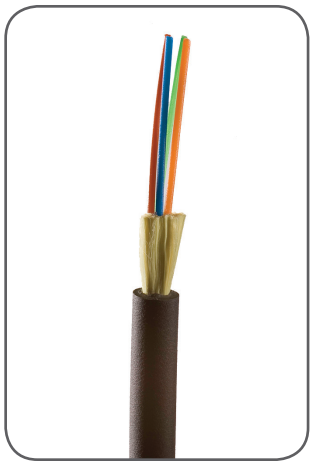
CERTIFICATION

OPTICAL CABLE CORPORATION

U.S. Army CECOM A3159879E Fiber Optic Cable Specification



With over 20 years of experience providing rugged and survivable fiber optic cable to the U.S. military and its allies, OCC continues to provide products that are easy to deploy and perform under the harshest conditions. Designed for uncompromised dependability, OCC produces physical plant cable products that have been tested to the most extreme military standards and are "real world" battlefield proven.

Our military certified fiber optic cables are optimized to withstand the rigors of difficult cable pulls, high tensile loading and severe crush occurrences and can repeatedly endure the abuse associated with the extreme environmental demands and repeated deployments. Where standard fiber optic cables are likely to fail, OCC's military-approved cables are particularly well suited to survive the harshest environments. In 2005, the United States Defense Logistics Agency certified Optical Cable Corporation as an approved manufacturer of qualified ground tactical fiber optic cables in accordance with MIL-PRF-85045/8A. This certification was granted after subjecting these fiber optic cable products to an exhaustive series of optical, mechanical and environmental tests to ensure full compliance with the demanding requirements of the United States Military.

In accordance with MIL-PRF-85045/8A and in reference to U.S. Army CECOM A3159879E, OCC's fiber optic cables are compliant in meeting the following specification requirements:

Parameter	Test Specification	Performance Range
Crosstalk	MIL-PRF-85045 (EIA/TIA-455-42)	< -60 dB
Thermal Shock	MIL-PRF-85045 (EIA/TIA-455-71)	-57°C to +85°C
Barometric Pressure (Altitude)	MIL-PRF-85045 (EIA/TIA-455-190)	3,000 meters (op), 12,200 meters (non-op)
Fluid Immersion	MIL-PRF-85045 (EIA/TIA-455-12)	Diameter change ≤ 10%
Temperature Cycling	MIL-PRF-85045 (EIA/TIA-453-3)	-46°C to +71°C
Storage Temperature	MIL-PRF-85045 Section 4.7.6.4	-57°C to +85°C
Temperature - Humidity Cycling	MIL-PRF-85045 (TIA/EIA-455-5)	+25°C to +65°C, RH 95%
Life Aging	MIL-PRF-85045 (TIA/EIA-455-4)	240 hours at +110°C
Flammability	MIL-PRF-85045 Section 4.7.6.12.1	60° Angle
Corner Bend	MIL-PRF-85045 (EIA/TIA-455-88)	500 N test load
Knot Force (Mandrel, Non-mandrel)	MIL-PRF-85045 (EIA/TIA-455-87)	500 N test load
Impact (1.5 kg hammer)	MIL-PRF-85045 (EIA/TIA-455-25)	100 impacts @ +25°C 50 impacts @ -46°C and +71°C
Cyclic Flexing	MIL-PRF-85045 (EIA/TIA-455-104)	2,000 cycles @ -46°C, +25°C, +71°C
Crush	MIL-PRF-85045 (EIA/TIA-455-41)	2,000 N/cm for 3 minutes
Cable Twist Bending	MIL-PRF-85045 (EIA/TIA-455-91)	100 N test load 2,000 cycles @ -46°C, +25°C, +71°C
Tensile Loading and Elongation	MIL-PRF-85045 (EIA/TIA-455-33)	≤ 0.5 dB multimode, ≤ 0.2 dB single-mode
Operational Tensile	MIL-PRF-85045 (EIA/TIA-455-33)	290 N, 72 hours
Ice Crush	MIL-PRF-85045 (EIA/TIA-455-98)	No degradation after exposure
Low Temperature, Flexibility (Cold Bend)	MIL-PRF-85045 (EIA/TIA-455-37)	-46°C 10 kg mass
Fungus Resistance	MIL-PRF-85045 (EIA/TIA-455-56)	No degradation after exposure

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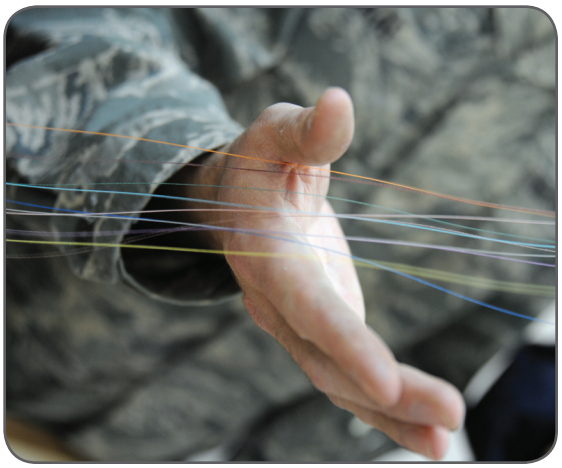
OCC's military-approved fiber optic cables are designed specifically for tactical/harsh environment connectors such as TFOCA and TFOCA II®*. They are also compatible with other harsh environment connectors such as MIL-C-28876 and MIL-C38899. This compatibility with connector designs allows OCC's military ground tactical fiber optic cables to provide end users with components that are easy to install, provide a high degree of reliability and offer outstanding performance characteristics.

- Rugged, tight-buffered fiber optic cable construction for the highest possible survivability in severe crush, impact, vehicle runover, deployment and retrieval conditions.
- Specifically designed for extreme environmental conditions - temperature, humidity, ice, fungus, and fluid immersion
- Available with radiation hardened or non-radiation hardened optical fibers
- Cables are used in DOD and MOD projects domestically and worldwide.



*TFOCA II® is a registered trademark of AFSI

Cable Characteristics: A3159879E Compliant Cables						
Fiber Count	Diameter mm(in)	Weight kg/km (lbs/1,000')	Tensile Load		Minimum Bend Radius	
			Installation N (lbs)	Operational N (lbs)	Installation cm (in)	Long-term cm (in)
2	5.8 (0.23)	31 (21)	1,800 (400)	600 (135)	8.7 (3.4)	5.8 (2.3)
4	5.8 (0.23)	31 (21)	1,800 (400)	600 (135)	8.7 (3.4)	5.8 (2.3)

Ordering Information				
Fiber Type	Bandwidth (MHz-KM)		Fiber Count	
	850 NM	1,300 NM	2	4
Radiation Hardened (RH)				
62.5/125 Rad Hard	160	500	RK981104-06	RK981104-09
	220	800	RK981104-06-A	RK981104-09-A
50/125 Rad Hard	500	500	RK981104-07	RK981104-10
	600	1,000	RK981104-07-A	RK981104-10-A
Single-mode	-	-	RK981104-08	RK981104-11
Non-Radiation Hardened				
62.5/125	160	500	-	RK981104-01
	220	800	RK981104-A	RK981104-01-A
50/125	500	500	RK981104-02	RK981104-03
	500	1,000	RK981104-02-A	RK981104-03-A
Single-mode	-	-	RK981104-04	RK981104-05

Optical Cable Corporation (OCC) is a MIL-STD-790F certified manufacturing facility and has been providing the United States and allied militaries with ground tactical fiber optic cables, tactical fiber optic connectors, and deployable fiber optic cable assemblies for over 20 years. As a premium manufacturer of these components, we are proud to have many of the major worldwide defense agencies as our customers. To learn more about OCC's military tactical communications solutions, contact an OCC sales professional or visit us at www.occfiber.com.

OPTICAL CABLE CORPORATION

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