

# Specification Sheet

SH-1032-G

High-Performance Plastic Optical Fiber

E s k a™

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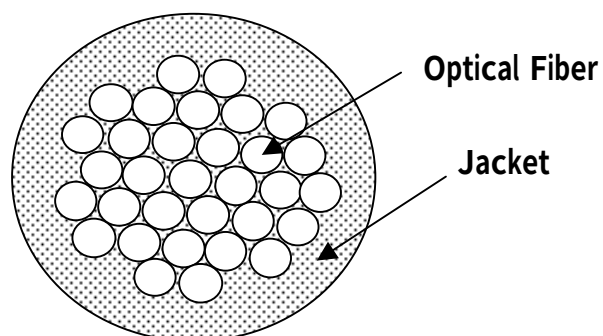
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1. Scope  
This specification covers basic requirements for the structure and optical performances of SH-1032-G.
2. Structure

Table 1

SH-1032-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         |                          | —             | 32                            |      |      |
| Jacket                   | Material                 | —             | Polyethylene                  |      |      |
|                          | Color                    | —             | Black                         |      |      |
|                          | Diameter                 | mm            | 2.73                          | 2.80 | 2.87 |
| Approximate Weight       |                          | g/m           | 6                             |      |      |
| Indication on the Jacket |                          | —             | ·····SUPER ESKA·····;Blue     |      |      |

Sectional View

## 3. Performances

Table 2

SH-1032-G

| Item                          |                                                    | Acceptance Criterion<br>and/or<br>[ Test Condition ]                               | Specification |       |      |      |
|-------------------------------|----------------------------------------------------|------------------------------------------------------------------------------------|---------------|-------|------|------|
|                               |                                                    |                                                                                    | Unit          | Min.  | Typ. | Max. |
| Maximum<br>Rating             | Storage<br>Temperature                             | No Physical Deterioration<br>[ in a Dry Atmosphere ]                               | °C            | -55   | —    | +70  |
|                               | Operation<br>Temperature                           | No Deterioration<br>in Optical Properties *<br>[ in a Dry Atmosphere ]             | °C            | -55   | —    | +70  |
|                               |                                                    | No Deterioration<br>in Optical Properties **<br>[ under 95%RH condition ]          | °C            | —     | —    | +60  |
| Optical<br>Properties         | Transmission Loss<br>[ 650nm<br>Collimated Light ] | [ 25°C 50%RH ]                                                                     | dB/km         | —     | —    | 650  |
|                               |                                                    | [ Operation Temperature ]                                                          | dB/km         | —     | —    | 700  |
| Mechanical<br>Characteristics | Minimum<br>Bend Radius                             | Loss Increment $\leq 0.5\text{dB}$<br>[ A Quarter Bend ]                           | mm            | 32    | —    | —    |
|                               | Repeated Bending<br>Endurance                      | Loss Increment $\leq 1\text{dB}$<br>[ in Conformity to the<br>JIS C 6861 ]***      | Times         | 1,000 | —    | —    |
|                               | Tensile Strength                                   | Tensile Force at 5%<br>Elongation; in Conformity<br>to the JIS C 6861 ]            | N             | 70    | —    | —    |
|                               | Twisting Endurance                                 | Loss Increment $\leq 1\text{dB}$<br>[ Sample Length : 1m<br>Tensile Force : 4.9N ] | Times         | 5     | —    | —    |
|                               | Impact Endurance                                   | Loss Increment $\leq 1\text{dB}$<br>[ in Conformity to the<br>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