[e]The available power budget assumes a BER at the PMD service interface of 10^{-3}. The required BER of 10^{-12} at the PCS service interface is achieved by the FEC function of the PCS.
[f]The channel insertion loss is based on the cable attenuation at the target distance and nominal measurement wavelength. The channel insertion loss also includes the loss for connectors, splices and other passive components such as splitters.
[g]The power budgets for PR10, PR20~~ and,~~ PR30, and PR40 power budget classes are such that a minimum insertion loss is assumed between transmitter and receiver. This minimum attenuation is required for PMD testing.
[h]The allocation for penalties is the difference between the available power budget and the channel insertion loss; insertion loss difference between nominal and worst case operating wavelength is considered a penalty. This allocation may be used to compensate for transmission related penalties. Further details are given in 75.7.2.
[i]The extra 1 dB of penalty here is to unify the downstream Tx and Rx specifications.

Change Table75B-2 by inserting a column for PRX40 as follows:

Table 75B–2—Illustrative PRX10, PRX20, PRX30, and PRX40 channel insertion loss and penalties (asymmetric-rate, 10 Gb/s downstream, 1 Gb/s upstream power budget classes)

Description	PRX10		PRX20		PRX30		PRX40		Unit
	US[a]	DS[a]	US[a]	DS[a]	US[a]	DS[a]	US[a]	DS[a]	
Fiber Type[b]	IEC 60793–2 B1.1, B1.3 SMF ITU–T G.652, G.657 SMF								
Measurement wavelength for fiber	1310	1577[c]	1310	1577[c]	1310	1577[c]	1310	1577[c]	nm
Nominal distance[d]	10		20		20		20		km
Available power budget	23.0	21.5[e]	26.0	25.5[e]	30.4	30.5[e]	34.4	34.5[e]	dB
Channel insertion loss (max)[f]	20		24		29		33		dB
Channel insertion loss (min)[g]	5		10		15		18		dB
Allocation for penalties[h]	3	2.5[i]	2	1.5	1.4	1.5	1.4	1.5	dB
Optical return loss of ODN (min)	20								dB

[a]US stands for Upstream, DS stands for Downstream.
[b]Other fiber types are acceptable if the resulting ODN meets channel insertion loss and dispersion requirements.
[c]The nominal transmit wavelength is 1577 nm.
[d]Nominal distance refers to the expected maximum distance a PMD is capable of achieving in a typical ODN. Numerous ODN implementation practices may result in longer or shorter distances being actually achievable in a user's network.
[e]The available power budget assumes a BER at the PMD service interface of 10^{-3}. The required BER of 10^{-12} at the PCS service interface is achieved by the FEC function of the PCS.
[f]The channel insertion loss is based on the cable attenuation at the target distance and nominal measurement wavelength. The channel insertion loss also includes the loss for connectors, splices and other passive components such as splitters.
[g]The power budgets for PRX10, PRX20, PRX30, and PRX40 power budget classes are such that a minimum insertion loss is assumed between transmitter and receiver. This minimum attenuation is required for PMD testing.
[h]The allocation for penalties is the difference between the available power budget and the channel insertion loss; insertion loss difference between nominal and worst case operating wavelength is considered a penalty. This allocation may be used to compensate for transmission related penalties. Further details are given in 75.7.2.
[i]The extra 1 dB of penalty here is to unify the downstream Tx and Rx specifications.

75B.2.2 Upstream wavelength allocation

Change the description in 75B.2.2 by modifying the paragraph on the use of WDM filtering as follows:

The 1 Gb/s upstream transmission uses the 1260–1360 nm wavelength band for 1000BASE-PX10-U, 1000BASE-PX20-U, 1000BASE-PX30-U, 1000BASE-PX40-U, 10/1GBASE-PRX-U1, 10/1GBASE-PRX-U2, ~~and~~ 10/1GBASE-PRX-U3, ~~–~~and 10/1GBASE-PRX-U4 compliant ONUs~~, and the 1290–1330 nm wavelength for 1000BASE-PX40-U and 10/1GBASE-PRX-U4 compliant ONUs~~, as specified in Clause 60. The 10 Gb/s upstream transmission uses the 1260–1280 nm wavelength band, as specified in Clause 75. ~~The two wavelength bands overlap, thus WDM channel multiplexing cannot be used to separate the two data rates.~~ The 1260-1360 wavelength band and the 1260-1280 wavelength band overlap, thus WDM channel multiplexing cannot be used to separate the two data rates for 1000BASE-PX10-U, 1000BASE-PX20-U, 1000BASE-PX30-U compliant ONUs and 10/1GBASE-PRX-U1, 10/1GBASE-PRX-U2, 10/1GBASE-PRX-U3 compliant ONUs.

An OLT supporting both upstream data rates uses TDMA techniques to avoid collisions between transmissions originating from different ONUs, resulting in a dual-rate burst–mode reception as discussed in 75.6.