Issued in
No.

Specification Sheet

SHCP-4002

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 SHCP-4002.

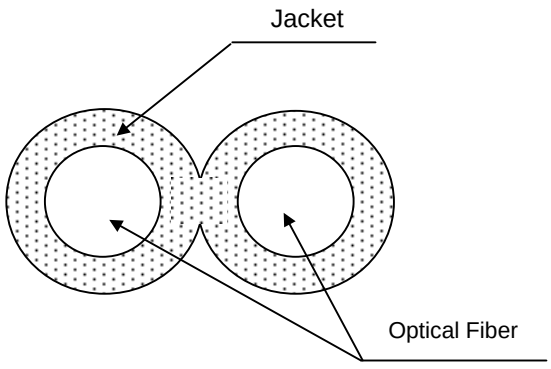
2. Structure

Table 1

Item				SHCP-4002		
				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		—	Chlorinated Polyethylene		
	Color		—	Black		
	Dimension	Minor Axis	mm	2.13	2.20	2.27
		Major Axis	mm	4.20	4.30	4.40
Approximate Weight			g/m	11		
Indication on the Jacket			—	White; refer the margin of the table (as following indication) (One of the Pair)		

Indication : E89328-A MITSUBISHI RAYON VW-1 AWM 5310 80C VW-1

Sectional View



3. Performances

Table 2

Item		Acceptance Criterion and/or [Test Condition]	SHCP-4002			
			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	2	–	–
	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.
** 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