

# ESKA™ High-performance Plastic Optical Fiber: SK10

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
Overall Diameter	μm	250
Approximate Weight (g/m)	0.06	

Packaging	
Spool Length (m)	12,000
Net weight on spool (kg)	1.4
Spool Weight (kg)	0.66
Carton Size (mm)	286 X 286 X 130
Carton Weight (kg)	1.6
Master Carton	12 spools

## Applications: Sensing

SK grade fibers are typically used for sensing temperatures, speed, liquidity levels, and positioning. In addition, medical and general illumination are popular applications.

Performance		Criteria for Acceptance and/or [Test Conditions]	Unit	Values
Storage and 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 [95% RH]**	°C	Max.60
Optical Properties	Transmission Loss [650nm Collimated Light]	[Standard Condition] [10m-1m cutback]	dB/km	Max.300
Mechanical Characteristics	Minimum Bend Radius	Loss increment =< 0.5dB [quarter bend]	mm	Min.5
	Tensile Strength	Tensile force at yield point [JIS C 6861]	N	Min.3

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.

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