

OS1 v OS2 v G652 v G657 SMF standards in a page

International Telecommunication Union standards are used to specify fibre types

- ITU-T G.652 NDSF (non-dispersion-shifted fibre)
- ITU-T G.657 Bend-insensitive single mode fibre

OS1

Meeting the G.652 specification has an absorption wavelength at 1383nm due to -OH (hydroxyl) within the fibre, which makes the E-band (water peak band) unusable.

This typically makes **OS1** a two-window fibre (1310nm and 1550nm) with 1dB attenuation/km

OS2

Meeting the G.652D specification has no absorption at 1383nm

This means **OS2** will support all wavelengths from 1260nm to 1625nm, with 0.4dB per 1000m.

OS1 and OS2 will support 1 to 10 Gigabit Ethernet but **OS2** is far better for 40 Gigabit or greater.

OS2 Low water peak fibres are used for CWDM and PON

ITU-T G.65X Fibre ANSI/TIA-568.3-D and ISO-IEC 11801.

G.652D, OS1 is historically referred as non-bend-insensitive NDSF SMF for 1310 and 1550 operation

- **OS1** will support 1 to 10 Gigabit Ethernet

G.652D, OS2 is historically referred as non-bend-insensitive SMF for 1260nm-1625nm operation

- **OS2** will support 1 - 40 Gigabit and greater.

G.657; is referred as bend-insensitive BIF SMF.

G.657A1 minimum bending radii is 10 mm.

G.657A2 minimum bending radii is 7.5 mm.

G.657B2 minimum bending radii is 7.5 mm.

G.657B3 minimum bending radii is 5 mm.

ITU-T G.657A1 and A2 are fully compliant with G.652D,

ITU-T G.657B2 and A3 are fully compatible with G.652D

G.655 and G.656; is commonly found in long-distance transport transmission

G.654; is common in ultra-long reach and submarine applications.

Please contact atg for more detail and delivery times