

METRIC

MIL-C-85045/13(SH)
30 November 1988

MILITARY SPECIFICATION SHEET

CABLE, FIBER OPTIC, FIBER OPTIC
CABLE CONFIGURATION TYPE B (OFCC),
OPTICAL FIBER TYPE SU AND MM (METRIC)

This specification is approved for use by the Department of the Navy, and is available for use by all Departments and Agencies of the Department of Defense.

The requirements for acquiring the product described herein shall consist of this specification sheet and the issue of the following specification listed in that issue of the Department of Defense Index of Specifications and Standards (DoDISS) specified in the solicitation: DOD-C-85045.

CLASSIFICATION

Fiber optic cable configuration type: B (OFCC).

Optical fiber type: SU (Dispersion-unshifted, glass core and glass cladding, single-mode)
MM (Graded-index, glass core and glass cladding, multimode).

DESIGN AND CONSTRUCTION

Fiber:

Type MM fibers 1, 3, 5, 7 (see figure 1) shall be in accordance with MIL-F-49291/02.

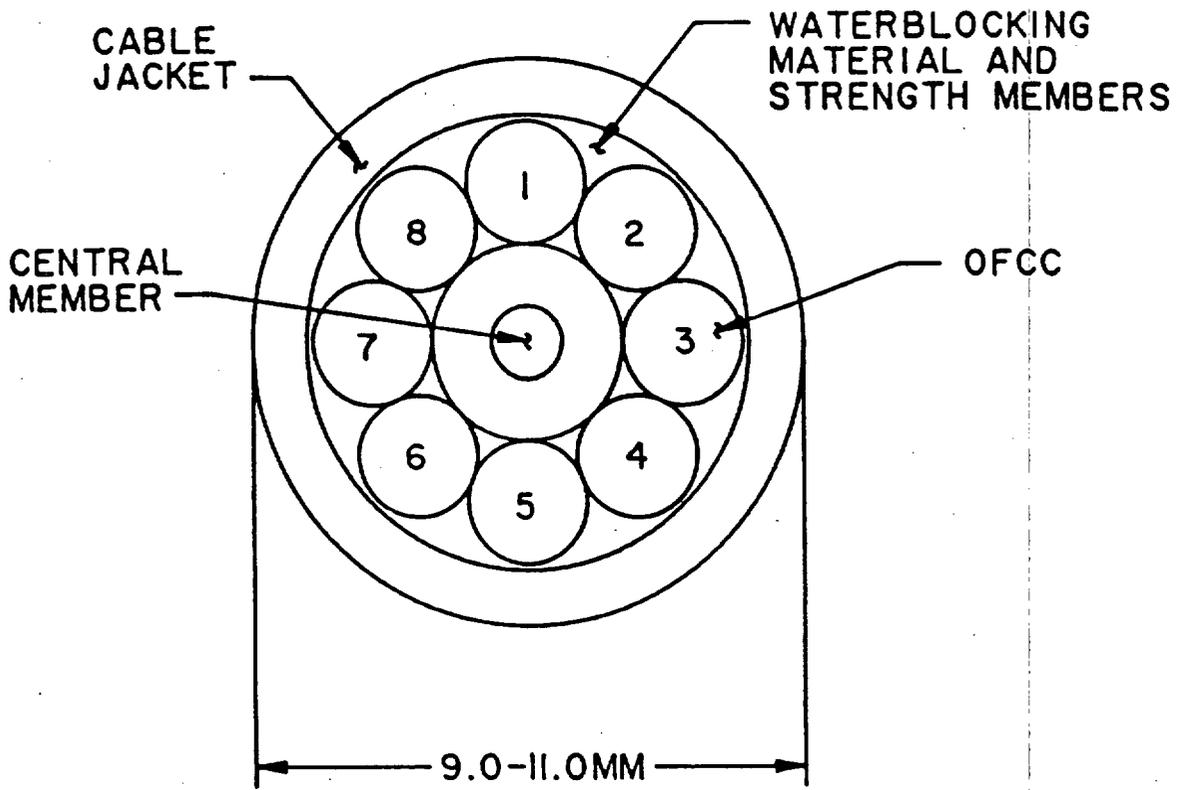
Type SU fibers 2, 4, 6, 8 (see figure 1) shall be in accordance with MIL-F-49291/01.

Buffer diameter: $900 \pm 50 \mu\text{m}$.

AMSC N/A

FSC 6015

DISTRIBUTION STATEMENT A. Approved for public release; distribution is unlimited.



NOTES:

1. OFCC - Optical fiber cable component.

FIGURE 1. Eight OFCC fiber optic cable.

OFCC

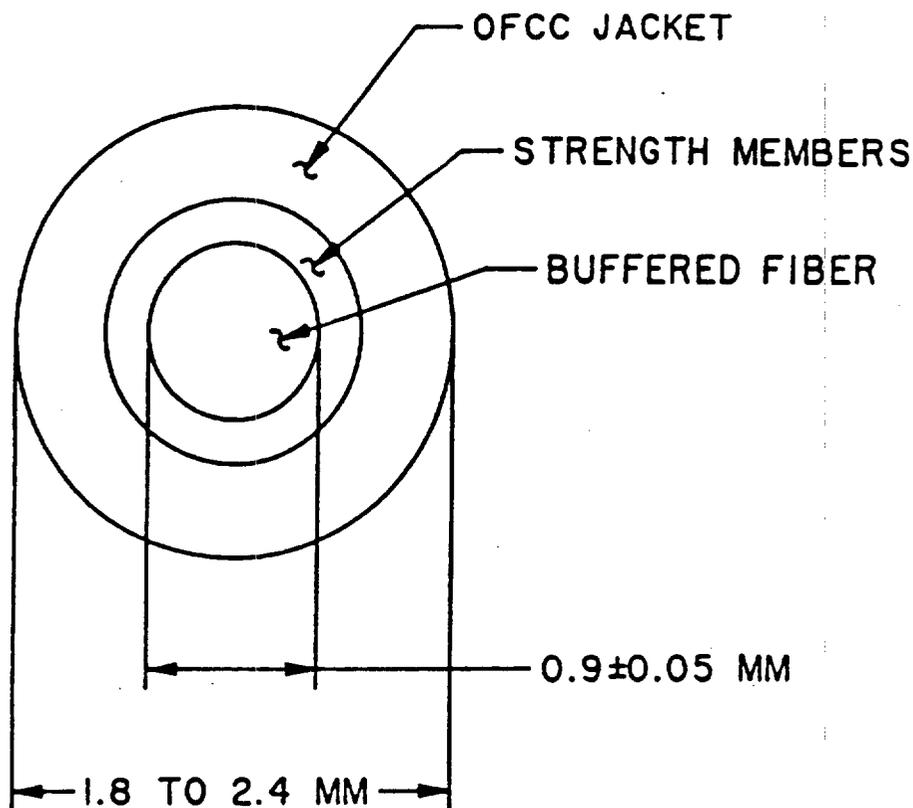
Dimensions and configuration: See figure 2. The tolerances on all dimensions shall be plus or minus 10 percent.

Mass per unit length: N/A.

Tensile loading: ≥ 270 newtons.

Dynamic bend tensile load: 90 newtons (minimum).

Torsion condition: Less than 15 degrees, tensile load 55 newtons, total torque 25 N-cm.



NOTE: 1. Buffered fiber includes the core, cladding, coating, and additional buffer material.

FIGURE 2. Optical fiber cable component.

FINISHED CABLE:

Dimensions and configuration: Eight OFCC units shall be helically laid over the central member with a maximum lay of 25 cm (see figure 1). The tolerance on the finished cable diameter shall be plus or minus 10 percent.

Number of fibers: 8 (one per OFCC). Fibers 1, 3, 5, 7 are type MM fibers and fibers 2, 4, 6, 8 are type SU fibers (see figure 1).

Concentricity: ≥ 0.8 .

Mass per unit length: ≤ 175 kg/km.

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Maximum attenuation rate: 2.0 dB/km for type MM fiber
1.0 dB/km for type SU fiber.

Tensile loading: \geq 2700 newtons.

Crush: N/A.

Pressure cycling: N/A.

Hydrostatic pressure: N/A.

ENVIRONMENTAL

Temperature range: 2 (Operating: minus 28 to plus 65°C
Storage: minus 62 to plus 71°C).

Ultraviolet radiation: N/A.

Oxygen pressure exposure: N/A.

PART IDENTIFYING NUMBER: M85045/13-001.

PART DESIGNATOR: BSUMM008.

Review activities:
Navy - EC, YD

Preparing activity:
Navy - SH
(Project 6015-N012-1)