

WE'RE WELL
CONNECTED



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Powell®



AVIM®

Developed in the mid-90s, the AVIM® was designed for vibration resistance in avionics, space and mobile platforms.

Available versions:

- ▶ SM, MM, PM
- ▶ Harsh environment qualified

Features:

- ▶ High vibration resistance (35 gRMS)
- ▶ High Shock resistance (500g)
- ▶ Space flight experience

Standards:

- ▶ ESCC 3420/002

Midi AVIM® / Mini AVIM®

Designed for compactness and ruggedness in dynamic small environments, such as space, avionics and mobile platforms.

Available versions:

- ▶ SM, MM, PM and PZ
- ▶ PS, PSm, PM-PS (Mini AVIM® only)
- ▶ Space Qualified (ESCC certificate 355)

Features:

- ▶ High vibration resistance (35 gRMS)
- ▶ High Shock resistance (500g)
- ▶ Titanium design

Standards:

- ▶ ESCC 3420/001 Mini AVIM®

HE-2000®

A rugged and reliable harsh environment push-pull connector with superior optical and mechanical performance.

Available versions:

Connector and bulkhead assembled (83526) cable, tube or fiber. The ferrule front face can be PC, APC or APC4° polished for MM, SM, PM, PS, large core or small core fibers. Available also as XB.

Features:

- ▶ 4 optical/electrical channels
- ▶ Automatic protection shutter
- ▶ Protection IP67
- ▶ Push-Pull
- ▶ Field repairable
- ▶ Vibration resistant
- ▶ Allows mixing of fiber types

Standards:

- ▶ IEC 61754-35

MIL-38999 DM4 Family

The well-known MIL style connector with superior optical and mechanical properties.

Available versions:

Connector and bulkhead assembled with cable, tube or fiber. The ferrule front face can be PC, APC or APC4° polished for MM, SM, PM, PS, large core or small core fibers. Available also as XB.

Features:

- ▶ 4 to 12 optical / electrical channels
- ▶ Resistant metal shell
- ▶ Rugged metal shell
- ▶ Protection IP67
- ▶ Field repairable
- ▶ Vibration resistant locking system
- ▶ Allows mixing of fiber types

Standards:

- ▶ MIL-DTL-38999

MIL-83526 DM4

A ruggedized housing allows for easy handling in industrial environments.

Available versions:

Connector and bulkhead assembled with cable, tubes or fibers. The ferrule front face can be PC, APC or APC4° polished for MM, SM, PM, PS, large core or small core fibers. Available also as XB.

Features:

- ▶ 4 optical/electrical channels
- ▶ Resistant metal shell
- ▶ Corrosion resistant
- ▶ Protection IP68
- ▶ Field repairable
- ▶ Vibration resistant
- ▶ Allows mixing of fiber types

Standards:

- ▶ MIL-DTL-83526

Expanded Beam (XB)

This lensed connector ensures the data connection can be easily maintained even in heavily polluted and other harsh environments.

Available versions:

Connector and bulkhead assembled with cable or tube. The ferrule front face can be PC or APC polished for MM and SM fibers.

Features:

- ▶ 4 optical channels
- ▶ Resistant metal shell
- ▶ Corrosion resistant
- ▶ Protection IP68
- ▶ Fiber types mix (keep consistent)
- ▶ Field repairable
- ▶ Vibration resistant

Standards:

- ▶ MIL-DTL-83526

revos E-2000®

A rugged design makes this connector particularly suitable for industrial applications requiring long transmission distances and high data rates.

Available versions:

Connector and bulkhead assembled with cable or tube. The ferrule front face can be PC, APC or APC4° polished for MM and SM fibers. Available also as XB.

Features:

- ▶ 2 optical channels
- ▶ Robust IP65-rated enclosure
- ▶ Integrated caps and shutters
- ▶ E-2000® connector with ACA
- ▶ Easy locking lever
- ▶ Automatic protection shutter

Standards E-2000®:

- ▶ IEC 61754-15

DiaFlex

A multifiber connector system based on the MT ferrule and a mechanical design that provides excellent optical properties.

Available versions:

Male and female connectors are assembled with cable or fan outs. The ferrule front face can be PC or APC polished for MM and SM fibers.

Features:

- ▶ 8-24 optical channels
- ▶ Resistant metal shell
- ▶ Corrosion resistant
- ▶ Protection IP68
- ▶ Easy locking system
- ▶ Protective cap with feed-in eye
- ▶ Small external diameter

Standards MT Ferrule:

- ▶ IEC 61754-5

* E-2000®, F-3000®, AVIM® and HE-2000® are registered trademarks of DIAMOND SA in the USA and other countries.

* The pictures of the connectors are not scaled true to the original

SINGLE FIBER CONNECTORS

TECHNOLOGIES

Active Core Alignment (ACA)

The goal of ACA is to achieve the best insertion loss values by minimizing the fiber eccentricity to the ferrule outer diameter, as well as, achieving a perfectly aligned exit angle. As part of the ACA process, the metallic end-face of the two component ferrule is shaped so that one side of the material deformation causes the fiber core to align to the middle of the central axis of the ferrule in a controlled manner.

Available connectors: All connector types

MULTI FIBER CONNECTORS

High Power (PS)

Diamond Power Solution (PS) connections utilize various beam expansion methods, which can vary greatly depending on the scope of the application. The different PS types available are as follows:
PS Collimated (contact), PM-PS (contact), PSm (contact), PSI (free standing), PSc (collimator), PSF Free Space (diverging), PSb Ball Lens (expanded beam), PSI Lensed (focused).

Available connectors: E-2000®, F-3000®, Mini AVIM®, DMI, FC, X-Beam and more upon request

Polarization Maintaining (PM)

Diamond Polarization Maintaining (PM) connectors are renowned for their exceptional performance. The Active Core Alignment (ACA) process minimizes core offset to ensure low insertion loss. Active Polarization Orientation (APO) guarantees optimal alignment of polarization axes for high extinction ratio on PM and polarizing (PZ) fibers.

Available connectors: E-2000®, F-3000®, LSA (DIN), FC, SC, DMI, AVIM® family and others upon request

