

June 15, 2012

Manufactured by Mitsubishi Rayon Co., Ltd.

Specification Sheet

RHNP-4002-B

(MAP-5922)

High-Performance Plastic Optical Fiber

Eska™

MITSUBISHI RAYON CO., LTD.

ESKA OPTICAL FIBER DIVISION

1-1, Marunouchi 1-Chome, Chiyoda-ku, Tokyo 100-8253, Japan

Phone : +81-3-6748-7518

Facsimile: +81-3-3286-1366

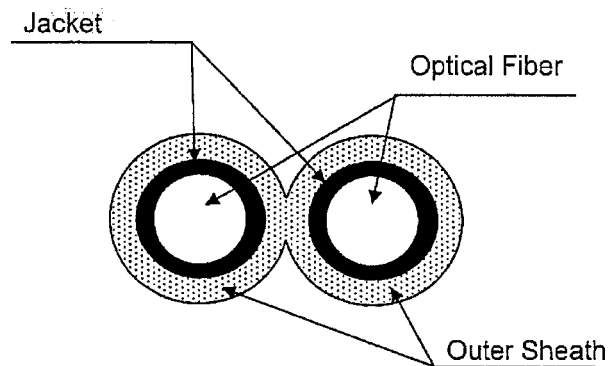
1. Scope
This specification covers basic requirements for the structure and optical performances of RHNP-4002-B.

2. Structure

Table 1

Item		RHNP-4002-B				
		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	—	Polyethylene Copolymer			
	Color	—	Black			
Outer Sheath	Material	—	Chlorinated fluoro Polymer			
	Color	—	Black			
	Dimension	Minor Axis	mm	2.13	2.2	2.27
		Major Axis	mm	4.25	4.4	4.55
Approximate Weight		g/m	—			
Indication on the Jacket		—	E336876 MITSUBISHI RAYON (UL) OFNP Pink			

Sectional View



3. Performances

Table 2

Item		Acceptance Criterion and/or [Test Condition]	RHNP-4002-B			
			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	—	—	170
		[Operation Temperature]	dB/km	—	—	190
	Bandwidth	[launch NA > Fiber NA]	MHz·50m	40	—	—
Mechanical Characteristics	Minimum Bend Radius	Loss Increment $\leq 0.5\text{dB}$ [A Quarter Bend]***	mm	25	—	—
	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	140	—	—
	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	0.4	—	—

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

4. Revision

REVISION No.	DATE	REMARK	DRAWN	APPVD
	June 15, 2012	new issue	Takenaka	Okita