

Specification Sheet

SH-8001

High-Performance Plastic Optical Fiber

E s k a™

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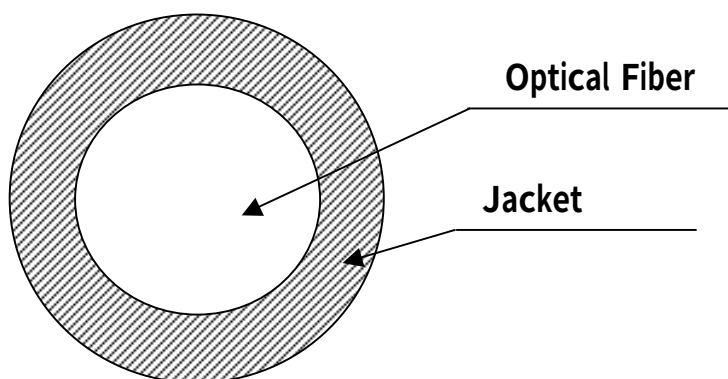
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1. Scope
This specification covers basic requirements for the structure and optical performances of SH-8001.
2. Structure

Table 1

		SH-8001			
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	1,840	1,960	2,080
	Cladding Diameter	μm	1,880	2,000	2,120
Jacket	Material	—	Polyethylene		
	Color	—	Black		
	Diameter	mm	2.9	3.0	3.1
Approximate Weight		g/m	7		
Indication on the Jacket		—	White line		

Sectional View



3. Performances

Table 2

SH-8001

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	60	—	—
	Repeated Bending Endurance	Loss Increment $\leq 1\text{dB}$ [in Conformity to the JIS C 6861]***	Times	1,000	—	—
	Tensile Strength	Tensile Force at 5% Elongation; in Conformity to the JIS C 6861]	N	270	—	—
	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.

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*** Bend Angle +/-90° ,Bend Radius 35mm,Tension 1,000g