

Specification Sheet

SH-4002

High-Performance Plastic Optical Fiber

E s k aTM

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1. Scope

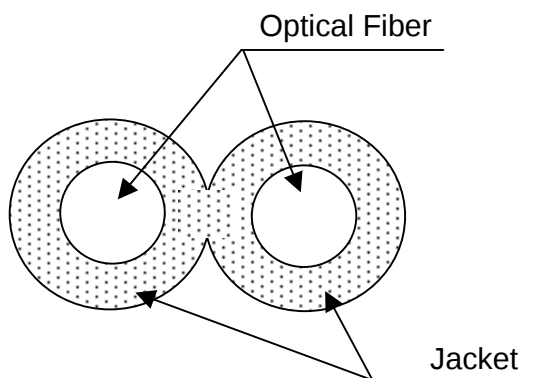
This specification covers basic requirements for the structure and optical performances of SH-4002.

2. Structure

Table 1

Table 1				SH-4002		
Item			Specification			
			Unit	Min.	Typ.	Max.
Optical Fiber	Core Material		-	Polymethyl-Methacrylate Resin		
	Cladding Material		-	Fluorinated Polymer		
	Core Refractive Index		-	1.49		
	Refractive Index Profile		-	Step Index		
	Numerical Aperture		-	0.5		
	Core Diameter		μm	920	980	1,040
	Cladding Diameter		μm	940	1,000	1,060
	Number of fibers		-	2		
Jacket	Material		-	Polyethylene		
	Color		-	Black		
	Dimension	Minor Axis	mm	2.13	2.2	2.27
		Major Axis	mm	4.2	4.3	4.4
Approximate Weight			g/m	8		
Indication on the Jacket			-	·····SUPER ESKA·····;Blue		

Sectional View



3. Performances

Table 2

SH-4002

Item		Acceptance Criterion and/or [Test Condition]	Specification			
			Unit	Min.	Typ.	Max.
Maximum Rating	Storage Temperature	No Physical Deterioration [in a Dry Atmosphere]		-55	-	+70
	Operation Temperature	No Deterioration in Optical Properties* [in a Dry Atmosphere]		-55	-	+70
		No Deterioration in Optical Properties** [under 95%RH condition]		-	-	+60
Optical Properties	Transmission Loss [650nm Collimated Light]	[25 50%RH]	dB/km	-	-	190
		[Operation Temperature]	dB/km	-	-	210
Mechanical Characteristics	Minimum Bend Radius	Loss Increment 0.5dB [A Quarter Bend]***	mm	25	-	-
	Repeated Bending Endurance	Loss Increment 1dB [in Conformity to the JIS C 6861]****	Times	10,000	-	-
	Tensile Strength	Tensile Force at 5% Elongation; in Conformity to the JIS C 6861]	N	140	-	-
	Twisting Endurance	Loss Increment 1dB [Sample Length : 1m Tensile Force : 4.9N]	Times	5	-	-
	Impact Endurance	Loss Increment 1dB [in Conformity to the JIS C 6861]	N·m	0.4	-	-

All tests are carried out under temperature of 25 unless otherwise specified.

* Attenuation change shall be within +/- 10% after 1,000 hours.

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*** In the direction of the minor axis

**** Bend Angle +/-90°, Bend Radius 15mm, Tension 1,000g