

Specification Sheet

SHV-4001

High-Performance Plastic Optical Fiber

E s k a™

mitsubishi RAYON CO.,LTD.

ESKA OPTICAL FIBER DIVISION

6-41 Konan 1-Chome,Minato-ku,Tokyo,JAPAN

Phone : +81-3-5495-3060

Facsimile : +81-3-5495-3212

1. Scope

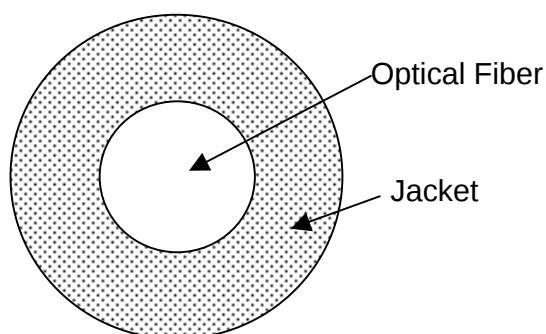
This specification covers basic requirements for the structure and optical performances of SHV-4001

2. Structure

Table 1

SHV-4001

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
Jacket	Material	-	Polyvinylchloride		
	Color	-	Gray		
	Diameter	mm	2.13	2.20	2.27
Approximate Weight		g/m	5		
Indication on the Jacket		-	Blue; refer the margin of the table (as following indication)		

E89328-A MITSUBISHI RAYON  AWM5235 75C VW-1 SHV4001Sectional View

3. Performances

Table 2

SHV-4001

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 Characteristic s	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	5,000	-	-
	Tensile Strength	Tensile Force at 5% Elongation [in Conformity to the JIS C 6861]	N	70	-	-
	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.

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

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