

## Space Grade FC Connectors and assemblies

#### **Overview**

OFP's 'Space FC' is designed for aerospace and space flight applications. It features extra ruggedization against shock, vibration, and is manufactured with specially selected and fully qualified materials for vacuum, corrosive environments, and extreme temperatures.



## **Connector Features**

- 100% compatible with FC JIS C standards with excellent mechanical strength and corrosion resistance
- Hex-nut design to allow for precision torquing to 7 in-lbs tightness
- Compatible with Singlemode, PM, Micro Expanded Beam (MEB) and Multimode fibers up to 880um core
- High precision 'Elite' grade zirconia ceramics for ultra low insertion loss and performance stability
- Precision 'R' (narrow) type key machined into inner body, infinitely tuneable for maximum performance
- All boots manufactured in Hytrel 8068 material and vacuum baked to exceed NASA outgassing specs



## **Connector Styles**

- For ruggedized cable from 1.8mm diameter to 3mm diameter
- For 900um tight buffered or 250um primary coated fibers
- Compatible with PEEK, SS armouring tubes and available for high temp polyimide fibers



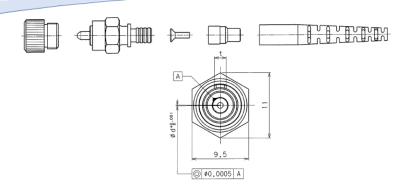
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## **Terminated Assemblies**

OFP offers a full termination service for Space FC connectors starting from simple patchcord and pigtail assemblies.

Also, OFP manufactures hermetic fiber tail assemblies pre-terminated with Space grade FC's for coupling by our customers to high performance active devices such as laser emitters, detectors and modulators. These typically include space quality hermetic feedthroughs for single or multiple fibers, and precision laser ablation lensed or cleaved fiber tips for optimal coupling to and from practically any chip.

Termination services are available for all SM, PM and MM fiber types, for wavelengths from 400 nm to 2,000 nm, 100% tested to the highest standards for both optical and mechanical performance.

Please contact us for your specific Space FC termination requirements at <a href="mailto:sales@ofpgco.com">sales@ofpgco.com</a>

## **Typical Connector and Termination Qualification**

Test Type	<b>Typical Test Standard</b>	<b>Parameters</b>
Vibration	FOTP-11D, Random Vibration VI, Condition Letter K, Table 1	46.3 Overall RMS Gs 3 Axis, 20 mins per axis
Shock	M TIA-455-14 A	500G's 3 shocks per +/- Axis for full 18 shocks
Thermal Age	GR-326-CORE	168 hours at 85°C
Thermal Cycle (1)	TIA-455-3B	Temperature –40C to +60°C
		10 Cycles. Hold time 30 mins. Also tested to < -200° C
Thermal Cycle (2)	GR-326-CORE increased upper temperature to +85°C from +75°C	Temperature -40°C to +85°C
		21 Cycles. Hold time 1 hour. Total time 168 hours
Outgassing	Customer specified	Objective - NASA EEE-INST-002



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