

CORNING CATV Node Assembly

Business Challenge

The fiber optical node – the key to the hybrid fiber coaxial (HFC) network – is more complex than ever as it takes on the latest demands of one-way and two-way broadband network applications, including voice, video, and high-speed internet.

Today, operators are pushing fiber closer to the customer – known as fiber deep, and often referred to as node+0 – in an HFC architecture that achieves significant bandwidth gains per home passed to support emerging services. With this increased fiber demand, the ability to deploy new nodes quickly and reliably becomes paramount for operators. The solution? Our CATV node assembly.

Solution

Designed to provide connectivity between the HFC node and the fiber cable trunks in existing HFC n+x (amplified) and now in fiber-deep n+0 (non-amplified) networks, our CATV node assembly enables the operator to configure the system with stubbed or preconnectorized cables dropped at the node location. Cable lengths up to 3,000 ft eliminate the need for additional splice points, hardware, and labor time at the node location.

Our node assembly is composed of two parts: the furcation unit and the fitting. The furcation unit terminates the cable with an epoxy stub and supports two to 12 fibers. The metal fitting encloses the epoxy and links the furcation unit to any hardware, providing a 5/8-in threaded input port. Connectors and fibers can be fed into the housing from the outside.

Additionally, the furcation method provides a continuous path from the splice closure to the node location. Each 250 μ m fiber is fed through a 900 μ m, 2 mm, or 3 mm tube for added protection. The 900 μ m tubes are unitized by a spiral wrap, making fiber routing in the node fast and easy. An epoxy-filled stainless steel sleeve strain-relieves fibers and provides IP68-rated protection against water and dust penetration. It also bonds all cable components together, which eliminates pistoning of the cable core. This design transfers strain directly through the strength elements of the cable to the node housing. Pull-out forces up to 400 lb can be applied without jeopardizing the connection integrity.

Our product portfolio includes everything you need to design and deploy your fiber-deep network. You can select from either 90- or 180-degree stubbed assemblies for splicing into fiber cables via traditional methods, or jumpers equipped with an OptiTip® multifiber connector for quick and easy connection to preconnectorized FlexNAP™ systems or OptiTip-enabled terminals.

Features and Benefits:

Rugged Design	Withstands 400 lb pull-out force and protects against water penetration
Flexible Offering	Variety of connectors available in a single assembly to support future services
Reliable Performance	Factory-installed and factory-tested connectors
Fiber Capacity	Two to 12 fibers per assembly
Robust Cable	Utilizes FastAccess® binderless technology for non-armored and single-jacket, single-armored loose tube cables.

