75.6 Dual–rate (coexistence) mode

To support coexistence of 10G–EPON and 1G–EPON ONUs on the same outside plant, the OLT may be configured to use a dual–rate mode. Dual–rate mode supports transmission ~~and/or~~ reception of both 10 Gb/s and 1 Gb/s data rates, and can be introduced as ~~an~~ options for 10G-EPON OLTs, functionally combining PMDs ~~of~~ 10Gb/s and 1Gb/s data rates.
~~BASE–PR–D or 10/1GBASE–PRX–D~~
~~PMDs.~~

Table 75–12 depicts PMD coexistence mapping for dual–rate mode options.

Table 75–12—PMD coexistence mapping for dual–rate mode option[a]

~~Dual-rate operation~~	OLT PMD combination	ONU PMDs coexisting on the same ODN
~~D~~ownstream	1000BASE–PX–D~~ + ~~ 10/1GBASE–PRX–D	(1) 1000BASE–PX–U (2) 10/1GBASE–PRX–U
~~U~~pstream	10GBASE–PR–D~~ + ~~ 10/1GBASE–PRX–D	(1) 10GBASE–PR–U (2) 10/1GBASE–PRX–U
~~D~~ownstream ~~U~~pstream	1000BASE–PX–D~~ + ~~ 10GBASE–PR–D	(1) 1000BASE–PX–U (2) 10/1GBASE–PRX–U (3) 10GBASE–PR–U

[a]Note: Only PMDs with compatible power budgets can be connected to the same ODN.

75.6.1 Downstream dual–rate operation

When the downstream dual–rate operation is enabled, the OLT transmits both 10 Gb/s and 1 Gb/s downstream signals in WDM manner. The OLT should meet both 10 Gb/s and 1 Gb/s specifications defined in Table 75–5 (10GBASE–PR–D transmit ~~specification~~characteristics) and in Table 60–3 or Table 60–6 (1000BASE–PX–D transmit characteristics).

75.6.2 Upstream dual–rate operation

When the upstream dual–rate operation is enabled, the OLT receives both 10 Gb/s and 1 Gb/s upstream signals in TDMA manner. Further implementation details are described in Annex 75A. The OLT should meet both 10 Gb/s and 1 Gb/s specifications defined in Table 75–6 (10GBASE–PR–D receive characteristics), and in Table 60–5, Table 60–8 (1000BASE–PX–D receive characteristics) and Table 75–7 (10/1GBASE–PRX–D receive characteristics).

NOTE—The damage threshold values in Table 60-5, Table 60-8 and Table 75–7 are considerably higher than those in Table 75–6 ~~and the PMD should be appropriately labeled.~~