Issued in
No.

# Specification Sheet

## CK-80

High-Performance Plastic Optical Fiber

E s k a™


MITSUBISHI RAYON CO.,LTD.

ESKA OPTICAL FIBER DIVISION

6-41 Konan 1-Chome,Minato-ku,Tokyo 108-8506,JAPAN

Phone ：+81-3-5495-3060

Facsimile：+81-3-5495-3212

1. Scope

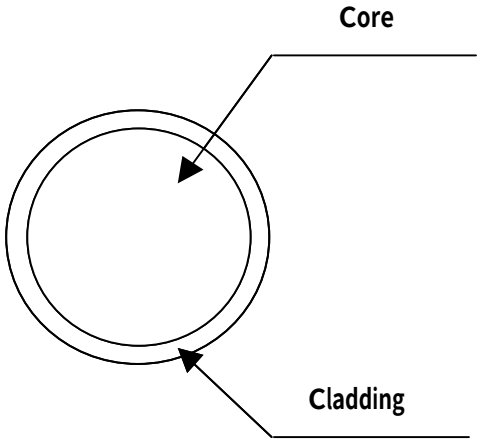
The specification covers basic requirements for the structure and optical performances of CK-80.

2. Structure

Table 1

| Item | | CK-80 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 | 1,840 | 1,960 | 2,080 |
| | Cladding Diameter | μm | 1,880 | 2,000 | 2,120 |
| Approximate Weight | | g/m | 4 | | |

Sectional View



3. Performances

Table 2

| Item | | Acceptance Criterion and/or [ Test Condition ] | CK-80 Specification | | | |
|---|---|---|---|---|---|---|
| | | | Unit | Min. | Typ. | Max. |
| Maximum Rating | Storage Temperature | No Deterioration in Optical Properties | ℃ | −55 | − | +70 |
| | Operation Temperature | No Deterioration in Optical Properties* [ in a Dry Atmosphere ] | ℃ | −55 | − | +70 |
| | | No Deterioration in Optical Properties** [ 95%RH ] | ℃ | − | − | +60 |
| Optical Properties | Transmission Loss | [ 650nm Collimated Light ] [ Standard condition ] [ 10m-1m cutback ] | dB/km | − | − | 200 |
| Mechanical Characteristics | Minimum Bend Radius | Loss Increment ≦0.5dB [ A Quarter Bend ] | mm | 80 | − | − |
| | Tensile Strength | [ Tensile Force at Yield Point ] [ JIS C 6861 ] | N | 260 | − | − |

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.