

Plastic Optic Fiber Characteristics

SIMPLEX POF 1 / 2.2 [mm] Structure				
Product Description		Specification		
		Minimum	Type	Maximum
Optical Fiber ESKA™ SK-40 Mitsubishi™	Core Material	Polymetyl-Metacrylate Resin		
	Clad Material	Fluorinated Polymer		
	Core Reflective Index	-----	1.49	-----
	Clad Reflective Index	-----	1.41	-----
	Reflective Index Profile	Step index		
	Numerical Aperture (NA)	-----	0.5	-----
	Core Diameter [μm]	920 μm	980 μm	1'040 μm
	Clad Diameter [μm]	940 μm	1000 μm	1'060 μm
	Core Number	1		
Jacket	Inner Jacket Material	Polyethylene		
	Inner diameter [mm]	2.13 mm	2.20 mm	2.27 mm
	Jacket Color	Black		
Approximative Weight		4.00 [g/m]		
Indication of UL Style Number		None		
Fiber Length on Spool [m] 450m Spool measurements [9.8cm x 30cm x 30cm] for more details see the "POF Spool Characteristics" Document.		100m, 150m, 200m, 250m, 300m, 350m, 400m, 450m		
Fiber Length on Spool [m] 2600m Spool measurements [19.2cm x 40cm x 40cm] for more details see the "POF Spool Characteristics" Document.		1'000m, 1'100m, 1'200m, etc. until 2'600m		

SIMPLEX					
POF 1 / 2.2 [mm] Performance					
Product Description			Specification		
			Minimum	Type	Maximum
Maximum Rating	<i>Storage Temperature [°C]</i>	No Physical Change	-55	----	70
	<i>Operation temperature [°C]</i>	No Deterioration in Optical Properties	-55	----	70
	<i>Operation Temperature under 95% RH [°C]</i>	No Deterioration in Optical Properties	----	----	65
Transmission Loss	<i>Attenuation (Collimated light) [dB/km]</i>	650 [nm] (Ta = 25 °C)	----	----	160
		650 [nm] (Ta = operation temp)	----	----	170
		660 [nm] (Ta = operation temp)	----	----	265
	<i>Bandwidth</i>	Launch NA > Fiber NA	40 MHz.50m	----	----
Mechanical Characteristics	<i>Minimum Bending Radius</i>	(Ta: Operation temp.)	----	25	----
	<i>Repetead Bending Endurance [Times]</i>	Loss Increment ≤1dB 90° 25mmR, Dead Weight: 500g	10'000	----	----
	<i>Tensile Strength [N]</i>	Tensil Force at 5% Elongation in Conformity to the JIS C 6861	70	----	----
	<i>Twisting Endurance [Times]</i>	Loss Increment ≤1dB Sample Length: 1[m], Tensile Force 4.9[N]	5	----	----
	<i>Impact Endurance [N.m]</i>	Loss Increment ≤1dB in Conformity to the JIS C 6861	0.4	----	----

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

Cross Section of Simplex POF

