

Specification Sheet

SH-3002

High-Performance Plastic Optical Fiber

E s k aTM

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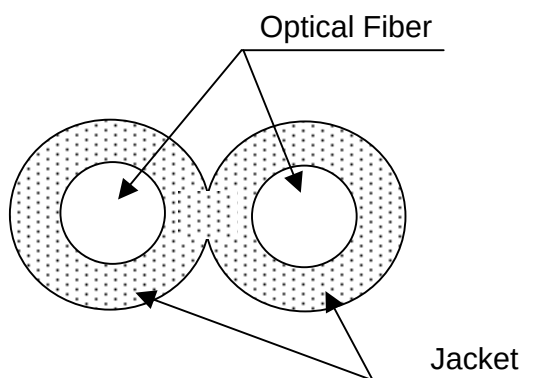
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1. Scope
This specification covers basic requirements for the structure and optical performances of SH-3002.
2. Structure

Table 1

Table 1				SH-3002		
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	690	735	780
	Cladding Diameter		μm	705	750	795
	Number of fibers		—	2		
Jacket	Material		—	Polyethylene		
	Color		—	Black		
	Dimension	Minor Axis	mm	2.13	2.20	2.27
		Major Axis	mm	4.2	4.3	4.4
Approximate Weight			g/m	8		
Indication on the Jacket			—	One of the pair ·····SUPER ESKA ·····:Blue		

Sectional View



3. Performances

Table 2

		SH-3002				
Item		Acceptance Criterion and/or [Test Condition]	Specification			
			Unit	Min.	Typ.	Max.
Maximum Rating	Storage Temperature	No Physical Deterioration [in a Dry Atmosphere]	°C	-55	—	+70
	Operation Temperature	No Deterioration in Optical Properties* [in a Dry Atmosphere]	°C	-55	—	+70
		No Deterioration in Optical Properties** [under 95%RH condition]	°C	—	—	+60
Optical Properties	Transmission Loss [650nm Collimated Light]	[25°C 50%RH]	dB/km	—	—	200
		[Operation Temperature]	dB/km	—	—	220
Mechanical Characteristics	Minimum Bend Radius	Loss Increment $\leq 0.5\text{dB}$ [A Quarter Bend]***	mm	20	—	—
	Repeated Bending Endurance	Loss Increment $\leq 1\text{dB}$ [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	90	—	—
	Twisting Endurance	Loss Increment $\leq 1\text{dB}$ [Sample Length : 1m Tensile Force : 4.9N]	Times	2	—	—
	Impact Endurance	Loss Increment $\leq 1\text{dB}$ [in Conformity to the JIS C 6861]	N·m	—	—	—

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

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

** Attenuation change shall be within +/- 10% after 1,000 hours, except that due to absorbed water.

*** In the direction of the minor axis

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