Issued in
No.

# Specification Sheet

## SH-4001

High-Performance Plastic Optical Fiber

E s k a™


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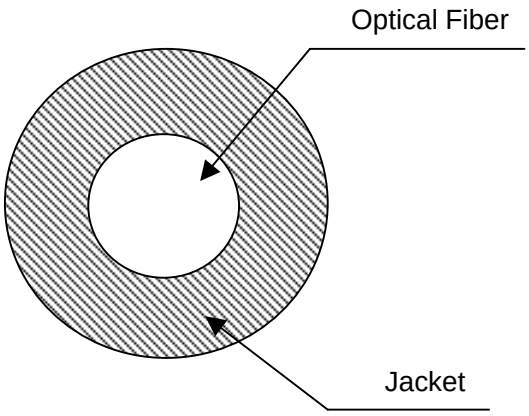
1. Scope
This specification covers basic requirements for the structure and optical performances of SH-4001.

2. Structure

Table 1

| Item | | | SH-4001 | | |
|---|---|---|---|---|---|
| | | 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 | 920 | 980 | 1040 |
| | Cladding Diameter | μm | 940 | 1,000 | 1,060 |
| Jacket | Material | — | Polyethylene | | |
| | Color | — | Black | | |
| | Diameter | mm | 2.13 | 2.20 | 2.27 |
| Approximate Weight | | g/m | 4 | | |
| Indication on the Jacket | | — | ・・・・・SUPER ESKA・・・・・：Blue | | |

Sectional View



3. Performances

Table 2

| Item | | Acceptance Criterion and/or [ Test Condition ] | SH-4001 Specification | | | |
|---|---|---|---|---|---|---|
| | | | Unit | Min. | Typ. | Max. |
| Maximum Rating | Storage Temperature | No Physical Deterioration [ in a Dry Atmosphere ] | ℃ | -55 | – | +70 |
| | Operation Temperature | No Deterioration in Optical Properties* [ in a Dry Atmosphere ] | ℃ | -55 | – | +70 |
| | | No Deterioration in Optical Properties** [ under 95%RH condition ] | ℃ | – | – | +60 |
| Optical Properties | Transmission Loss [ 650nm Collimated Light ] | [ 25℃ 50%RH ] | dB/km | – | – | 190 |
| | | [ Operation Temperature ] | dB/km | – | – | 210 |
| Mechanical Characteristics | Minimum Bend Radius | Loss Increment ≦0.5dB [ A Quarter Bend ] | mm | 25 | – | – |
| | Repeated Bending Endurance | Loss Increment ≦1dB [ in Conformity to the JIS C 6861 ]*** | Times | 10,000 | – | – |
| | Tensile Strength | Tensile Force at 5% Elongation [ in Conformity to the JIS C 6861 ] | N | 70 | – | – |
| | Twisting Endurance | Loss Increment ≦1dB [ Sample Length : 1m Tensile Force : 4.9N ] | Times | 5 | – | – |
| | Impact Endurance | Loss Increment ≦1dB [ in Conformity to the JIS C 6861 ] | N·m | 0.2 | – | – |

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

* Attenuation change shall be within +/- 10% after 1,000 hours.
** Attenuation change shall be within +/- 10% after 1,000 hours, except that due to absorbed water.
*** Bend Angle +/-90° ,Bend Radius 15mm,Tension 500g