**BUILD-TO-PRINT**

**FIBER OPTIC**

**CABLE HARNESS DESIGNER’S GUIDE**

In addition to our wide range of catalog (ASAP) Fiber Optic Cable Assemblies, Glenair offers turnkey, build-to-print fiber optic harnesses and box assemblies. To get started, fill out this designer’s guide, then contact your local Glenair Sales office or the Factory at 818-247-6000. Glenair offers the fastest turnaround because we make and stock all the component parts, and have one of the largest and most experienced assembly facilities in the business. Ask for a tour!

Originator: __________________________
Phone Number: _______________________
Title of Assembly _______________________
Project/Program _______________________

### Application Specifications

**Working Environment**
- [ ] Shipboard
- [ ] Airframe
- [ ] Avionics
- [ ] Secure Communications
- [ ] Ground Support/Soldier System
- [ ] Armored Vehicle
- [ ] Rail/Mass Transit
- [ ] Space
- [ ] Missile Defense
- [ ] Telecommunications
- [ ] Industrial
- [ ] Downhole or Surface Use
- [ ] Other

**Cable Installation**
- [ ] Outdoor
- [ ] Indoor
- [ ] Internal-to-Equipment

**Temperature Requirements**
- Operating: \( -^\circ C = \_ \_ \_ \_ + ^\circ C = \_ \_ \_ \_ \)
- Storage: \( -^\circ C = \_ \_ \_ \_ + ^\circ C = \_ \_ \_ \_ \)

### Optical Fiber Requirements

#### Singlemode
- Number of fibers ________
- Fiber Size
  - [ ] 9/125 µm
  - [ ] Other
- Test wavelength
  - [ ] 1310 nm
  - [ ] 1550 nm
- Acceptable optical dB insertion loss
  - [ ] Less than .5 dB
  - [ ] Less than 1.0 dB
- Acceptable optical return loss (backreflection)
  - [ ] Not applicable
  - ________ dB

#### Multimode
- Number of fibers ________
- Fiber Size
  - [ ] 50/125 µm
  - [ ] 62.5/125 µm
  - [ ] 100/140 µm
  - [ ] Other
- Test wavelength
  - [ ] 850 nm
  - [ ] 1300 nm
- Acceptable optical dB insertion loss
  - [ ] Less than .5 dB
  - [ ] Less than 1.0 dB
Cable Harness Construction

Assembly Length Requirements
☐ Less than 10 Meters
☐ 10 to 150 Meters
☐ More than 150 Meters

Cable Type
☐ Buffered
☐ Simplex
☐ Distribution
☐ Breakout

Basic Harness/Assembly Description
☐ Open Wire Harness
☐ Repairable/Jacketed
☐ Overmolded (MIL-M-24041 Materials)
☐ Metal/Fabric Overbraided
☐ Conduit

Alternative Wire Protection Media
☐ High Flexibility Convoluted Tubing
☐ EMI/EMP Metal-Core Conduit
☐ Molded Shrink Boots
☐ Junction Boxes and Cable Bays

Strain relief
☐ Not Applicable
☐ Light Duty
☐ Medium Duty
☐ Heavy Duty
☐ Gorilla Proof

Level of Environmental Protection
☐ Not Applicable
☐ Moisture Resistance
☐ Full Water Immersion
☐ Chemical/Caustic Fluid Resistance
☐ Extreme Corrosion Resistance
☐ Intense Atomic Radiation

Special Considerations
☐ RoHS Compliant Materials
☐ Extreme Temperature Tolerance
☐ UL94-VO Flammability
☐ UV Resistance
☐ Field Repairability
☐ Crush/Abrasion Resistance
☐ Weight Reduction
☐ Size or Shape Restraints as Specified:

List the non-Glenair connectors used in this project, including connector interface designators, if known:

List jacket/sheath or other wire/fiber protection materials such as conduit, including material type and brand:

Fiber Optic Termination Assembly

Connector
☐ Jam Nut or ☐ Square Flange or ☐ Plug
☐ Pin ☐ Skt ☐ Genderless ☐ Contact Qty____

MIL-DTL-38999 Series III Type ____________
Glenair High Density (GHD) ________________
Series 80 Mighty Mouse ____________________
Eye-Beam™ ______________________________
Glenair Front Release (GFR) ________________
MIL-PRF-64266 (NGCON) Type _____________
GFOCA __________________________________
MIL-PRF-28876 ___________________________
Termini Part No. __________________________
Dust Cover: ☐ Yes ☐ No

Fiber Optic Breakout Assembly

A Connector
☐ Jam Nut or ☐ Square Flange or ☐ Plug
☐ Pin ☐ Skt ☐ Genderless ☐ Contact Qty____

MIL-DTL-38999 Series III Type ____________
GHD _____________________________________
Series 80 Mighty Mouse ____________________
Eye-Beam™ ______________________________
Glenair Front Release (GFR) ________________
MIL-PRF-64266 (NGCON) Type _____________
GFOCA __________________________________
MIL-PRF-28876 ___________________________
Termini Part No. __________________________
Dust Cover: ☐ Yes ☐ No

B Connector
☐ ST Connector
☐ FC Connector
☐ SC Connector
☐ SMA Connector
☐ LC Connector
☐ Other

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