

Specification Sheet

SH-1048-G

High-Performance Plastic Optical Fiber

E s k a™

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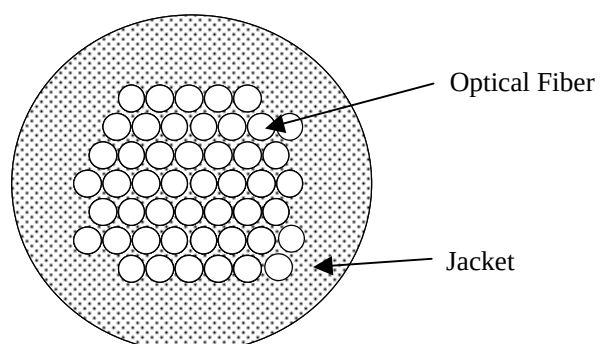
1. Scope
This specification covers basic requirements for the structure and optical performances of SH-1048-G.
2. Structure

Table 1

SH-1048-G

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	—	0.5		
	Core Diameter	μm	231	255	279
	Cladding Diameter	μm	241	265	289
Number of Fibers		—	48		
Jacket	Material	—	Polyethylene		
	Color	—	Black		
	Diameter	mm	2.93	3.00	3.07
Approximate Weight		g/m	7		
Indication on the Jacket		—	·····SUPER ESKA·····;Blue		

Sectional View



3. Performances

Table 2

SH-1048-G

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	—	+70
	Operation Temperature	No Deterioration in Optical Properties * [in a Dry Atmosphere]	°C	-55	—	+70
		No Deterioration in Optical Properties ** [under 95%RH condition]	°C	—	—	+60
Optical Properties	Transmission Loss [650nm Collimated Light]	[25°C 50%RH]	dB/km	—	—	650
		[Operation Temperature]	dB/km	—	—	700
Mechanical Characteristics	Minimum Bend Radius	Loss Increment $\leq 0.5\text{dB}$ [A Quarter Bend]	mm	48	—	—
	Repeated Bending Endurance	Loss Increment $\leq 1\text{dB}$ [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 $\leq 1\text{dB}$ [Sample Length : 1m Tensile Force : 4.9N]	Times	5	—	—
	Impact Endurance	Loss Increment $\leq 1\text{dB}$ [in Conformity to the JIS C 6861]	N·m	—	—	—

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

* Attenuation change shall be within +/- 10% after 1,000 hours.

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