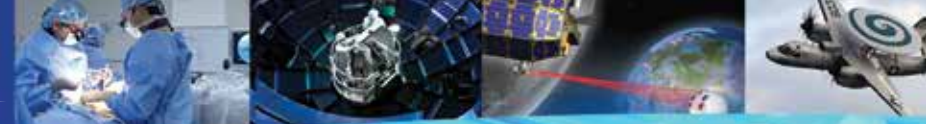
COASTAL CONNECTIONS

Innovative Fiber Termination Experts



# Qualified FC (QFC) Connector

The Qualified FC connector is designed to meet the harsh environments of aerospace applications however it is affordable enough to be used wherever a rugged FC connector is needed. The QFC can mate to a standard FC connector and be used with almost any fiber type or cable construction.

### Connector Features:

- Suitable for single-mode, polarization maintaining, and multimode fibers up to 880um
- Ceramic ferules for better performance over time and in high vibration.
- Integrated connector key for reliability
- Hytrel 8068 boots are vacuum baked for 24 hours to pass NASA outgassing requirements
- Wrench flats on coupling nut so that the connector can be torque to 7 in-lbs
- Built in the USA with Quality Components

The assembly process is the most important factor in guaranteeing performance on this connector. The assembly process used at Coastal Connection comes from a 2 year, multimillion dollar effort to qualify and build another single-mode connector for thermal cycling in space.

| Tests | | Parameters | Samples | Results |
|---|---|---|---|---|
| **Vibration** | FOTP-11D, Random Vibration VI, Condition Letter K, Table II | 46.3 Overall RMS Gs<br>3 Axis, 20 minute per axis | Seven, 900um loose tube cables with SMF-28e+ fiber | 0.1dB increase in power through 7 connections @1550nm |
| | FOTP-11D, Random Vibration VI, Condition Letter K, Table II | 46.3 Overall RMS Gs<br>3 Axis, 30 minute per axis | Thirty Four, 250um buffered cables with Nufern 1300nm PM fiber | 0.02db Average increase in loss<br>0.18dB Maximum increase in loss |
| **Shock** | M TIA-455-14 A | 500Gs<br>3 shock per +/- Axis for a total of 18 shocks | Thirty Four, 250um buffered cables with Nufern 1300nm PM fiber | 0.003db Average increase in Loss<br>0.13dB Maximum increase in loss |
| **Thermal Age** | GR-326-CORE | Temperature: 85° C<br>Time: 168 hour | Thirty Four, 250um buffered cables with Nufern 1300nm PM fiber | 0.00db Average increase in Loss<br>0.03dB Maximum increase in loss |
| **Thermal Cycle** | TIA-455-3B | Temperature: -40 to 60° C<br>Cycles: 10<br>Hold Time: 30 Minute<br>*Also tested to <-200° C | Seven, 900um loose tube cables with SMF-28e+ fiber | 0.15dB increase in loss at -40°C through 7 connectors @1550nm |
| | GR-326-CORE<br>Increased upper temperature from 75 to 85°C | Temperature: -40 to 85° C<br>Cycles: 21<br>Hold Time: 1 Hour<br>Total Time: 168+ hours | Thirty Four, 250um buffered cables with Nufern 1300nm PM fiber | 0.06db Average increase in Loss<br>0.01dB Maximum increase in loss |
| **Outgassing** | Customer internal requirement | Unknown | Three, 900um Jacketed cables with SMF-28e+ Fiber | No measurable optical contamination |

*Insertion loss prior to testing 34 PM fibers: Minimum 0.02dB, Maximum 0.22dB, Average 0.11dB

**Coastal Connections custom engineers cables with the QFC connectors to the tightest specifications in the industry.**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