

RIVO MULTITRADE OPTICAL SYSTEMS

Polyvinyl chloride optical cable material



Overview

Polyvinyl Chloride (PVC) Fiber Optic Cable Assemblies – MouserMouser offers inventory, pricing, & datasheets for Polyvinyl Chloride (PVC) Fiber Optic Cable.

Key Takeaways

PVC optical cables use polyvinyl chloride as a protective sheath to enhance durability, fire resistance, and environmental protection for fiber optic networks.Overview

Polyvinyl chloride (PVC) optical cables are fiber optic cables that feature a PVC compound as the outer jacket, providing mechanical protection and environmental resistance for the delicate optical fibers inside . PVC is a versatile plastic material composed of PVC resin and additives, which can be customized to adjust hardness, color, and fire-retardant properties . These cables are widely used in telecommunications, data centers, and campus networks due to their reliability and cost-effectiveness .

Fiber Types and Performance

PVC optical cables can house different types of fibers, such as OM4 multimode fibers, which are optimized for high-speed data transmission. OM4 fibers support 10 Gbit/s up to 550 meters and are suitable for future 40 and 100 Gbit/s applications, making them ideal for data centers and high-performance computing environments . Lower-speed applications, such as 1 Gbit/s or 100 Mbit/s, also benefit from PVC optical cables, as the sheath protects the fiber while maintaining flexibility and ease of installation .

Advantages of PVC Sheathing

- **Mechanical Protection:** PVC increases tensile strength and abrasion resistance, reducing fiber damage during installation and use .
- **Environmental Resistance:** PVC shields fibers from moisture, chemical corrosion, and UV exposure, ensuring long-term stability .
- **Fire Retardancy:** PVC compounds can enhance fire resistance, improving safety in buildings and industrial settings .
- **Customizability:** PVC jackets can be produced in various colors and hardness levels to meet specific network or aesthetic requirements .
- **Eco-Friendly Options:** Modern PVC compounds comply with environmental standards, reducing ecological impact .

Applications

PVC optical cables are commonly used in:

- Building backbones and campus networks
- Data centers and high-performance computing
- Telecommunications and Ethernet networks
- Industrial and commercial installations requiring durable, fire-retardant cabling

Conclusion

PVC optical cables combine the high-speed performance of fiber optics with the protective and customizable properties of PVC sheathing. They offer durability, fire safety, and environmental protection, making them a reliable choice for a wide range of networking and industrial applications .

Article Content

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A PVC cable (made of polyvinyl chloride) has a jacket that gives off heavy black smoke, hydrochloric acid, and other

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What is Polyvinyl Chloride / PVC? Polyvinyl Chloride, also referred to as PVC or vinyl, is a thermoplastic material. PVC is very

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Compare LSZH, PVC, and PE fiber optic cable jacket materials: fire safety ratings, smoke toxicity, temperature range,

PVC Sheath Cable

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Uses of material/Cable types PVC sheaths for power cables are tough and abrasion resistant and are capable of operating on

PVC Cable Overview and Different Insulation Options comparison

PVC cables meaning in electrical refer to cables that use polyvinyl chloride as an insulating material. Polyvinyl

PVC materials in cable

PVC materials in cable PVC (Polyvinyl chloride) is one of the most widely used materials in cable manufacturing due to its excellent

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PVC — Polyvinyl chloride (vinyl), a general-purpose plastic jacket material used for cables. Features low in cost and

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Optical properties of pure and modified poly (vinyl chloride)

Background In this study, poly (vinyl chloride) (PVC) is considered one of the most versatile plastics. It is the second

PVC Sleeves And Insulation on Fiber-Optic Cable

PVC is a common plastic materials for different many uses and applications. PVC is flexible, cost-effective and hard

Understanding PVC Cable: Polyvinyl Chloride Insulation for Wires and ...

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