FEDERAL SUPPLY CLASS

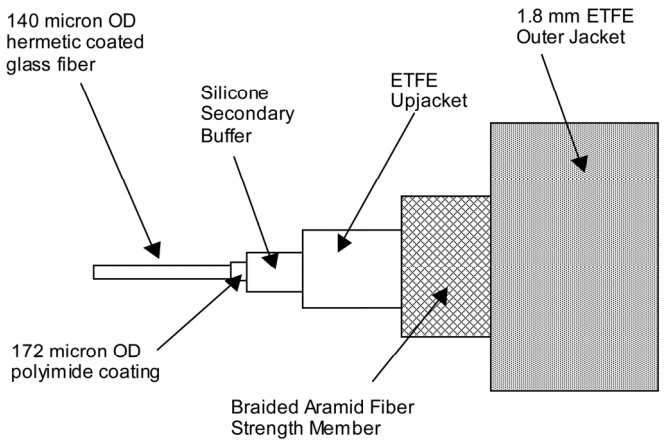


FIGURE 1 - CABLE CONFIGURATION

1. Construction Description:

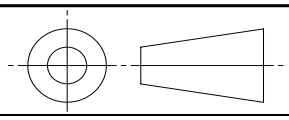
1.1 Optical Fiber Dimensions and Materials

Core Diameter:	100 µm ± 3 µm (0.0039 in ± 0.00012 in)
Core Material:	Graded Index Silica Glass
Cladding Diameter:	140 µm ± 2 µm (0.0055 in ± 0.00008 in)
Cladding Material:	Silica Glass
Core to Cladding Ellipticity:	2% maximum
Core to Cladding Offset:	2 µm maximum
Hermetic Coated:	Yes
Coating Diameter:	172 µm ± 1.5 µm (0.00675 in ± 0.00008 in) 0.66 Cpk with lower limit of 170.5 micron
Coating Material:	Polyimide

1.2 Cable Dimensions and Materials

Secondary Buffer Diameter:	450 µm ± 25 µm (0.0177 in ± 0.001 in)
Secondary Buffer Material:	Silicone
Buffer Concentricity:	65% minimum
Upjacket Diameter:	900 µm ± 50 µm (0.0354 in ± 0.002 in)
Upjacket Material:	Ethylene-Tetrafluoroethylene Copolymer (ETFE)
Strength Member:	Braided Aramid Fiber
Yarn Size	380 Denier
Number of Ends	16
Braid Picks/Inch	9
Outer Jacket Diameter:	1800 µm ± 100 µm (0.0709 in ± 0.039 in maximum)
Outer Jacket Material:	Ethylene-Tetrafluoroethylene Copolymer (ETFE)
Outer Jacket Concentricity:	6% of Jacket Outer Diameter

THIRD ANGLE PROJECTION



ISSUED 2003-07

CUSTODIAN: SAE AE-8/AE-8D

SAE Aerospace
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AEROSPACE STANDARD

CABLE, FIBER OPTIC, MULTIMODE,
100/140/172 µm GRADED INDEX,
HERMETIC COATED, TIGHT BUFFER

AS5382/1
SHEET 1 OF 3

TO PLACE A DOCUMENT ORDER: **Tel: 877-606-7323 (inside USA and Canada)** **Tel: 724-776-4970 (outside USA)**
Fax: 724-776-0790 **Email: custsvc@sae.org** **SAE WEB ADDRESS: http://www.sae.org**

1.3 Cable Performance

Operational Mode:	Multimode
Temperature Rating:	-55 to +165 °C
Storage Temperature:	-55 to +85 °C
Outer Jacket Color:	Green
Finished Cable Weight:	4.0 kg/km maximum

2. Optical Fiber Requirements:

Maximum Attenuation:	≤8 dB/km @ 850 nm, ≤6 dB/km @ 1300 nm
Numerical Aperture:	0.29 ± 0.015
Fiber Tensile Proof Test:	200,000 psi minimum
Bandwidth:	≥200 MHz-km @ 850 nm & 1300 nm

3. Environmental:

Fluid Immersion:	See Table 1 for test fluid listing.
Freezing Water Immersion:	≤0.5 dB change in optical transmittance during the test with ≤0.5 dB permanent change after test
Humidity Resistance:	≤0.5 dB change in optical transmittance during the test with ≤0.5 dB permanent change after test
Wicking:	Water Penetration of 88.5 mm maximum
Fungus Resistance:	Fungus inert per MIL-HDBK-454 Guideline 4
Blocking:	No areas of localized adhesion

4. Mechanical:

Cold Bend:	≤0.5 dB change in optical transmittance after test
Cyclic Flex:	≤0.5 dB change in optical transmittance during the test with ≤0.5 dB permanent change after test Test temps: -55 °C, +25 °C, +150 °C
Impact Resistance:	≤0.5 dB change in optical transmittance during the test with ≤0.5 dB permanent change after test
Crush Resistance:	≤0.5 dB change in optical transmittance during the test with ≤0.5 dB permanent change after test
Corner Bend:	≤0.5 dB change in optical transmittance during the test with ≤0.5 dB permanent change after test
Cable Tensile Load and Bending:	≤0.5 dB change in optical transmittance during the test with ≤0.5 dB permanent change after test Maximum tensile load 132 N
Jacket Material Tensile and Elongation:	Tensile Strength: 900 N/cm^2 minimum Elongation: 125% minimum
Durability of Manufacturer's Identification:	Required unless identification marking is under a clear jacket
Jacket Strippability:	Easily Removed, No damage to Fiber at 10X