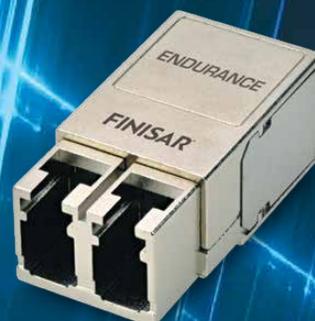


Solutions Guide

Fiber Optics for Military Applications



FINISAR[®]



Fiber Optics for Military Applications

Finisar designs and manufactures high-performance and reliable fiber optics products for military applications. With over 30 years of experience in the optical communications industry, Finisar is recognized as the world's largest supplier and volume leader of optical components and subsystems. The products featured in this solutions guide provide an overview of some optics technology best suited for advanced military applications.

Endurance® Rugged, Compact 10 Gb/s Transceiver

Finisar's Endurance transceiver provides bi-directional optical data links at data rates from 125 Mb/s up to 10 Gb/s for harsh environments. It is interoperable with standard SFP/SFP+ pluggable modules and contains 2-wire serial communication interface for digital control and diagnostics.

Endurance operates at a wide temperature range from -40C to 85C and available with an optional conformal coating resistant to corrosive environments. It mounts directly to the Printed Circuit Board to handle excessive shock and vibration. Finisar's 850nm oxide Vertical Cavity Surface Emitting Laser (VCSEL) is best-in-class for reliability and has excellent performance over temperature. Endurance has been qualified to additional military specifications for long-term aging, salt spray and vibration.

At half the length of Small-Form Factor (SFF) modules, Endurance saves space on Printed Circuit Boards and allows multiple modules to be mounted side-by-side for high-density edge port counts.



SFF

Endurance

300 Gb/s Board-Mount Optical Assemblies

Finisar's on-board optical transceiver module is a compact, high-bandwidth optical interconnect. The embedded optical modules is a full-duplex transceiver with 12 parallel lanes of up to 25 Gb/s in each direction. The link distance is up to 100 meters over a 24-fiber multimode ribbon cable. It's mounted directly to the host board with robust mounting features and can be placed close to the host ASIC, improving signal integrity performance and decreasing power consumption.



Advanced RF Optical Detectors and Receivers

Finisar's single and balanced photodetectors, which leverage advanced waveguide integrated photodiodes, offer a highly-linear frequency response from DC to over 100 GHz and high RF output power levels for Analog RF-over-Fiber applications. The detectors operate at various wavelengths including 1310 nm and 1550 nm. Finisar also offers receivers mating these advanced photodetectors with high-performance transimpedance amplifiers.



Finisar is Now Part of II-VI

Technology Innovator.
Broad Product Portfolio.
Trusted Partner.



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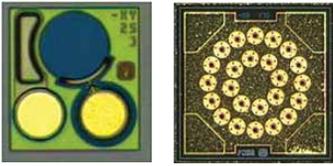


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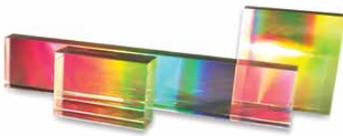


Optical Sensors and Discrete Components



Finisar offers a broad array of optical sources that can be used for developing sensors for reflective and scattering applications such as gesture recognition, motion sensors, velocity measurement, 3D scanning, and turbidity measurements. Finisar's laser components can also be utilized for atomic clocks, communication links in hazardous environments with transmitting power over fiber to operate the remote site and free-space, line-of-site communication data links.

High-Efficiency Diffractive Gratings



Finisar provides high efficiency diffraction gratings for optical telecommunications, defense and biological markets. This product portfolio offers over 100 grating products based on its record-breaking transmission grating platform including gratings for pulse compression and high-power beam combining utilized in high-power industrial lasers and high energy laser (HEL) weapons.

Optical Isolators



Finisar's optical isolators have low insertion loss and high isolation to prevent optical feedback into lasers and maintain optimal and consistent link performance. A proprietary bonding process, combined with years of volume manufacturing experience, results in high reliability. The types of isolators include free-space isolators, isolators with fiber pigtails, and receptacle isolators.

Optical Passives



Finisar's Dense Wavelength Division Multiplexers (DWDM) enables up to 48 wavelengths to be combined onto a single fiber for high-capacity transport. They utilize Thin Film Filter technology which offers flexibility from single to high port count and high integration from single MUX or DeMux to OADM (Optical Add-Drop Multiplexer) feature in one module. This product requires no electrical power, and offers a combination of low loss and high channel isolation along with long term reliability.