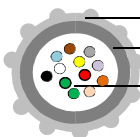


| Technical Data Sheet                                                                                                                                                                       |                                                                                     |                      |             |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|----------------------|-------------|
| Customer Name                                                                                                                                                                              | Alternetivo                                                                         |                      |             |
| Document no.                                                                                                                                                                               | 2198                                                                                |                      |             |
| Reference                                                                                                                                                                                  | Mail Dated 19.10.2020                                                               |                      |             |
| Issue no. & Date                                                                                                                                                                           | 00 & 28.10.2020                                                                     |                      |             |
| Cable Description                                                                                                                                                                          | 12F SM EPFU CABLE                                                                   |                      |             |
| Specification, If any                                                                                                                                                                      | YES                                                                                 |                      |             |
| Type of Fibre                                                                                                                                                                              | Single Mode, G.657A1 (245 Micron)                                                   |                      |             |
| Fibre Make                                                                                                                                                                                 | Birla Furukawa                                                                      |                      |             |
| Model No. / WO No.                                                                                                                                                                         | NIL                                                                                 |                      |             |
| Cable Cross Sectional Diagram [Drawing not to scale]                                                                                                                                       |                                                                                     |                      |             |
| <div><div><div>Plastic Outer Coating</div><div>Matrix Inner Coating</div><div>SM Fibres</div></div></div> |                                                                                     |                      |             |
| Cable Construction details                                                                                                                                                                 |                                                                                     |                      |             |
| No.of Fibres                                                                                                                                                                               | 12 Fibres                                                                           |                      |             |
| Fibre Colour                                                                                                                                                                               | Blue, Orange, Green, Brown, Slate, White, Red, Black, Yellow, Violet, Pink & Aqua   |                      |             |
| Inner Coating                                                                                                                                                                              | UV Curable Matrix Coating                                                           |                      |             |
| Outer Coating                                                                                                                                                                              | Plastic Coating                                                                     |                      |             |
| Optical Characteristics                                                                                                                                                                    |                                                                                     |                      |             |
| Attenuation at 1310 nm                                                                                                                                                                     | ≤ 0.40 dB/Km                                                                        |                      |             |
| Attenuation at 1550 nm                                                                                                                                                                     | ≤ 0.30 dB/Km                                                                        |                      |             |
| Cable Mechanical Characteristics                                                                                                                                                           |                                                                                     |                      |             |
| Temperature Range [IEC 60794-1-2-F1]                                                                                                                                                       | -40 °C to +60 °C                                                                    |                      |             |
| Tensile Force [IEC 60794-1-2-E1]                                                                                                                                                           | 9.81 x W (W=Mass of 1 Km Cable), at 0.6 % Strain                                    |                      |             |
| Repeated Bending [IEC 60794-1-2-E6]                                                                                                                                                        | 25 Cycle, Bending Diameter 60 mm                                                    |                      |             |
| Torsion Resistance [IEC 60794-1-2-E7]                                                                                                                                                      | 2 Cycle [± 180°] adequate Load to keep the cable Straight, Length under Test-300 mm |                      |             |
| Cable Bending Radius [IEC 60794-1-2-E11 A]                                                                                                                                                 | 60 mm Mandrel Diameter, Turns 4, Cycle 3                                            |                      |             |
| Crush Resistance [IEC 60794-1-2-E3]                                                                                                                                                        | 100 N [100 X 100 mm] for 60 sec                                                     |                      |             |
| Impact Resistance [IEC 60794-1-2-E4]                                                                                                                                                       | Height 0.2 meters, Weight = 100 grams, 3 Nos at different places                    |                      |             |
| Kink Resistance [IEC 60794-1-2-E10]                                                                                                                                                        | 60 mm Mandrel Diameter                                                              |                      |             |
| Cable Physical Characteristics                                                                                                                                                             |                                                                                     |                      |             |
| Cable Outer Diameter                                                                                                                                                                       | 1.8 ± 0.15 mm                                                                       | Cable length per Pan | 6000 meters |
| Nominal Cable Weight                                                                                                                                                                       | 2.4 Kg/Km                                                                           |                      |             |