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**REV. B**  
**AS5382™/2**

FEDERAL SUPPLY CLASS  
6010

**RATIONALE**

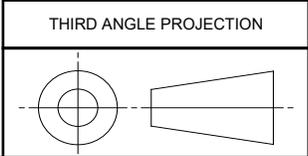
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CUSTODIAN: AE-8/AE-8D		PROCUREMENT SPECIFICATION: NONE	
	<b>AEROSPACE STANDARD</b>		<b>AS5382™/2</b>
	CABLE, FIBER OPTIC, MULTIMODE, 100/140/172 μm GRADED INDEX, NONHERMETIC, LOOSE TUBE		

ISSUED 2004-08 REVISED 2011-10 STABILIZED 2021-09

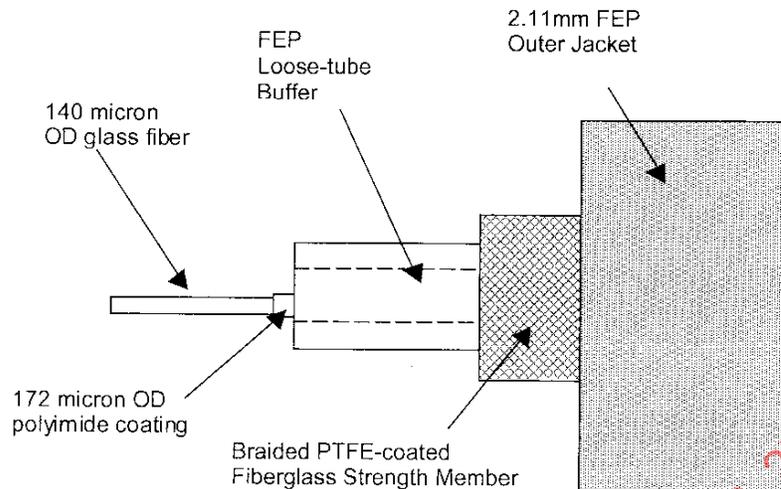


FIGURE 1 - CABLE CONFIGURATION

1. CONSTRUCTION DESCRIPTION

1.1 OPTICAL FIBER DIMENSIONS AND MATERIALS

CORE DIAMETER:  $100 \pm 4 \mu\text{M}$  ( $0.0039 \pm 0.00016$  IN.)  
 CORE MATERIAL: GRADED INDEX SILICA GLASS

CLADDING DIAMETER:  $140 \pm 3 \mu\text{M}$  ( $0.0055 \pm 0.00012$  IN.)  
 CLADDING MATERIAL: SILICA GLASS

CORE/CLADDING CONCENTRICITY: 0.94 MINIMUM

HERMETIC COATED: NO

COATING DIAMETER:  $172 \pm 2 \mu\text{M}$  ( $0.00677 \pm 0.00008$  IN.)  
 COATING MATERIAL: POLYIMIDE

CLADDING/COATING CONCENTRICITY: 0.82 MINIMUM

1.2 CABLE DIMENSIONS AND MATERIALS

BUFFER: LOOSE TUBE  
 INNER DIAMETER:  $0.38 \pm 0.025$  MM ( $0.0150 \pm 0.001$  IN.)  
 OUTER DIAMETER:  $0.76 \pm 0.025$  MM ( $0.0300 \pm 0.001$  IN.)  
 BUFFER MATERIAL: FEP

STRENGTH MEMBER: BRAIDED PTFE-COATED FIBERGLASS  
 COVERAGE: 90% MINIMUM  
 OUTER DIAMETER:  $1.60 \pm .051$  MM ( $.0630 \pm .002$  IN.)

OUTER JACKET DIAMETER:  $2.11 \pm 0.05$  MM ( $0.083 \pm 0.002$  IN.)  
 OUTER JACKET MATERIAL: EXTRUDED FLUORINATED ETHYLENE PROPYLENE (FEP)

1.3 CABLE PERFORMANCE

OPERATIONAL MODE:	MULTIMODE
TEMPERATURE RATING:	-65 °C TO +200 °C
STORAGE TEMPERATURE:	-55 °C TO +200 °C
OUTER JACKET COLOR:	VIOLET (NON-STANDARD COLOR)
BRAID BREAK FORCE:	80 LBS. MINIMUM
FINISHED CABLE WEIGHT:	5.95 KG/KM (4.0 LBS./1000 FEET) MAXIMUM
MINIMUM BEND RADIUS:	0.85 IN. (10X OD)

2. OPTICAL FIBER REQUIREMENTS

MAXIMUM ATTENUATION:	≤10DB/KM @ 760 - 992 NM
NUMERICAL APERTURE:	0.29 ± 0.020
FIBER TENSILE PROOF TEST:	200 000 PSI MINIMUM
BANDWIDTH:	100 MHZ-KM MIN. @ 850NM & 1300NM

3. ENVIRONMENTAL

FLUID IMMERSION:	SEE TABLE 1 FOR TEST FLUID LISTING.
FREEZING WATER IMMERSION:	≤0.5DB CHANGE IN OPTICAL TRANSMITTANCE DURING & AFTER TEST
HUMIDITY RESISTANCE:	≤0.5DB CHANGE IN OPTICAL TRANSMITTANCE DURING & AFTER TEST
WICKING:	WATER PENETRATION OF 88.5MM MAXIMUM
FUNGUS RESISTANCE:	FUNGUS INERT PER MIL-HDBK-454 GUIDELINE 4
BLOCKING:	NO AREAS OF LOCALIZED ADHESION

4. MECHANICAL

COLD BEND:	≤0.5DB CHANGE IN OPTICAL TRANSMITTANCE AFTER TEST
CYCLIC FLEX:	≤0.5DB CHANGE IN OPTICAL TRANSMITTANCE DURING & AFTER TEST TEST TEMPS: -55 °C, +25 °C, +150 °C
IMPACT RESISTANCE:	≤0.5DB CHANGE IN OPTICAL TRANSMITTANCE AFTER TEST
CRUSH RESISTANCE:	≤0.5DB CHANGE IN OPTICAL TRANSMITTANCE DURING & AFTER TEST
CORNER BEND:	≤0.5DB CHANGE IN OPTICAL TRANSMITTANCE AFTER TEST
CABLE TENSILE LOAD AND BENDING:	≤0.5DB CHANGE IN OPTICAL TRANSMITTANCE DURING & AFTER TEST MAXIMUM TENSILE LOAD 35 000 PSI.
JACKET MATERIAL TENSILE AND ELONGATION:	TENSILE STRENGTH: 5,000 PSI MINIMUM ELONGATION: 200% MINIMUM
DURABILITY OF MANUFACTURER'S IDENTIFICATION:	REQUIRED UNLESS IDENTIFICATION MARKING IS UNDER A CLEAR JACKET
JACKET STRIPPABILITY:	EASILY REMOVED, NO DAMAGE TO STRENGTH MEMBER.

	<b>AEROSPACE STANDARD</b>	<b>AS5382™/2</b> SHEET 2 OF 3	<b>REV.</b> <b>B</b>
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