

FIBER OPTIC CONNECTORS & COMPONENTS



**Fiber Optic Interconnect Solutions for Military,
Aerospace and Harsh Environment Applications**

RADIALL 
The next conneXion

Radiall has been instrumental in designing and manufacturing fiber optic products for harsh environment applications for more than three decades. The experience of its team, its tradition for innovation and its high level service make Radiall an expert in the fiber optic field and a reliable key partner for your success. One of its latest developments, the LuxCis® (ARINC 801) terminus has been adopted by the industry as the new standard interconnect solution for airborne avionics and communications.

FIBER OPTIC CONNECTORS



LuxCis®: Physical contact
ARINC 801 / EN 4639 / EN 4640 / EN 4645

- Typical insertion loss of 0.1 dB. Superior optical performance maintained in harsh environments
- 1.25 mm ferrule for high density connectors
- Easy to clean and inspect optical end faces with the removable sleeve holder
- Multimode, singlemode and APC versions
- A single contact part number fits in a wide range of circular and rectangular connectors, including EPX®, ARINC 600, MIL-DTL-38999 or board connectors
- Ruggedized single channel solution with the LxC-R® connector
- Hermetic solutions available

PRO BEAM®: Expanded beam
MIL-DTL-83526/20 & 21

- Non physical contact solution, reducing surface damage and sensitivity to dust and particles
- Ruggedized connector, able to withstand extreme vibration and shock conditions
- More than 3,000 mating cycles
- Multimode and singlemode versions
- Up to 4 channels per insert
- Also available inserts for Arinc 600, MIL-DTL-38999 and EPX®



MIL-PRF-29504 compatible termini

- Termini for use in standard electrical cavity
- Size 16 and size 12 contacts available
- Available for ARINC, 38999 and EPX®

Commercial connectors

- LC, SC, ST and FC connectors redesigned for harsh environments
- Can accommodate loose or tight cable structures



LuxCis®, LxC-R® and EPX® are trademarks of Radiall - PRO BEAM® is a trademark of Tyco Elextronics



APPLICATIONS:

- **RF over Fiber** (remote antennas, phase array radar, military radio networking, and all radio signal conversion over a fiber in severe environments)
- **Sensors** (performance or structural)
- **In Flight Entertainment** (seat box connections, on-board fiber optic equipment, etc...)
- **Avionics data transmission**
- **High speed data networking**, including wavelength multiplexing

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FIBER OPTIC TRANSCEIVERS



- Harsh environment qualified: ARINC 804 / DO-160 / MIL-STD-883E
- World smallest optical transceivers: 12x13mm
- Up to 12 channels per package
- Bit rate up to 10 Gbps
- Extended temperature range: -55/125°C
- Very low power consumption: <50mW/ch/Gbps

Custom designs

- Application specific performance and environmental solutions
- High performance integrated packaging solutions
- Optical network design services



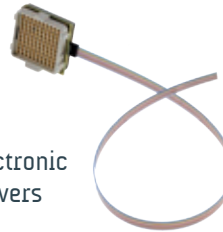
S-LIGHT

Single channel optoelectronic modules and transceivers



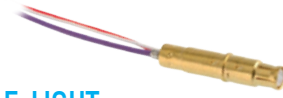
D-LIGHT

Multichannel optoelectronic modules and transceivers



E-LIGHT

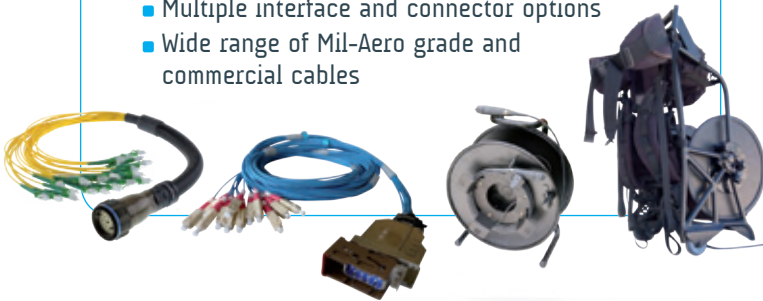
Active electro-optic inserts and connectors



FIBER OPTIC ASSEMBLIES, ACCESSORIES AND TEST SOLUTIONS

Harness assemblies

- Simplex, break-out and multichannel assemblies
- Designed by Radiall or built to customer print
- Manufactured and fully tested on AS9100 assembly lines
- Multiple interface and connector options
- Wide range of Mil-Aero grade and commercial cables



Accessories and Tools

- Backshells for circular and rectangular connectors, specifically designed for optical applications
- Repair solutions
- Aerospace measurement quality jumpers and test harnesses



Fiber optic interconnect solutions are recommended for all applications where:

- High data rates are required
- Standard architectures become too complex
- Data transmission needs to be secured
- EMI or electrical arcing is a concern
- Weight reduction is important
- Reduced power consumption is needed





AEROSPACE



AUTOMOTIVE



DEFENSE



INDUSTRIAL



INSTRUMENTATION



MEDICAL



SPACE



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