5.2 ONU Capacity

In order to address the anticipated bandwidth demand in both residential and business applications, two classes of ONUs ~~should~~ need to be supported ~~in~~ by NG-EPON to address different applications in the most cost-effective manner.

A residential-class ONU ~~should~~ is expected ~~be able~~ to support data rates of ~~at least one wavelength channel in the downstream direction and one wavelength channel in the upstream direction, supporting~~ up to 10 Gb/s in the upstream direction and at least 10 Gb/s in the downstream direction. A residential-class ONU is intended for asymmetric data rate services. For example, in multi-wavelength WDM-PON system, a residential-class ONU would support at least one wavelength channel in the downstream direction and one wavelength channel in the upstream direction.

A business-class ONU ~~should~~ is expected to ~~be able to~~ support ~~at least 4 wavelength channels in downstream and at least four wavelength channels in upstream directions, supporting~~ data rates of at least 40 Gb/s ~~symmetric data rates~~in the upstream and downstream directions. ~~There is no upper limit on the number of downstream and upstream wavelength channels supported by the ONU and this number is left open as an implementation choice.~~ A business-class ONU is intended for symmetric data rate services. For example, in multi-wavelength WDM-PON system, a business-class ONU would support at least 4 wavelength channels in downstream and at least four wavelength channels in upstream directions. There is no upper limit on the number of downstream and upstream wavelength channels supported by the ONU and this number is left open as an implementation choice

5.1