Can a silicon tube be used to blow two optical fibers



Overview

The FOA Reference For Fiber Optics One could add extra tubes for future use and even blow out unused fibers and replace them with new How to install air bl.

Key Takeaways

Yes, a silicon tube could potentially be used to blow two optical fibers, provided it has a smooth inner surface, appropriate diameter, and can maintain air pressure for the installation.Key Considerations



© 2026 ZITHA TECH SPECIALTY CABLES (Pty) Ltd - All rights reserved

Tube Material and Surface: Air-blown fiber systems rely on tubes with a low-friction inner lining to allow fibers to glide easily under compressed air. Silicon has a naturally smooth surface, which can reduce friction, but it must be free of irregularities or roughness that could damage the fiber coating during installation . Tube Diameter: The inner diameter of the tube must be slightly larger than the combined diameter of the fibers to allow them to move freely without excessive air leakage. For example, microtubes used in ABF systems range from 3.5 mm to 6 mm inner diameter for single or multiple fibers . Two standard single-mode fibers (typically 0.25 mm coated) would require a tube with at least 1 mm inner diameter, but a larger diameter is recommended to ensure smooth blowing and reduce friction . Air Pressure and Sealing: The tube must be able to maintain sufficient air pressure along its length. Silicon is flexible, but care must be taken to ensure that connections and bends do not leak air, as pressure loss can prevent the fibers from advancing properly . Fiber Coating Compatibility: ABF systems often use fibers with special foamed or low-friction coatings to facilitate blowing. Standard fibers can work, but the combination of silicon tube and fiber coating should be tested to avoid abrasion or fiber damage . Installation Length and Bends: Silicon tubes are flexible, but excessive bending or long runs may reduce blowing distance. ABF systems typically achieve hundreds of meters in straight or moderately curved routes, depending on tube diameter and fiber stiffness .

Practical Recommendation

• Use a silicon tube with smooth inner walls and an inner diameter at least 2–3 times the fiber diameter for two fibers.

• Test a short section first to ensure fibers can be blown without damage.

• Ensure airtight connections at both ends to maintain pressure.

• Consider using lubricants or low-friction coatings if friction is high. In summary, while silicon is not a standard ABF tube material, it can be used for blowing two optical fibers if the tube is smooth, properly sized, and capable of maintaining air pressure, making it suitable for small-scale or experimental installations .

© 2026 ZITHA TECH SPECIALTY CABLES (Pty) Ltd - All rights reserved

Article Content

Fiber Optic Cable Blowing Procedure: Full Guide (2024)

What Is The Fiber Optic Cable Blowing Procedure?Maximizing Its PerformanceBlowing vs Pulling Cables: Which Is Better?How Do You Bury Fiber Optic Cable in A Blowing Installation?How Do You Pull Fiber Optic Cable Through A Conduit?Essential Fiber Optic Cable Blowing Procedure EquipmentIts Benefits on Fiber Optical NetworksLearn More About The Fiber Optic Cable Blowing MethodThe fiber optic cable blowing process is often preferred for installations due to its numerous advantages over the pulling method. It minimizes damage to the cable, reduces the risk of jams in the conduit, and is faster, saving on manpower and resources. However, using a pulling eye and a winch may be more suitable in certain situations.See more on thenetworkinstallers incabamerica

BlownIn - Blown Fiber Optic Cable | Incab America LLC

BlownIn is a multitube design that can have up to 432 fibers. It is an all-dielectric and UV-resistant micro air blown cable suitable for

Contact Us

Continue your research online:

Website: https://zithatech.co.za
Technical inquiry: https://zithatech.co.za/contact.html

This document is for preliminary research. Verify specifications against current standards, product documentation and project requirements.

© 2026 ZITHA TECH SPECIALTY CABLES (Pty) Ltd - All rights reserved