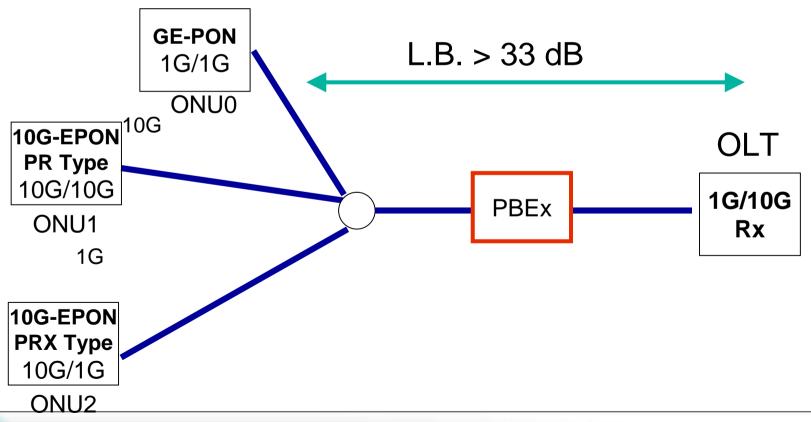


## Supplement for comment #41, 42, 43, 44

2012, July
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## 1000GBASE-PX40, 10GBASE-PRX/PR-40 with PBEx

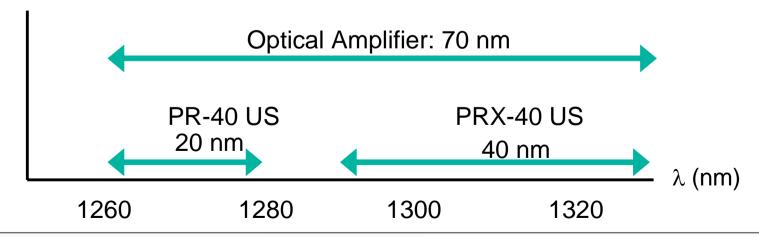
1000BASE-PX40, 10GBASE-PRX40 and 10GBASE-PR40 would be used in combination with power budget extender (PBEx) for loss budget > 33 dB.



## Optical amplifier type PBEx (Upsteream)

- Optical amplifier (OA) is one of PBEx candidates.
- In case of coexistence 1G and 10G, one OA should amplify both 1G and 10G optical signals. In D1.0, optical transmitter wavelength range are;
  - 1260 to 1280 nm for 10G
  - 1290 to 1330 nm for 1G
- Wavelength bandwidth of 1260 to 1330 nm (70 nm) is required to OA and t is difficult to realize good performance OA with wide wavelength bandwidth such as 70 nm.

10**G** 



Optical Amp.

## Narrowed wavelength range

- Optical transmitter wavelength range of 1290-1330 nm cannot be realized with FP-LD.
- If the wavelength of 1G upstream is narrowed as 1290-1310 nm, wavelength bandwidth can be narrowed as 1290 to 1310 nm (50 nm). It is easier to realize than D1.0.
- Therefore, the wavelength range of 1000BASE-PX40-U in Table 75-1 shall be narrow as 1300 +/-10 nm.

