

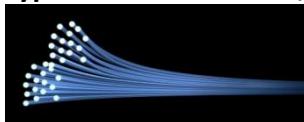
## Single Mode Fiber

ITU-T G652(Tables A,B,C,D);

IEC Specifications 60793-2-50 Type B1.3



Type: Low Water Peak, Single Mode



### CONSTRUCTION

|   |   |
|---|---|
| <b>Characteristic</b>                                       | Low water peak single mode optical fiber, which enables customers to construct high performance wired networks for voice , video, and/or data transmission. The fiber made of germanium doped silica core and a silica cladding is in compliance with ITU-T G.652A,B,C and D. A dual layer acrylate is coated over the cladding to provide high product reliability and allows easy splicing throughout the cable life. Its low water peak characteristics and excellent stability performance against hydrogen provide broad-range operational bandwidth while maintaining fully compatibility with conventional SMF with higher proof testing , the fiber gives much tolerance in cabling and installation. |
| <b>Type of primary coating</b>                              | dual layer UV cured acrylate  |
| <b>Core material composition</b>                            | germanium doped silica, no boron, no phosphorous  |
| The optical fibres inside the cable do not contain splices. |   |

### DIMENSIONS

|                                     |               |
|-------------------------------------|---------------|
| mode field diameter @ 1310 nm       | 9,2 ± 0,4 µm  |
| @ 1550 nm                           | 10,4 ± 0,5 µm |
| Core/Clad concentricity error       | ≤ 0,4 µm      |
| cladding diameter                   | 125 ± 0,5 µm  |
| cladding non-circularity            | ≤ 0,5 %       |
| coating diameter (uncoloured fibre) | 245 ± 5 µm    |
| coating/cladding eccentricity       | ≤ 12 µm       |

### OPTICAL PERFORMANCE

| Attenuation                                  | Typical Values                 | Max. Values |
|--|--------------------------------|-------------|
| - @ 1310 nm                                  | 0,33-0,35 dB/km                | 0,40 dB/km  |
| - @ 1550 nm                                  | 0,19-0,22 dB/km                | 0,25 dB/km  |
| - @ 1625 nm                                  | 0,20-0,24 dB/km                | 0,40 dB/km  |
| - @ 1383 nm                                  | 0,31-0,35 dB/km                | 0,40 dB/km  |
| Chromatic dispersion                         |                                |             |
| - 1285 – 1330 nm                             | ≤ 3,5 ps/(nm*km)               |             |
| - 1525 – 1575 nm                             | ≤ 18 ps/(nm*km)                |             |
| - @ 1625nm                                   | ≤ 22 ps/(nm*km)                |             |
| Polarization mode dispersion @ 1550 nm       | ≤ 0,1 ps/km <sup>2</sup>       |             |
| Cut-off wavelength (λ <sub>cc</sub> )        | ≤ 1260 nm                      |             |
| Zero dispersion wavelength (λ <sub>0</sub> ) | 1300 < λ <sub>0</sub> < 1324nm |             |

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### PERFORMANCE CHARACTERISTICS

|                                     |       |                  |
|-------------------------------------|-------|------------------|
| Effective group index of refraction | 1,466 | @1310 nm/1383 nm |
|                                     | 1,467 | @1550 nm         |
|                                     | 1,470 | @1625 nm         |

### MECHANICAL PROPERTIES

|   |              |
|---|--------------|
| proof test entire length                                      | 1,2 %        |
| macro bending sensitivity (100 turns, mandrel 50 mm, 1550 nm) | ≤ 0,05 dB/km |
| strippability; stripping force                                | 1,3 – 8,9 N  |

### ENVIRONMENTAL SPECIFICATIONS

| Test                         | Test Condition            | Induced attenuation @1310, 1550 & 1625 nm |
|------------------------------|---------------------------|---|
| Temperature humidity cycling | -10 to + 85°C up to 98%RH | ≤ 0,05 dB/km                              |
| Temperature dependent        | -60 to + 85°C             | ≤ 0,05 dB/km                              |

