

ITU-T

The long-time leader in optical fibre and cable standardization

Major Recommendations:

G.650.1, Definitions and test methods for mode field, glass geometry, mechanical and linear transmission characteristics of cabled and uncabled optical fibres

G.650.2, Definitions and test methods for polarization mode dispersion, effective area, and non-linear transmission characteristics of cabled and uncabled optical fibres

G.652, The characteristics of a single-mode optical fibre and cable with zero-dispersion wavelength around 1310 nm, but which can also be used in the 1550 nm region

G.653, The characteristics of a single-mode optical fibre and cable with zero-dispersion wavelength shifted into the 1550 nm region, specified to take advantage of the attenuation minimum in that spectral region

G.654, The characteristics of a single-mode optical fibre and cable with zero-dispersion wavelength around 1300 nm, with the cutoff-wavelength shifted and the loss optimized for use in the 1530-1625 nm region

G.655, The characteristics of a single-mode optical fibre and cable, which has the absolute value of the chromatic dispersion coefficient greater than some non-zero value throughout the wavelength range from 1530 to 1565 nm, in order to reduce the growth of non-linear effects which can be particularly deleterious in DWDM (Dense Wavelength Division Multiplexing) systems

Optical Fibres and Cables

International Telecommunication Union



These standards provide attributes and values for optical fibres and cables which are needed to support:

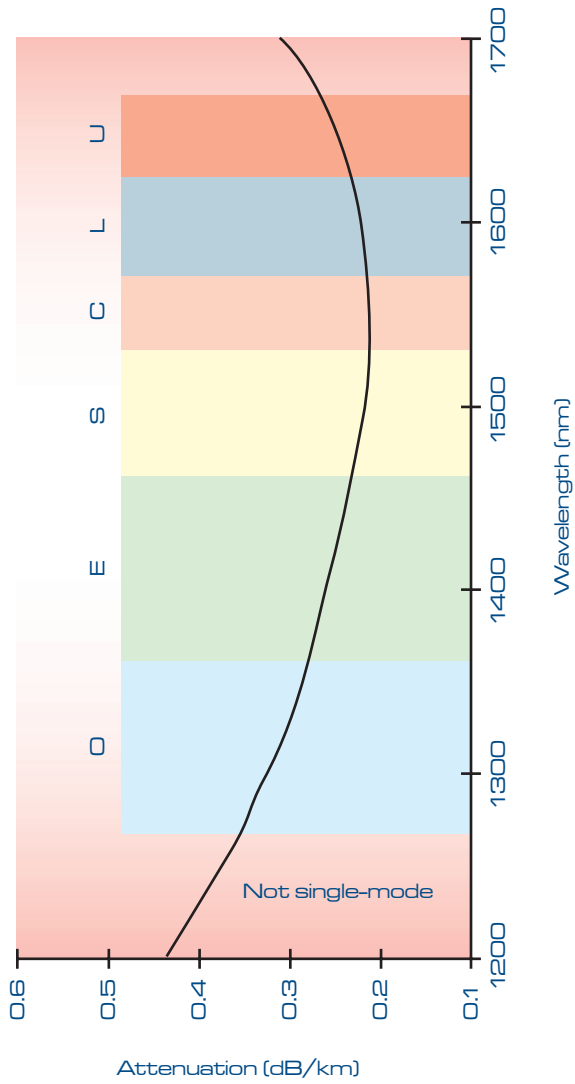
- Network applications such as those recommended in Recommendation **G.957** up to 2.5 Gbit/s (STM-16), as well as 10 Gbit/s (STM-64) up to 40 km (Ethernet)
- Network applications up to 10 Gbit/s (STM-64) in Recommendations **G.691** and **G.692**, and 40 Gbit/s (STM-256) in **G.693** and **G.959.1**, which may include Dense Wavelength Division Multiplexing (DWDM)
- Network applications in the extended E- and S-band wavelength range as described in Recommendation **G.965**
- Repeated optical submarine systems as described in Recommendation **G.977**, which may include optical amplifiers and/or DWDM
- Gigabit-capable Passive Optical Networks (G-PON) such as those described in Recommendations **G.984.1** and **G.984.2**

Optical Fibres and Cables

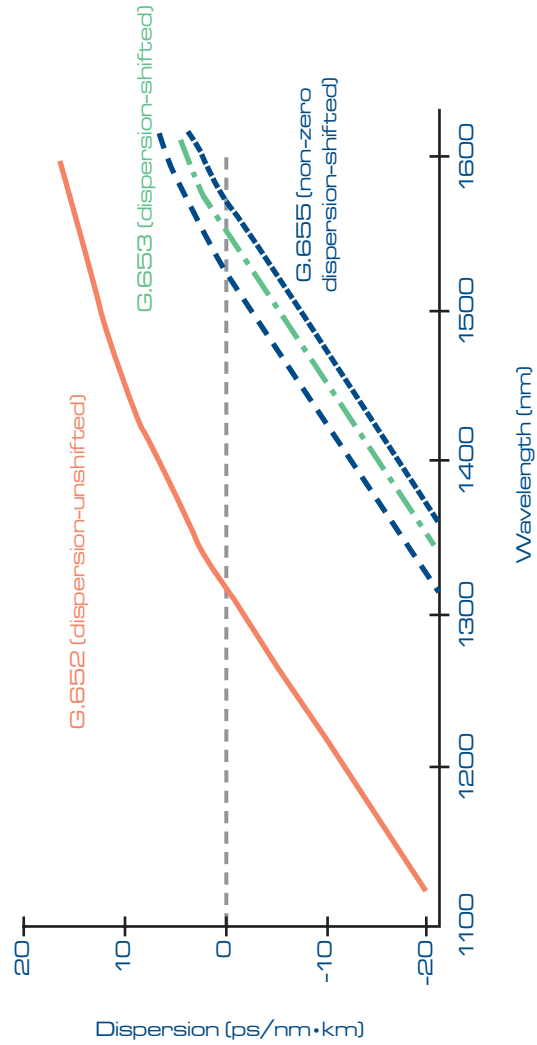
For more information on optical fibre and cable Recommendation activity, please check the ITU-T Study Group 15 website at: www.itu.int/ITU-T/com15

Up-to-date standardization of the most important terrestrial and submarine physical transmission medium

Single-mode fibre inherent attenuation throughout the six spectral bands



Chromatic dispersion: the rate of pulse spreading, which can limit a fibre's information-carrying capacity



An optical fibre consists of a light-guiding core, a glass cladding, and a plastic coating for abrasion protection

