

# ESKA™ MEGA Polyethylene Jacketed Optical Fiber Cord: **MH4001**

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

January 2010

Structure		
Core Material	Polymethyl Methacrylate Resin (PMMA)	
Cladding Material	Fluorinated Polymer	
Core Refractive Index	1.49	
Refractive Index Profile	Step Index	
Numerical Aperture	0.3	
	Unit	Typical
Core Diameter	μm	980
Cladding Diameter	μm	1,000
Jacket Diameter	mm	2.2
Approximate Weight	g/m	3.7

Packaging	
Spool Length (m)	500
Net weight on spool (kg)	3.7
Spool Weight (kg)	1.8
Carton Size (mm)	470 X 470 X 180
Carton Weight (kg)	4.3
Master Carton	2 spools
Jacket	
Color and Material	Black, Polyethylene
Indication on Jacket	ESKA MEGA; Pink

Performance		Criteria for Acceptance and/or [Test Conditions]	Unit	Values	
Operation Temperature		No deterioration in optical properties [in a dry atmosphere]*	°C	-55 ~ 85	
Operating Temperature in a Moist Atmosphere		No deterioration in optical properties [under 95% RH]**	°C	Max.75	
Optical Properties	Transmission Loss [650nm Collimated Light]	[25°C 50% RH]	dB/km	Max.160	
		[Operation Temperature]	dB/km	Max.180	
	Bandwidth	-3dB bandwidth, Launch NA = 0.3, Length 50m@650nm	MHz	Min.170	Typ.200
Mechanical Characteristics	Minimum Bend Radius	Loss increment =< 0.5dB [a quarter bend]	mm	Min.25	
	Repeated Bending Endurance	Loss increment =< 1 dB [in conformity to the JIS C 6861]***	Times	Min.5,000	
	Tensile Strength	[Tensile force at yield point [JIS C 6861]	N	Min.70	
	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	Min.0.4	

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.

\*\*\* Bend Angle +/-90° , Bend Radius 15mm, Tension 500g.

## Applications

The MH-Series of cables are typically used as data transfer media for high bandwidth and network requirements.

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