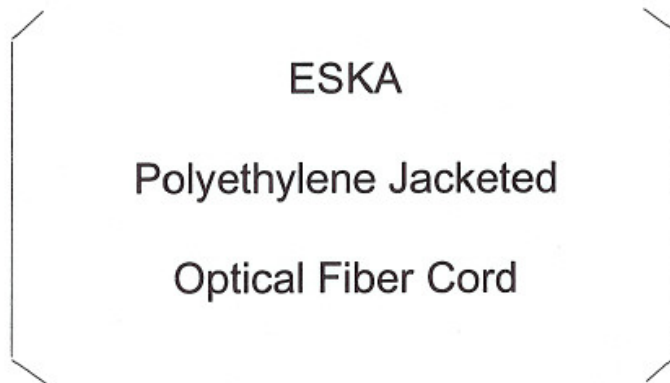


# Specification Sheet

BH-4001



ESKA  
Polyethylene Jacketed  
Optical Fiber Cord

High - Performance Plastic Optical Fiber

Eska<sup>TM</sup>

MITSUBISHI RAYON CO., LTD.  
ESKA OPTICAL FIBER DIVISION

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1.Scope

scope

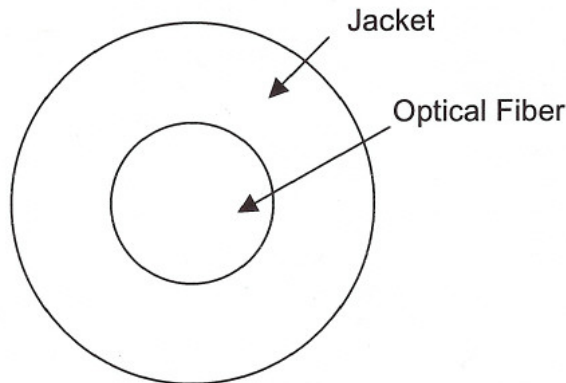
This specification covers basic requirements for the structure, optical and mechanical performances of BH-4001 .

2.Structure

Table1

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	—	0.58		
	Core Diameter	mm	920	980	1040
	Number of Core		1		
	Cladding Diameter	mm	940	1,000	1,060
Jacket	Material and Color	—	Cross-linked Polyethylene : Black		
	Diameter	mm	2.13	2.20	2.27
	Indication on the Jacket	—	None		
Approximate Weight		g / m	3.9		

Sectional View



3.Performance

No. SPC040601-01

Table2

BH-4001

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	—	+ 105
	Operation Temperature	No Deterioration in Optical Properties* [ in a Dry Atmosphere ]	°C	- 55	—	+ 105
		No Deterioration in Optical Properties** [ under 95 %RH condition]	°C	—	—	+ 85
Optical Properties	Transmission Loss ( 650 nm Collimated Light )	[ 25°C, 50%RH]	dB/km	—	—	200
		Operation Temperature	dB/km	—	—	250
Mechanical Characteristics	Minimum Bend Radius	Loss Increment =< 0.5 dB [ A Quarter Bend ]	mm	25	—	—
	Repeated Bending Endurance	Loss Increment =< 1 dB [ in Conformity to the JIS C 6861 ]	Times	1,000	—	—
	Tensile Strength	[Tensile Force at 5% Elongation; in Conformity to the JIS C 6861 ]	N	70	—	—
	Twisting Endurance	Loss Increment =< 1 dB [ Sample Length : 1 m Tensile Force : 4.9 N ]	Times	5	—	—
	Impact Endurance	Loss Increment =< 1 dB [ in Conformity to the JIS C 6861 ]	Nm	0.2	—	—

All tests are carried out under temperature of 25°C unless otherwise specified.

\* Attenuation change shall be within +-10 % of the specification (operation temperature) after 1,000 hours.  
(According to our test method)

\*\* Attenuation change shall be within +-10 % of the specification (operation temperature) after 1,000 hours,  
except that due to absorbed water . (According to our test method)