

# ESKA™ Concentrically Arranged Optical Fiber Bundle Cord: SAT2119

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	0.5	
	Unit	Typical
Core Diameter (core fiber)	μm	485
Core Diameter (surrounding fibers)	μm	240
Cladding Diameter (core fiber)	μm	500
Cladding Diameter (surrounding fibers)	μm	250
Number of Fibers	1 surrounded by 9	
Jacket Diameter	mm	2.20
Approximate Weight (g/m)	3.7	

Packaging	
Spool Length (m)	500
Net weight on spool (kg)	3.0
Spool Weight (kg)	1.2
Carton Size (mm)	365 X 365 X 160
Carton Weight (kg)	3.6
Master Carton	5 spools
Jacket	
Color and Material	Black, Polyethylene
Indication on Jacket	---SUPER ESKA---, Blue

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.20
	Repeated Bending Endurance	Loss increment =< 1 dB [in conformity to the JIS C 6861]	Times	Min.5,000
	Tensile Strength	[Tensile force at 5% Elongation; in conformity to the JIS C 6861]	N	Min.40
	Twisting Endurance	Loss Increment =< 1 dB [sample length: 1m, Tensile Force: 4.9N]	Times	-
	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
SAT2119 is typically used with photo-electric sensors.

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