

# ESKA™ Polyethylene Jacketed Plastic Optical Fiber Bundle Cord: SH1004

Manufactured by Mitsubishi Chemical Corporation  
Marketed and sold by Mitsubishi International PolymerTrade Corporation

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Structure		
Core Material	Polymethyl Methacrylate Resin (PMMA)	
Cladding Material	Fluorinated Polymer	
Core Refractive Index	1.49	
Refractive Index Profile	Step Index	
Numerical Aperture	0.5	
	Unit	Typical
Core Diameter	μm	240
Cladding Diameter	μm	250
Number of Fibers Bundled	4	
Jacket Diameter	mm	1.00
Approximate Weight	g/m	0.79

Packaging	
Spool Length (m)	1000
Net weight on spool (kg)	2.0
Spool Weight (kg)	1.2
Carton Size (mm)	365 X 365 X 160
Carton Weight (kg)	2.6
Master Carton	5 spools
Jacket	
Color and Material	Black, Polyethylene
Indication on Jacket	None

Performance		Criteria for Acceptance and/or [Test Conditions]	Unit	Values
Operation Temperature		No deterioration in optical properties* [in a dry atmosphere]	°C	-55 ~ 70
Operating Temperature in a Moist Atmosphere		No deterioration in optical properties [under 95% RH] **	°C	Max.60
Optical Properties	Transmission Loss [650nm Collimated Light]	[25°C 50% RH]	dB/km	Max.650
		[Operation Temperature]	dB/km	Max.700
Mechanical Characteristics	Minimum Bend Radius	Loss increment =< 0.5dB [a quarter bend]	mm	Min.5
	Repeated Bending Endurance	Loss increment =< 1 dB [in conformity to the JIS C 6861]	Times	-
	Tensile Strength	[Tensile force at 5% Elongation; in conformity to the JIS C 6861]	N	Min.14
	Twisting Endurance	Loss Increment =< 1 dB [sample length: 1m, Tensile Force: 4.9N]	Times	Min.5
	Impact Endurance	Loss Increment =< 1 dB [in Conformity to the JIS C 6861]	N · m	-

Notes: Performance tested in conditions under 25°C unless otherwise indicated.

\* Attenuation increase shall be <10% after 1,000 hours.

\*\* Attenuation increase shall be <10% after 1,000 hours, except when due to absorbed water.

## Applications

SH1004-N is typically used for tight area sensor applications.

The information contained herein is presented as a guide to product selection. It is subject to change without notice, and should not be regarded as a representation, warranty or guarantee with regard to the quality, characteristics or use of this product