

Specification Sheet

SH-1001-1.0

High-Performance Plastic Optical Fiber

E s k a™

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1. Scope

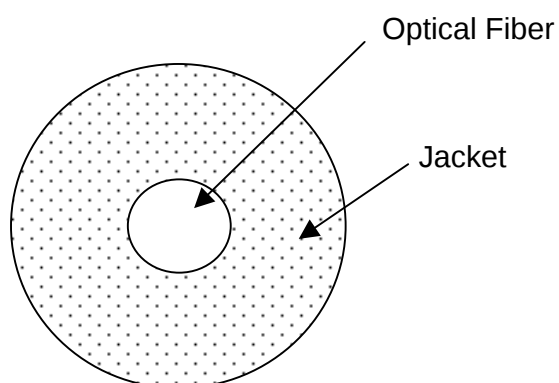
This specification covers basic requirements for the structure and optical performances of SH-1001-1.0.

2. Structure

Table 1

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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	217	240	263
	Cladding Diameter	μm	227	250	273
Jacket	Material	-	Polyethylene		
	Color	-	Black		
	Diameter	mm	0.95	1.00	1.05
Approximate Weight		g/m	0.7		
Indication on the Jacket		-	None		

Sectional View

3. Performances

Table 2

SH-1001-1.0

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	-	-	400
		[Operation Temperature]	dB/km	-	-	420
Mechanical Characteristics	Minimum Bend Radius	Loss Increment 0.5dB [A Quarter Bend]	mm	5	-	-
	Repeated Bending Endurance	Loss Increment 1dB [in Conformity to the JIS C 6861]***	Times	-	-	-
	Tensile Strength	Tensile Force at 5% Elongation [in Conformity to the JIS C 6861]	N	4	-	-
	Twisting Endurance	Loss Increment 1dB [Sample Length : 1m Tensile Force : 4.9N]	Times	-	-	-
	Impact Endurance	Loss Increment 1dB [in Conformity to the JIS C 6861]	N·m	-	-	-

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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*** Bend Angle +/-90°, Bend Radius 15mm, Tension 500g