Article Content

Optical Modulation

Explore our intensity modulators, ensuring unmatched stability across operational conditions, and phase modulators with high photo-refractive thresholds, both

Lithium niobate intensity electro-optic modulator | Exail

When they are matched with the family of Exail RF drivers, these modulators serve all applications, from laboratory experiments to demanding industrial systems.

EOSPACE, INC

Our name represents our commitment to designing great products to research and explore electro-optics. EOSPACE products utilize proprietary lithium niobate (LiNbO3) integrated optics devices to

Thorlabs Lithium Niobate Electro-Optic Modulators, Fiber-Coupled

Thorlabs manufactures a variety of lithium niobate (LiNbO 3) optical phase, intensity, and I/Q modulators. These high-performance devices are based on titanium-indiffused waveguide

Optical Modulators – Buyer''s Guide & Supplier List | RP Photonics

This buyer''s guide for optical modulators provides technical background, comparison of major types, selection criteria, and an overview of suppliers.

CMOS-Fabricated Ultraviolet Light Modulator Using Low-Loss Alumina ...

This paper presents CMOS-fabricated ultraviolet light modulators with low-loss properties, advancing the field of photonics and UV light modulation technology.

Low-Loss 795 nm Electro-Optic Modulators

Electro-optic modulators in the near-infrared spectrum are finding applications in atomic clocks, quantum sensing, quantum information processing, and high-precision measurement. We

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Integrated lithium niobate electro-optic modulators operating ...

Chip-scale lithium niobate electro-optic modulators that rapidly convert electrical to optical signals and use CMOS-compatible voltages could prove useful in optical communication

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High-performance coherent optical modulators based on thin ...

In-phase/quadrature (IQ) electro-optic modulators are underpinning devices for coherent transmission technology. Here the authors present IQ modulators in the lithium-niobate-on-insulator

What can be integrated on the silicon photonics platform and how?

We discuss on-chip light sources with gain materials, linear electro-optic modulators using electro-optic materials, low-power piezoelectric tuning devices with piezoelectric materials,

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Electro-optic Modulators – Buyer''s Guide & Suppliers

This buyer''s guide for electro-optic modulators provides technical background, comparison of major types, selection criteria, and an overview of suppliers.

Advancements in CMOS-Compatible Silicon Nitride Optical Modulators

This paper proposes two types of electro-refractive optical modulator structures as a fully CMOS-compatible alternative solution. These modulators leverage the properties of amorphous (top)

Ultracompact and large-bandwidth silicon modulator in a CMOS-compatible ...

In this work, we investigate the slow-light enhancement in an optical resonator and present a comprehensive theoretical framework for designing a resonance-based EO modulator with

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Today, standardized silicon photonics technology platforms implemented by foundries provide access to optimized library components, including low-loss optical routing, fast modulation,

The Return of Lithium Niobate — From Bulk Modulators

The emergence of thin-film lithium niobate (TFLN) brings this proven material into the domain of integrated photonics, enabling tightly confined waveguides with

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