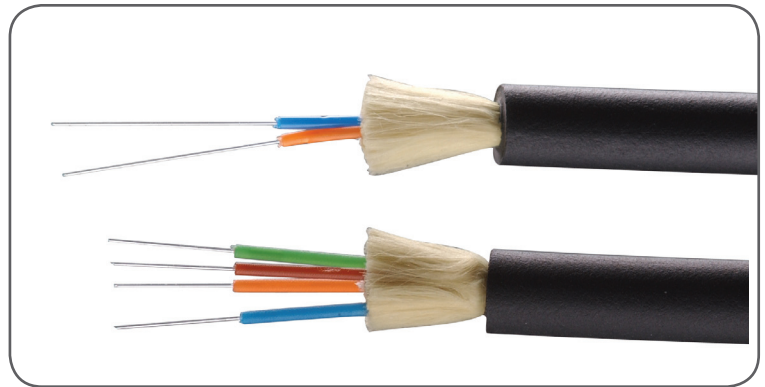


MIL-PRF-85045/8A Ground Tactical Fiber Optic Cable

The U.S. military needed an extremely strong, lightweight, rugged and survivable fiber optic cable, able to efficiently transmit previously unprecedented volumes of data in the field. OCC and its engineers were at the forefront of the development of tight-buffered, tight-bound cable technology that met these criteria. The result: cables that were easy to deploy and performed under the harshest of conditions.

Since 1983, OCC has been designing and manufacturing some of the most reliable, rugged and robust fiber optic cable products for the military ground tactical market - field proven and relied on by defense agencies around the world. 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, OCC's fiber optic cables have been proven to meet 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

MIL-PRF-85045/8A Ground Tactical Fiber Optic Cable

Contracts often demand qualified products, and OCC's suite of military approved and certified fiber optic cables offer the reliability and performance needed when communications are vital for the success of the mission.

- Rugged, tight-buffered fiber optic cable construction for the highest possible survivability in severe crush, impact, vehicle rollover, deployment and retrieval conditions.
- Tested to the most demanding military tactical cable qualification standards
- Designed specifically for TFOCA and TFOCA II®* applications
- Can be used with other tactical/harsh environment connectors such as MIL-C-28876, MIL-C-38999 or other standard commercial optical connectors
- High tensile load capability for excellent termination strength with military tactical connectors



*TFOCA II® is a registered trademark of AFSI.

Cable Characteristics: DOD QPL-85045 Qualified 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)	9.3 (3.7)	4.6 (1.8)
4	5.8 (0.23)	31 (21)	1,800 (400)	600 (135)	9.3 (3.7)	4.6 (1.8)

Ordering Information						
Part Number	Fiber Count	Fiber Type	Minimum LED Bandwidth (MHz-KM)		Minimum Laser Bandwidth (MHz-KM)	
			850 NM	1,300 NM	850 NM	1,300 NM
OC040522-04	2	62.5/125	500	500	510	500
OC040522-06	4	62.5/125	500	500	510	500

Our broad product offering for military tactical applications is built on the evolution of fundamental technologies designed to provide end users with components that are easy to install, provide a high degree of reliability and offer outstanding performance characteristics.

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.