

Specification Sheet

SH-2002-2.0W

High-Performance Plastic Optical Fiber

E s k aTM

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

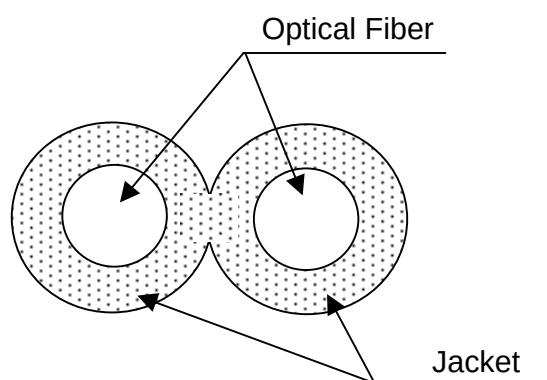
1. Scope
This specification covers basic requirements for the structure and optical performances of SH-2002-2.0W.
2. Structure

Table 1

SH-2002-2.0W

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	455	485	515
	Cladding Diameter		μm	470	500	530
	Number of fibers		—	2		
Jacket	Material		—	Polyethylene		
	Color		—	Black		
	Dimension	Minor Axis	mm	0.95	1.00	1.05
		Major Axis	mm	1.9	2.0	2.1
Approximate Weight			g/m	2		
Indication on the Jacket			—	White line on One of the pair		

Sectional View



3. Performances

Table 2

SH-2002-2.0W

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	—	—	210
		[Operation Temperature]	dB/km	—	—	230
Mechanical Characteristics	Minimum Bend Radius	Loss Increment $\leq 0.5\text{dB}$ [A Quarter Bend]***	mm	10	—	—
	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	36	—	—
	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