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- ★ 100% Optically Tested
- X Test Certificate Included
- X Low Loss Connectors
- X Zirconia Ceramic PC Ferrules
- X Bend insensitive construction
- X CIBSE TM65 Embodied Carbon: 0.189 kg CO2e

#### **Product Overview**

Excel OS2 9/125  $\mu$ m simplex patch leads are manufactured from the highest quality 900  $\mu$ m G657A2 buffer/jacket optical fibre, terminated with ceramic ferrule connectors. Each cable has strain relief boots to prolong and maintain performance levels of the assembly. A label containing a unique batch number is fixed to the centre of cable for quality and traceability purposes.

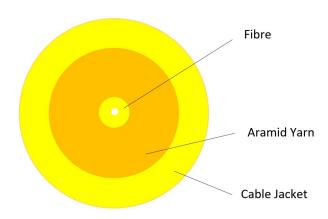
### **Product Specifications**

| Feature                                    | Values      |
|--|-------------|
| Fibre type                                 | Single mode |
| Category                                   | OS2         |
| Number of Cores                            | 1           |
| Cable type                                 | Simplex     |
| Length                                     | 3 m         |
| Type of connector connection 1             | SC          |
| Type of connector connection 2             | SC          |
| Outer sheath colour                        | Yellow      |
| Strain relief boot                         | Push-on     |
| Flame retardant according to IEC 60332-1-2 | yes         |
| Low smoke (acc. IEC 61034-2)               | yes         |

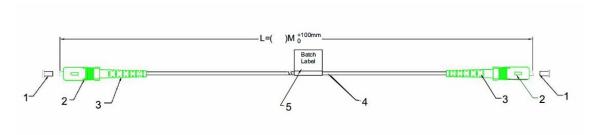
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## **Cross-section diagram**



## **Product drawing**



### **Cable specifications**

| Features                     | Values                   |
|------------------------------|--------------------------|
| Cable Construction           | Simplex                  |
| No. of Fibres                | 1                        |
| Cable Dimensions             | 3 mm                     |
| Colour                       | Yellow                   |
| Strength members             | Aramid Yam               |
| Temperature range            | -20 °C - +70 °C          |
| Connector Material           | Composite                |
| Minimum bend radius (loaded) | 10 x cable diameter      |
| Connector Ferrule            | 2.5 mm Zirconium ceramic |

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| Ferrule End Face         | APC Polish |
|--------------------------|------------|
| Connector Insertion Loss | Max. 0.3dB |

### **Fibre specifications**

| Mode Field diameter at 1310nm  Mode Field diameter at 1550nm | 8.4 - 9.2μm           |
|--|-----------------------|
| Mode Field diameter at 1550nm                                |                       |
|  | 9.3-10.3μm            |
| Cladding diameter  | $125.0 \pm 0.7 \mu m$ |
| Cladding Non-circularity                                     | ≤ 0.7%                |
| Primary Coating diameter                                     | 235 - 245μm           |
| Coating-Cladding Concentricity Error                         | ≤ 12µm                |
| Coating Non-circularity                                      | ≤ 6.0%                |
| Core-Cladding Concentricity Error                            | ≤0.5µm                |
| Max. attenuation at 1310nm                                   | ≤0.35 dB/km           |
| Max. attenuation at 1383nm                                   | ≤0.35 dB/km           |
| Max. attenuation at 1460nm                                   | ≤0.25 dB/km           |
| Max. attenuation at 1490nm                                   | ≤0.23 dB/km           |
| Max attenuation at 1550nm                                    | ≤0.21 dB/km           |
| Max attenuation at 1625nm                                    | ≤0.23 dB/km           |
| PMD (typical value)  | 0.04 ps/km            |
| Cut-off wavelength   | 1260nm                |
| Zero dispersion wavelength                                   | 1300-1324 nm          |
| Zero dispersion slope  | ≤0.092 ps/nm2.km      |
| Refractive Index at 1310nm                                   | 1.466                 |
| Refractive Index at 1550nm                                   | 1.467                 |
| Macro-Bend Loss - 10 turns, 15mm radius, 1625nm              | ≤0.03dB               |
| Macro-Bend Loss - 10 turns, 15mm radius, 1550nm              | ≤0.1dB                |
| Macro-Bend Loss - 1 turn, 10mm radius, 1550nm                | ≤0.1dB                |
| Macro-Bend Loss - 1 turn, 10mm radius, 1625nm                | ≤0.2dB                |
| Macro-Bend Loss - 1 turn, 7.5mm radius, 1550nm               | ≤0.5dB                |
| Macro-Bend Loss - 1 turn, 7.5mm radius, 1625nm               | ≤1.0dB                |

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| Coating Strip Force (typical) | 1.5N       |
|-------------------------------|------------|
| Coating Strip Force (peak)    | 1.3 - 8.9N |

### **Standards**

| Applicable standard           | Detail  |
|-------------------------------|---|
| BS EN 60332-1-2:2004+A11:2016 | Tests on electric and optical fibre cables under fire conditions - Test for vertical flame propagation for a single insulated wire or cable. Procedure for 1 kW pre-mixed flame |
| IEC 60793-1-1:2022            | Optical fibres - Part 1-1: Measurement methods and test procedures - General and guidance   |
| IEC 60793-2:2015              | Optical fibres - Part 2: Product specifications - General   |
| IEC 60793-2-10:2017           | Sectional specification for A1 multimode fibres   |
| IEC 60793-1-20:2014           | Optical fibres - Part 1-20: Measurement methods and test procedures - Fibre geometry  |
| IEC 60793-1-21:2001           | Optical fibres - Part 1-21: Measurement methods and test procedures - Coating geometry  |
| IEC 60793-1-22:2001           | Optical fibres - Part 1-22: Measurement methods and test procedures - Length measurement  |
| IEC 60793-1-30:2010           | Optical fibres - Part 1-30: Measurement methods and test procedures - Fibre proof test  |
| IEC 60793-1-31:2010           | Optical fibres - Part 1-31: Measurement methods and test procedures - Tensile Strength  |
| ITU-T G.652:2016              | Characteristics of a single-mode optical fibre and cable  |
| ITU-T G.657:2016              | Characteristics of a bending-loss insensitive single-mode optical fibre and cable   |
| EN 50173-1:2018               | Information technology. Generic cabling systems - General requirements  |
| EN 50173-2:2007 + A1:2010     | Information technology. Generic cabling systems - Office premises   |
| IEC 61754-1:2013              | Fibre optic interconnecting devices and passive components - Fibre optic connector interfaces - Part 1: General and guidance  |
| IEC 61754-2:1996              | Fibre optic connector interfaces - Part 2: Type BFOC/2,5 connector family   |
| IEC 61754-4:2013              | Fibre optic interconnecting devices and passive components - Fibre optic connector interfaces - Part 4: Type SC connector family  |

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| IEC 61754-4-100:2015                       | Fibre optic interconnecting devices and passive components - Fibre optic connector interfaces - Part 4-100: Type SC connector family - Simplified receptacle SC-PC connector interfaces |
|--|---|
| IEC 61754-4-100:2015                       | Fibre optic interconnecting devices and passive components - Fibre optic connector interfaces - Part 4-100: Type SC connector family - Simplified receptacle SC-PC connector interfaces |
| ISO/IEC 11801-1:2017                       | Information technology - Generic cabling for customer premises: Part 1 General Requirements   |
| RoHS-II/-III (2011/65/EU & 2015/863): 2023 | Our products, demonstrate full adherence to the regulatory stipulations of the EU Directive 2011/65/EU (RoHS-II) and its corresponding delegated directive 2015/863 (RoHS-III).         |
| WFD: 2023                                  | Compliant to Waste Framework Directive  |
| SCIP: 2023                                 | Compliant - Does Not Contain Substances of Concern In articles as such or in complex objects (Products)   |
| POPs (EU) No 2019/1021                     | EU Regulation for the restriction of Persistent Organic Pollutants.   |

#### **Part Number Table**

| Part Number | Description  |
|-------------|--|
| 201-211     | Excel Enbeam OS2 Fibre Optic Patch Lead G.657.A1 SC/APC-SC/APC SM 9/125 SX Yellow 1 m $$ |
| 201-212     | Excel Enbeam OS2 Fibre Optic Patch Lead G.657.A1 SC/APC-SC/APC SM 9/125 SX Yellow 2 m    |
| 201-213     | Excel Enbeam OS2 Fibre Optic Patch Lead G.657.A1 SC/APC-SC/APC SM 9/125 SX Yellow 3 m    |
| 201-214     | Excel Enbeam OS2 Fibre Optic Patch Lead G.657.A1 SC/APC-SC/APC SM 9/125 SX Yellow 5 m    |
| 201-216     | Excel Enbeam OS2 Fibre Optic Patch Lead G.657.A1 SC/APC-SC/APC SM 9/125 SX Yellow 10 m   |

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