

# Specification Sheet

RHEE-4002-WH  
( MAP-5756 )

High-Performance Plastic Optical Fiber

Eska™

MITSUBISHI RAYON CO.,LTD.

ESKA OPTICAL FIBER DIVISION

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

Phone : +81-3-6748-7518

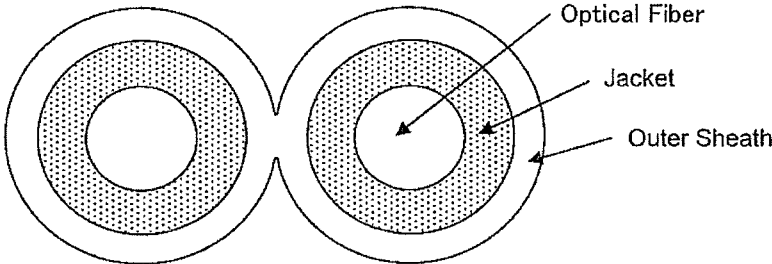
Facsimile: +81-3-3286-1366

- 1. Scope  
This specification covers basic requirements for the structure and optical performances of RHEE-4002-WH.
- 2. Structure

Table 1

Item		RHEE-4002-WH				
		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	1040	
	Cladding Diameter	μm	940	1000	1060	
	Number of Fibers	—	2			
Jacket	Material	—	Polyethylene			
	Color	—	Black			
Outer Sheath	Material	—	Polyethylene			
	Color	—	White			
	Dimension	Minor Axis	mm	2.13	2.20	2.27
		Major Axis	mm	4.3	4.4	4.5
Approximate Weight		g/m	7.5			
Indication on the Jacket		—	One of the pair, ●●● ▲ ESKA OPTOHOME MITSUBISHI RAYON ●●● : Pink			

Sectional View



## 3. Performances

Table 2

Item		Acceptance Criterion and/or [ Test Condition ]	RHEE-4002-WH 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	—	—	170
		[ Operation Temperature ]	dB/km	—	—	190
	Bandwidth	[ launch NA > Fiber NA ]	MHz·50m	40	—	—
Mechanical Characteristics	Minimum Bend Radius	Loss Increment $\leq 0.5$ dB [ A Quarter Bend ]	mm	25	—	—
	Repeated Bending Endurance	Loss Increment $\leq 1$ 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 $\leq 1$ dB [ Sample Length : 1m Tensile Force : 4.9N ]	Times	—	—	—
	Impact Endurance	Loss Increment $\leq 1$ 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 15mm, Tension 1,000g

## 4. Revision

REVISION No.	DATE	REMARK	DRAWN	APPVD
	Oct 7, 2011	new issue	Takenaka	Okita