

Dielectric Double Jacketed Fiber Cable

What is Dielectric Double Jacketed (DDJ) Fiber Cable?

DDJ is a self-supporting, crush and impact resistant fiber cable. The rugged Kevlar reinforced dual jacketing eliminates the need for defined pathway, does not require grounding or bonding, and is lightning resistant.





What are the specifications of DDJ?

DDJ is offered in OS2 and OM4 fiber types and maintains an outer diameter of 0.52" up to 72 fibers. The outer jacket is Black with a stripe to indicate the fiber type, Yellow for OS2 and Aqua for OM4.

DDJ is Optical Fiber Nonconductive Riser – Low Smoke (OFNR-LS) rated, or Optical Fiber Nonconductive General-Purpose (OFNG)/Tray rated, if not installed in a riser or plenum application, and UL 1666 compliant. DDJ is also impact and crush resistant up to 4448N, carries an operating tensile strength of 1330N, and an operating bend radius of 10.4". The operating temperature range is -50°C to +70°C (-58°F to 158°F).

Where can I use DDJ?

Fiber distribution cable requires a defined pathway or conduit to support and protect the cable. DDJ is self supporting and can be installed into these applications simply using J-hooks, Wyr-Grid[®] Overhead Cable Tray Routing System, or ladder rack.

Under normal load conditions, standard non-armored low count distribution cables have a tendency to sag between the J-hooks, or ladder rack gaps due to the normal weight of the cabling solution. Maximum spacing for J-hook installation per TIA-569 standard is between four feet (4') and five feet (5'), exceeding this increases the potential for attenuation. If the cable is heavy enough, it is possible to pinch the fibers located at the bottom of the cable and cause a total loss of signal, resulting in possible packet loss and service interruption. DDJ's self supporting construction protects the fibers from potential pinches, kinks, or attenuation.

Some installation areas where the DDJ can be cost effective and beneficial are:

- Tight areas where both data and power cabling would need to co-exist
- Riser cabling areas between floors
- · Between buildings in a campus environment
- Industrial space between the mini-data center and control panels
- Connectivity to remote cameras or security points

DDJ is also approved for installation in aerial or direct bury applications, under UL1277 & CSA 22.2 No. 230.

How do I terminate DDJ?

DDJ cable is a 250µm loose tube fiber cable with a 50µm (OM4) or 9µm (OS2) core. It can be terminated following standard field polish, mechanical connector (OptiCam[®] Fiber Optic Connectors) or pigtail fusion splice termination methods.

How do I test DDJ?

Testing the DDJ link is performed utilizing the standard testing procedures outlined in TIA-568-C (TIA-526-14A and TIA-526-7). These procedures and best practices are explained and demonstrated in Panduit Best Practice PN445-Permanent Link Testing of Multimode and Singlemode Fiber Optic Cabling Systems.

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