

Non-contact optical cable



Summary of Content

Non-contact optical cables transmit light without physical contact between fiber ends, offering higher durability, reduced maintenance, and reliable performance in harsh environments.

Overview

Non-contact optical cables, also known as non-contact fiber connectors (NC or MNC), are designed to transmit optical signals without requiring the fiber end faces to touch each other. Unlike conventional connectors, which rely on precise physical contact between polished fiber ends, non-contact connectors use beam-expanding optics or recessed fiber surfaces with anti-reflection coatings to maintain signal integrity. This design eliminates wear and tear, reduces contamination issues, and extends the connector's lifespan.

Key Features

- **Recessed Fiber Surfaces:** The fiber end is slightly recessed relative to the connector body, preventing direct contact and minimizing damage during mating.
- **Anti-Reflection Coating:** Coatings on the fiber end reduce light reflection and signal loss, improving optical performance.
- **Beam Expansion and Collimation:** Some designs use lenses to expand and collimate the light beam, making the connection less sensitive to dust, scratches, or misalignment.
- **High-Density Support:** Non-contact MPO connectors can handle multiple fibers (e.g., 8 to 48 channels) without the alignment challenges of traditional MPO connectors.

Article Content

Fiber Connector Types: A Complete Guide (2024)

Unlike the regular fiber optic connector, the non-contact fiber connector doesn't require physical contact between the

Fiber-optic cable

A fiber-optic cable, also known as an optical-fiber cable, is an assembly similar to an electrical cable but containing one or more

The non-contact connector: A new category of optical fiber connector

We report on a new category of fiber connectors called non-contact connectors. By introducing a gap between anti-reflection coated

Non-contact Fiber optic connectors-Arrayed Corporation

In this paper, we report a new category of optical fiber connectors called non-contact (NC) optical fiber connectors

Durable non-contact optical connectors: Features and

Expanded beam connectors use optical expansion to make connections without making

Fiber Optic Cables | Corning

Fiber optic cables for outdoor applications are engineered to withstand the more demanding conditions seen outside, from

Introduction to Non-contact MPO Fiber Connectors

The Non-Contact MPO fiber connector (NC-MPO) invented by Arrayed Fiberoptics, it might be the next generation multi-fiber optical

Durable non-contact optical connectors: Features and applications of ...

Expanded beam connectors use optical expansion to make connections without making physical contact. This

Non Contact Fiber Connector

Non Contact fiber connector (NC) is the next generation optical fiber connector invented by Arrayed Fiberoptics, where there is no

Contact Us

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