Nanning Xionghua Photoelectric Technology Co., Ltd.

Company Introduction/Product Promotion

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01

About enterprise

Company Introduction



ABOUT US

Professional focus

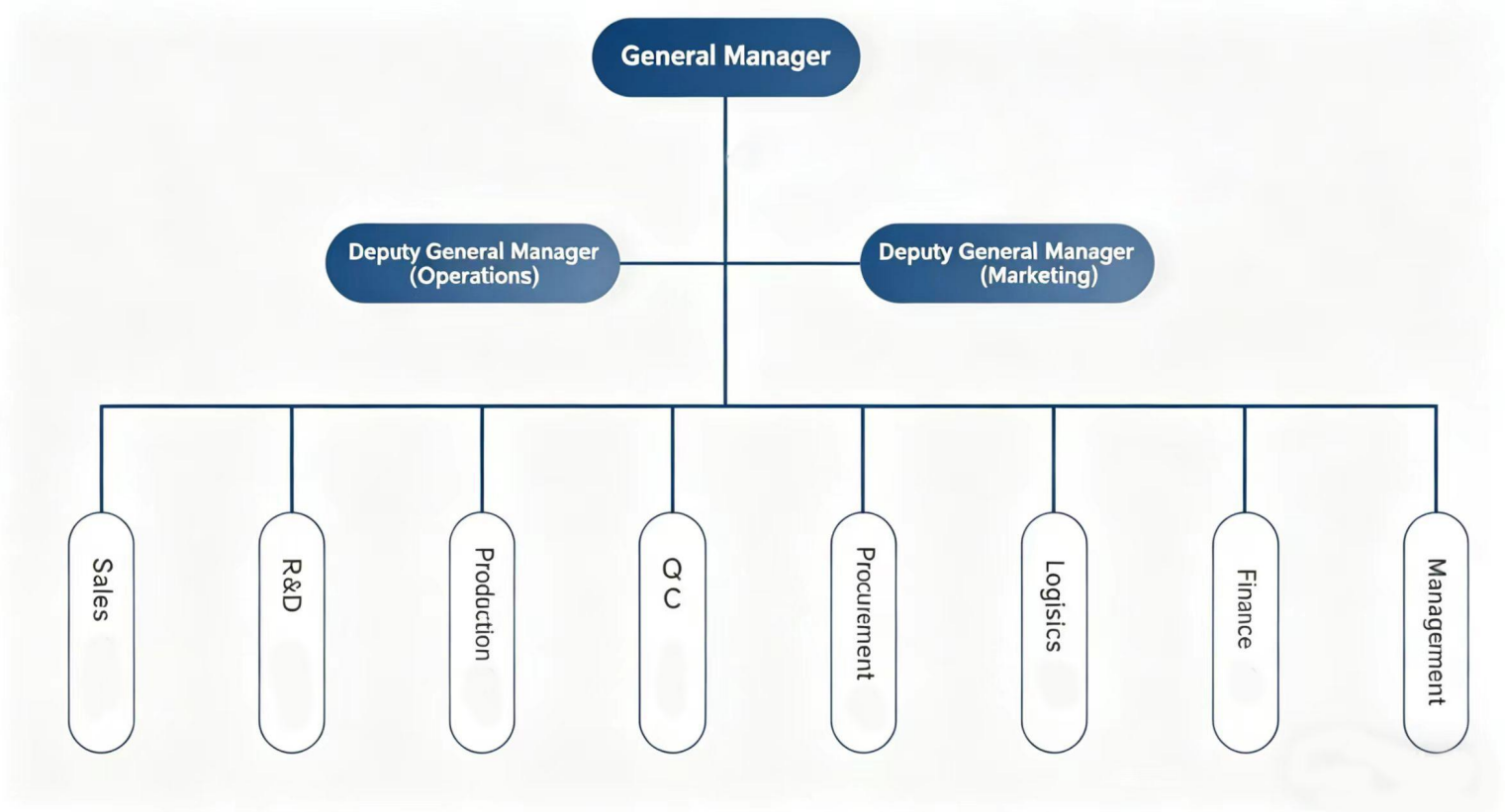
Quality assurance

Service first

Stable supply

Xionghua Photonics is a manufacturer and supplier of optical products, integrating R&D, production, and sales. We are committed to providing global customers with high-performance, high-reliability optical components and system solutions. Our core products include optical switches, passive components, special function devices, fiber optic patch cords, and system solutions, which are widely used in telecommunications, data centers, scientific research, and industrial fields. Through continuous technological innovation, precision manufacturing, and professional service, we help build more efficient and reliable information networks.

Organizational Structure



Products Center

Optical switches/optical devices

MEMS Optical Switches
Motor-driven Multiplexer Optical Switches
Relay-type Miniature Optical Switches
Magneto-optical Switches
MEMS VOA
Wavelength Division Multiplexers
Fiber Optic Collimators
Fiber Optic Circulators

Subsystem

All-Optical Switch
OLP optical line protection system
BYPASS optical bypass protection device

Customized products

Optoelectronic functional modules
Integrated equipment

Application areas



Optical communication network

Fiber optic transmission

Data center Optical transmission protection switching

Optical cross-connect (OXC)



Instrumentation

Optical testing instruments

Automated optical testing systems



Fiber Optic Testing Fiber Optic Sensing

Fiber Optic Cable Monitoring

Fiber Optic Temperature Sensor (DTS)

Fiber Optic Vibration Sensor (DVS)



Network information security

Network security firewalls

Intrusion detection/prevention systems

Data center security

Cloud computing security



National defense construction

Camp perimeter security

Phased array radar

Production Environment



02

Product Introduction

Optical Switch

Optical Switch

An optical switch is an optical path conversion device with one or more selectable transmission ports. Its function is to physically switch or logically operate optical signals in optical transmission lines or integrated optical circuits.

Main Applications

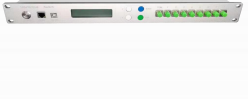
Optical transmission protection switching, optical network monitoring, instrumentation, fiber optic sensing, optical branching multiplexing (OADM), optical cross-connect (OXC), optical routing/switching, etc.











Optical switch series products

Optical switch series

- MEMS optical switch
  - 1×N MEMS optical switch devices
  - 1×N MEMS optical switch modules
  - M×N Matrix MEMS optical switch modules
- Motor-driven multi-channel optical switch
  - 1XN optical switch modules
- Relay-type miniature optical switch
  - 1×1,1×2,2×2B,2×2T
  - D1×1,D1×2,D2×2B 1X8
  - Mini1×2/1×3/1×4,Mini2×2B
- Magneto-optical switch
  - 1×1,1×2,1×4 2×2
- PM optical switch
  - 1XN optical switch modules
  - MXN Matrix optical switch modules



Features

Low insertion loss

This ensures minimal attenuation of the optical signal during switching, significantly improving the overall transmission efficiency of the link.

01

High Return loss

It effectively reduces light reflection interference, significantly improves the system signal-to-noise ratio, and ensures the quality of long-distance signal transmission.

02

Long Lifespan

It employs a precision mechanical structure and aerospace-grade high-quality materials to ensure stable switching operations for more than one million cycles.

03

High Repeatability

The optical path switching path has extremely high consistency, ensuring the system's stable and reliable performance during long-term operation.

04

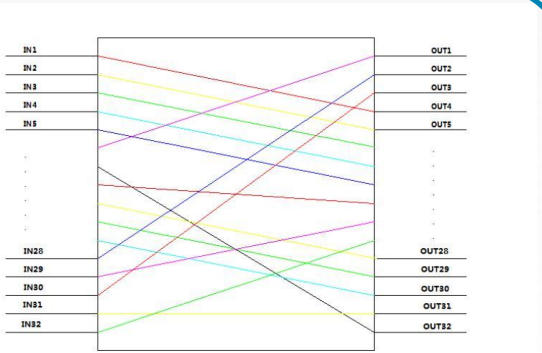
Subsystem series products

OCS All-Optical Switch

Based on high-performance MEMS technology and processes, the all-optical switch constructs a non-blocking all-optical switching system, enabling fast and flexible switching and scheduling of optical signals at the optical layer, without requiring O-E-O conversion.

Optional functions:

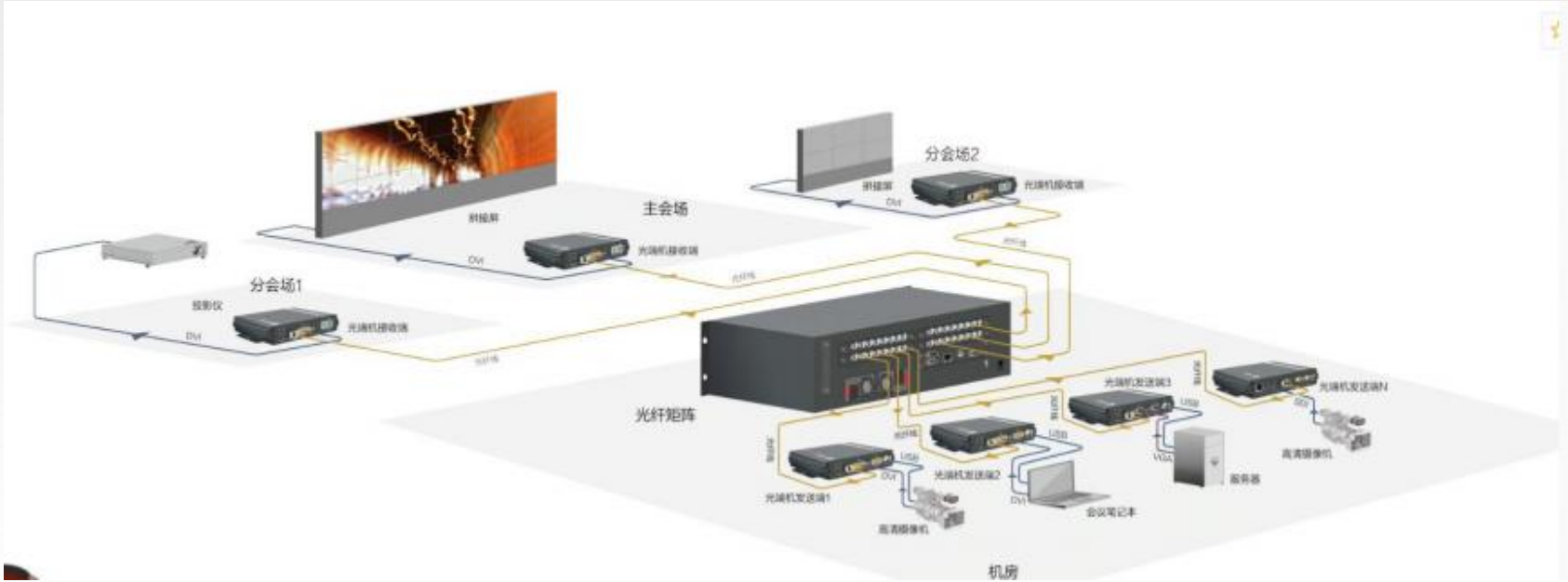
- Real-time optical power feedback
- Automatic switching strategy





OCS All-Optical Switch

Applications: Data centers, optical cross-connect (OXC), optical branching multiplexing (OADM), optical product testing platforms, etc.



Optical Line Protection Equipment

Functions and Features

Automatic Bypass Switching Control: Supports various automatic bypass control modes and combinations thereof, including power-down bypass, no-light bypass, and no-heartbeat signal bypass.



- Operates in the optical layer, providing transparent transmission of optical signals.
- Carrier-grade switching time.
- Supports flexible beam splitting functions.

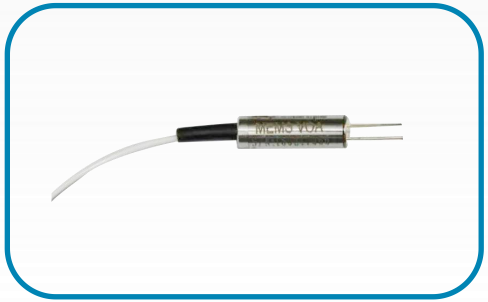


MEMS VOA

MEMS VOA module is a device used to attenuate optical power. It is mainly used for index measurement of optical fiber systems, signal attenuation of short-distance communication systems, and system testing. The optical attenuator is a very important fiber optic passive device. It can attenuate the optical signal energy as expected according to the user's requirements. It is often used to absorb or reflect the optical power margin, evaluate the loss of the system and various tests. . At present, this series of optical attenuators has been widely used in the field of optical communications.

Features

- ●High stability
- ●High reliability
- ●Low insertion loss
- ●Rapid response
- ●small volume



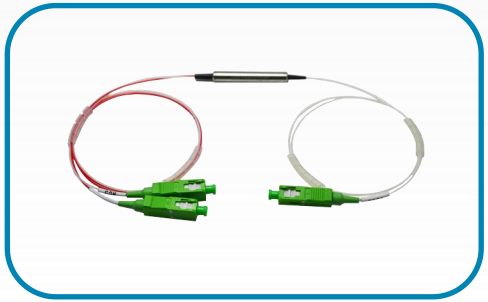


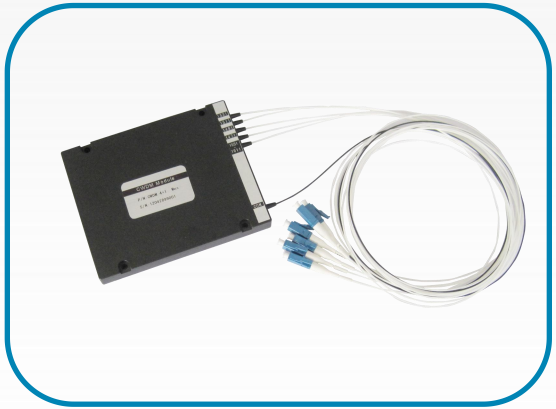
Wavelength division multiplexing(WDM)

Wavelength division multiplexing (WDM) is a technology that multiplexes individual wavelengths of light to transmit data over a single medium. WDM components work in reverse at the receiving end, by breaking the combined light wavelengths back into individual components and routing them to their receivers. Simply put, WDM systems combine signals through multiplexing (MUX) and separate them using demultiplexing (DEMUX). Wavelength division multiplexing is widely used in telecommunications applications because it can expand network capacity without laying more fiber.

Features

- Low insertion loss
- Low polarization dependent loss
- High channel isolation
- Good environment reliability
- High level of integration by plug-in design



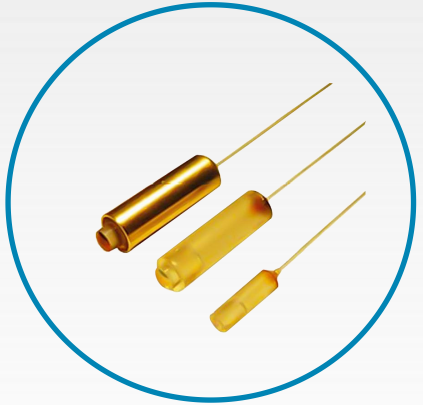


Fiber collimator

Fiber collimators are basic components of DWDM filters, isolators, circulators, and other micro-optical components.

Features

- Low Insertion Loss
- Wide pass band
- Low PDL
- High stability and reliability

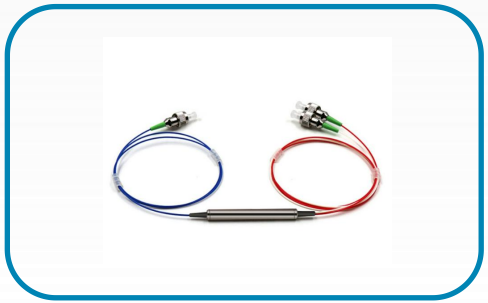


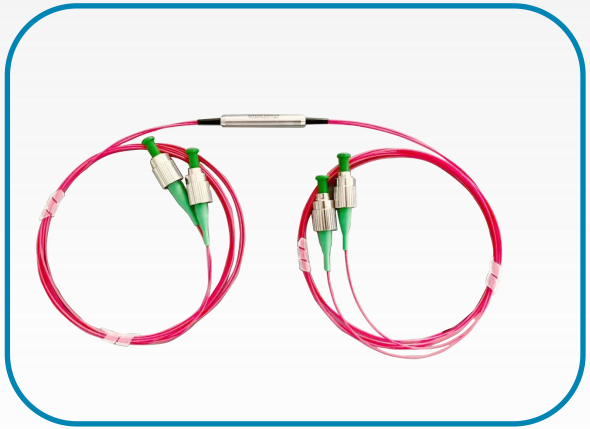
Fiber optic circulator

Fiber optic circulator is a multi-port non-reciprocal optical device, and light can only propagate in one direction. If the signal is input from port 1, it will be output from port 2; if the signal is input from port 2, it will be output from port 3, and its output loss is very small; when the light is input from port 2, the loss when output from port 1 is very large. Similarly, when light is input from port 3, the loss when output from ports 1 and 2 is also very large.

Application

- Fiber-optic laser
- Instrumentation
- Dispersion compensation device
- Fiber optic sensing
- Scientific research and other fields



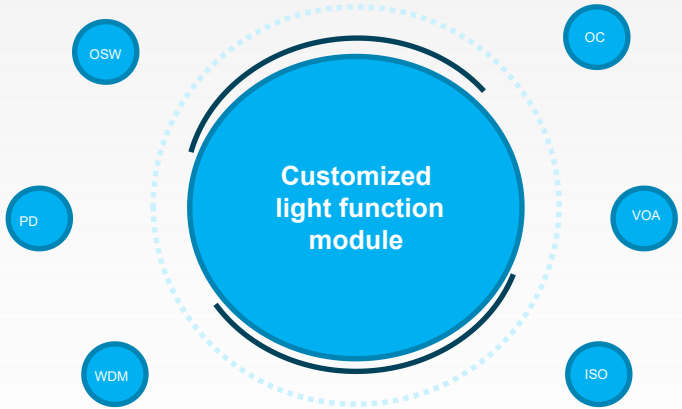


03 Customized Products

Customized light function module

Customized Products to Meet Your Specific Needs

Our company boasts a professional R&D team, strong R&D capabilities, and extensive experience in R&D, testing, and manufacturing. We are able to provide customers with various customized optical path modules, including OLP optical line protection modules, OPD optical power detection modules, BYPASS bypass protection modules, VOA adjustable optical attenuation modules, OXC modules, and more.







Customized equipment

Case Study: Rack-Mounted M×N Automatic Protection Switching Equipment

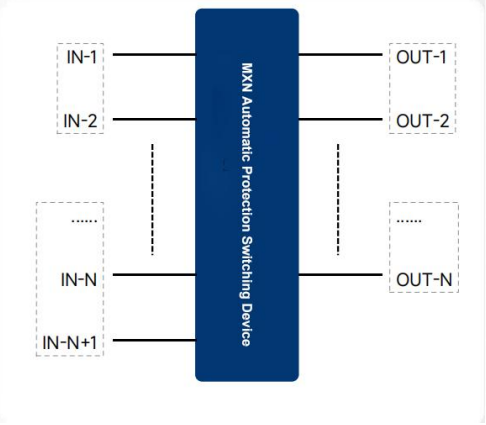
Real-time optical power detection: The equipment performs real-time optical power detection on optical signals from multiple signal sources.

Automatic protection switching: When a signal source or optical fiber fails, causing the optical power to fall below a set threshold, the system automatically switches to a backup signal source to ensure uninterrupted communication.

Multiple outputs: The output end can simultaneously transmit the same signal source to multiple receivers through the built-in 1:N splitter.

Power-off retention: When the equipment loses power, it remains on the original operating channel to avoid accidental switching.





Thanks watching

Contact Us

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