

Tech Optics manufacture a huge range of fibre optic cable assemblies for standard and harsh environment applications. Used by some of the biggest names in defence and aerospace plus electrical harness houses and connector manufacturers Tech Optics has an unsurpassed reputation for high quality flexible manufacture.

Assemblies are manufactured in Tonbridge using our ISO9001:2015 controlled processes which are fully traceable and 100% optically tested (test reports are supplied with each assembly together with a Tech Optics Cof S). First Article Inspection Reports are available as a cost option together with supplier C of Cs.

Services

- Build to print – assemblies built to your drawings
- Design support
 - Component selection
 - Harness design
 - Schematic / layout production
 - First Article Inspection Reports (FAIR)
 - Maintainability / serviceability / repair
 - Whole life cost
 - Training (installation, maintenance, repair, termination)



Aircraft assembly ARINC 801 to M38999

Assembly Types

- Ruggedised single and multimode assemblies
- Single and multi-channel assemblies
- Field deployable drums
- Armoured fibre optics
- Test harnesses
- Pigtail assemblies
- Patch cords utilising harsh environment and standard fibre connectivity
- Cable management/routing systems, enclosures and breakout systems
- Conduited assemblies
- Bespoke hybrid assemblies
- Loopbacks

Applications

- Aerospace (civil / military)
- Naval Systems
- Ground vehicles
- Deployable military communications
- Remotely Operated Vehicles (ROV)
- Radar / satellite systems
- Oil and Gas
- Rail
- Broadcast
- Telecoms / datacoms



Armoured HA (JN1055) Test Harness



TFOCA-II deployable drum assembly

Multi-Vendor Componentry

Tech Optics manufacture fibre optic harnesses using multiple approved manufacturers components to provide the best optical performance within time and cost constraints.

Typical Connector Types

- **Standard connectors** ST, FC, SC, LC, SMA...
- **Ruggedised singleway connectors**
 - MFM
 - HA (JN1055)
 - RSC
 - MIL-ST
- **Harsh environment multiway connectors**
 - M38999 / M29504
 - M28876 / M29504
 - ARINC 801
 - ELIO
 - TFOCA, -II, TFOCA-III
 - BDC
 - HDM
 - Duplex MFM
 - MC3, MC4, MC5
- **Expanded beam connectors**
 - M83526 / 20 / 21
 - Mini-expanded beam connectors
 - Windowed expanded beam connectors
- **Ribbon connectors**
 - MTP® / MPO hybridisation
 - MXC hybridisation

Connector Manufacturers

Tech Optics utilise connectors from the following manufacturers:-

- Amphenol Ltd.
- Amphenol Fiber Systems International
- Amphenol Fiber Optic Products
- Commscope
- Delphi
- Deutsch (TE Connectivity)
- Diamond
- Euromicron
- Glenair
- Huber + Suhner
- Radiall
- Senko
- Souriau
- TE Connectivity
- US Conec
- ...



TFOCA-III, 24 channel (SM) ship to shore assembly



M83526 Expanded Beam Assembly

Multi-Vendor Fibre Optic Cable

Tech Optics manufacture harnesses using multiple manufacturers cables from standard simplex patch cord to specialised multi-channel cable structures.

Typical Cable Types

- Simplex patchcord
- Zipcord
- Military Tactical cable (MIL-TAC)
- Armoured cable (CST, SWA)
- Distribution cable
- Breakout cable
- Loose tube cable
- JN1008 EFA cable
- Airbus cable (ABS0963)
- Naval cable MIL-PRF-85045
- Rail qualified

Cable Manufacturers

- Amphenol Spectra-Strip
- Carlisle
- Draka
- Hitachi
- Nexans
- OCC
- OFS
- Optral
- TE Connectivity
- WL Gore
- ...

Fibre sizes

- 9/125 μ m singlemode
 - OS1
 - OS2
- 50/125 μ m multimode
 - OM2
 - OM3
 - OM4
 - OM5
- 62.5/125 μ m
- 100/140 μ m
- 200/230 μ m
- 200/240 μ m
- 200/280 μ m
- Plastic Optical Fibre (POF)
- Speciality fibre sizes and constructions



Tech Optics fibre optic polishing station



Tech Optics fibre optic cable store



Deployable cable drums ready for test

Please contact our expert team to discuss your harsh environment fibre optic harness requirements in complete confidence.

For further information and to discuss your application contact:-

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TechOptics

Specifications subject to change without notice
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ISO9001:2015
for the distribution
of fibre optic
products and the
manufacture of
fibre optic
assemblies.

