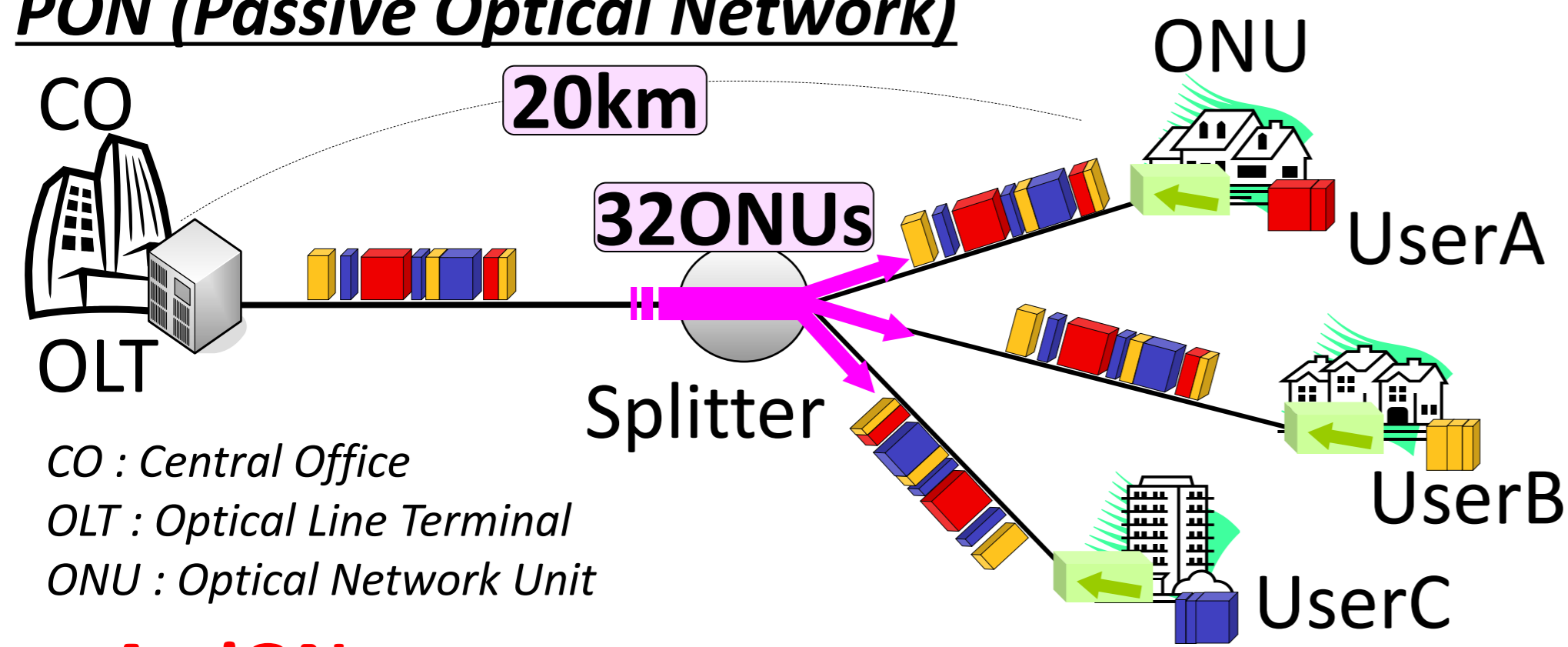


Optical Access Network

PON (Passive Optical Network)

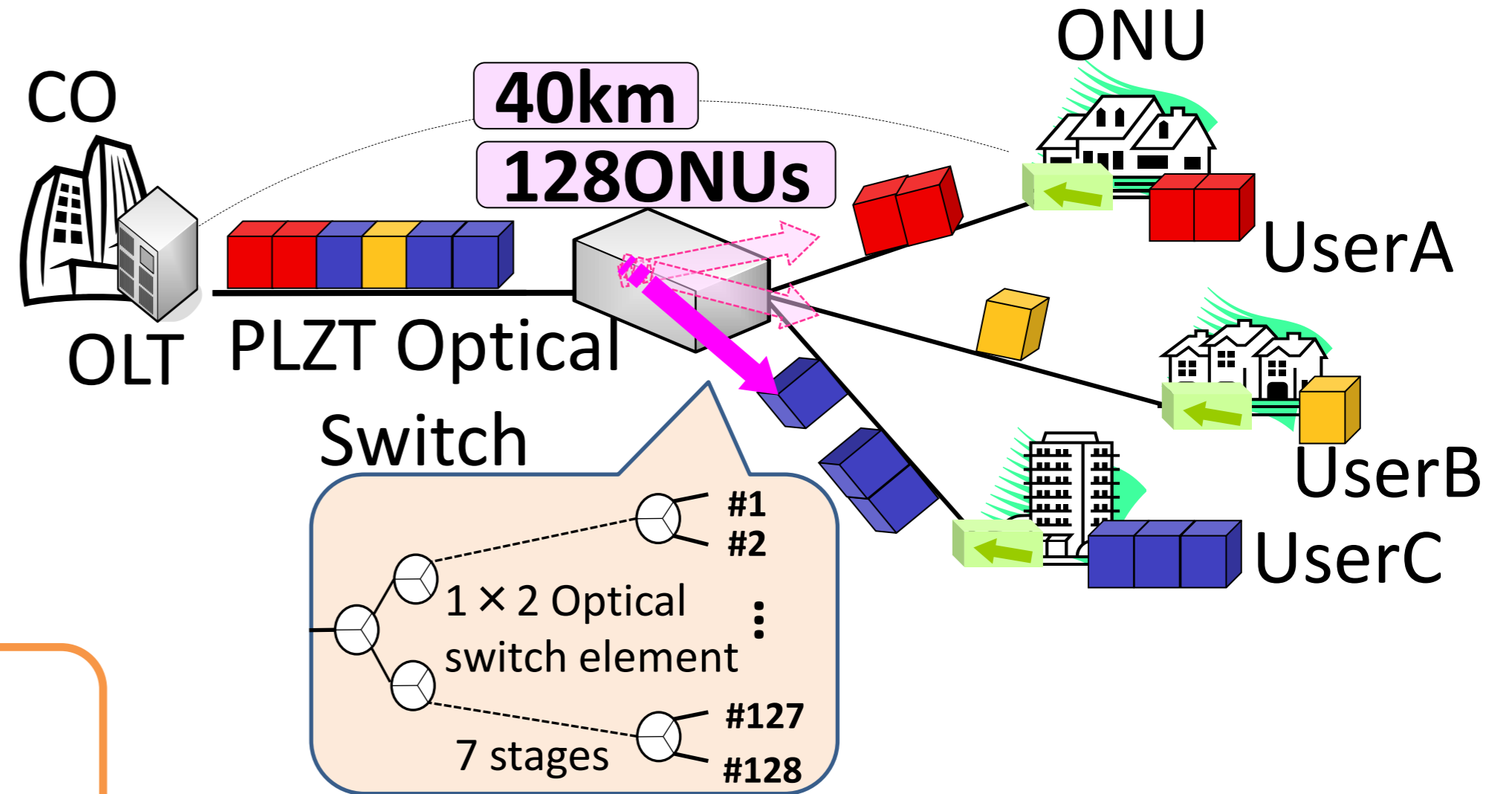


CO : Central Office
OLT : Optical Line Terminal
ONU : Optical Network Unit

ActiON:

- quadruplicate the number of users (128users).
- double the maximum transmission distance(40km).

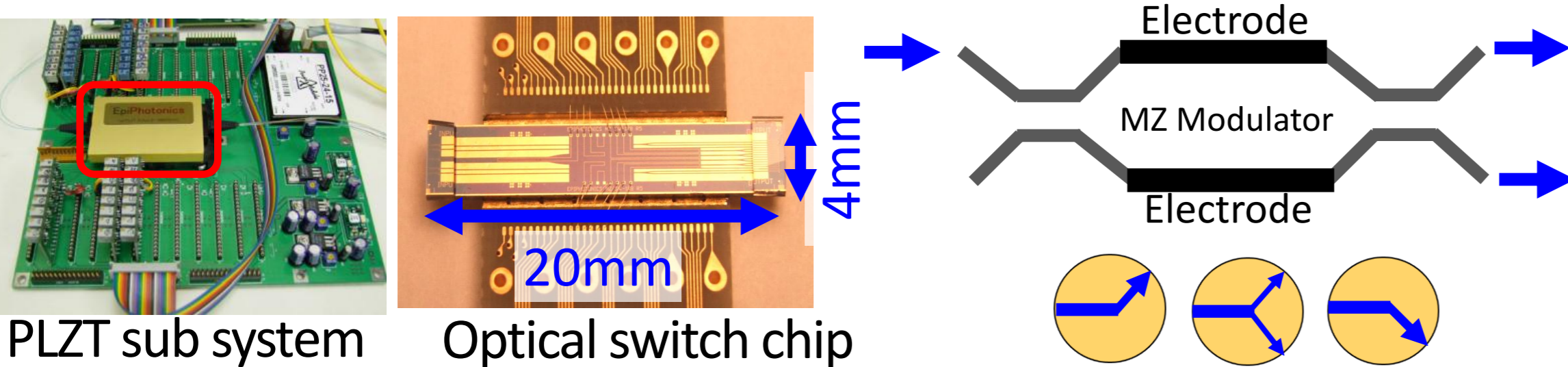
ActiON (Active Optical Network)



Multistage configuration of 1 x 2 optical switch element

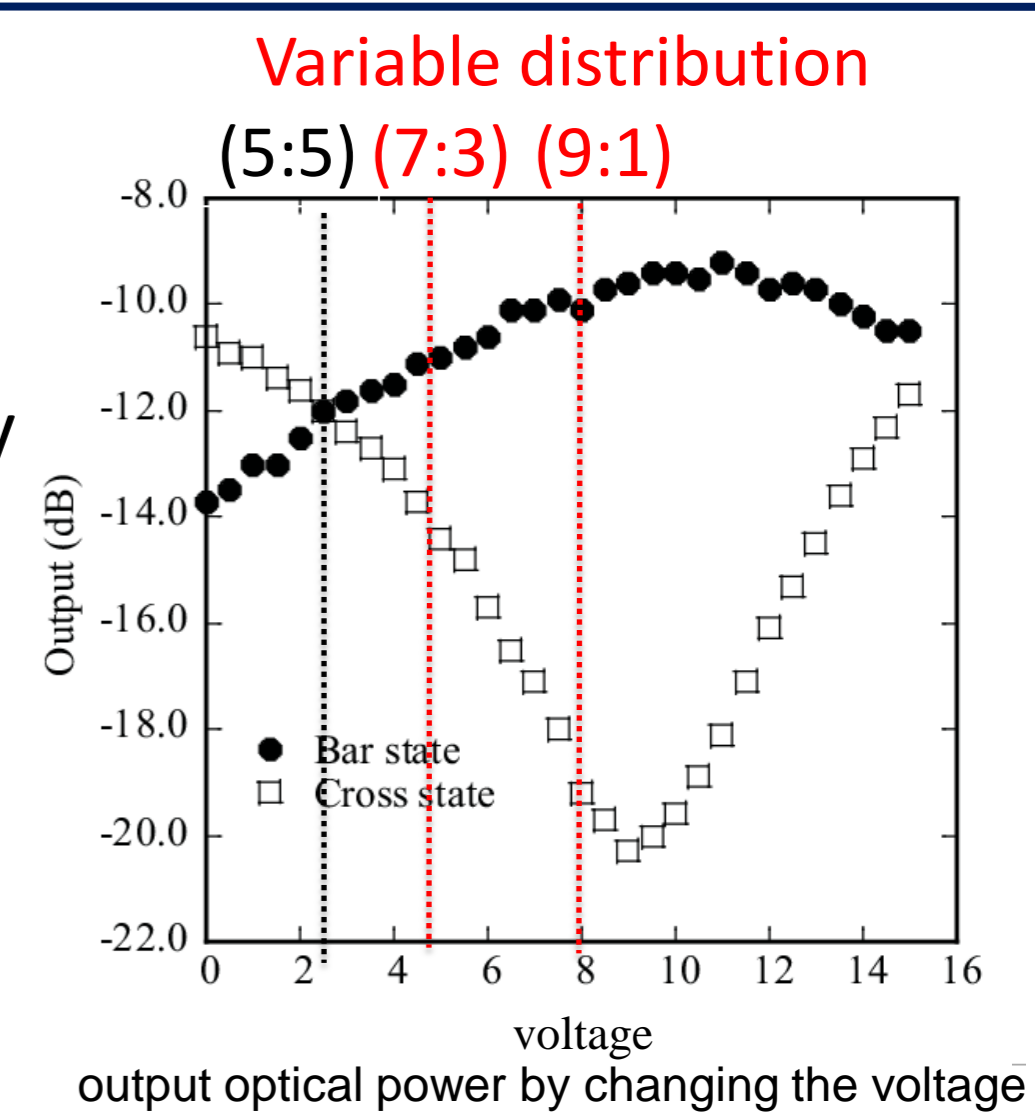
PLZT :Plomb Lanthanum Zirconate Titanate

PLZT optical switch structure



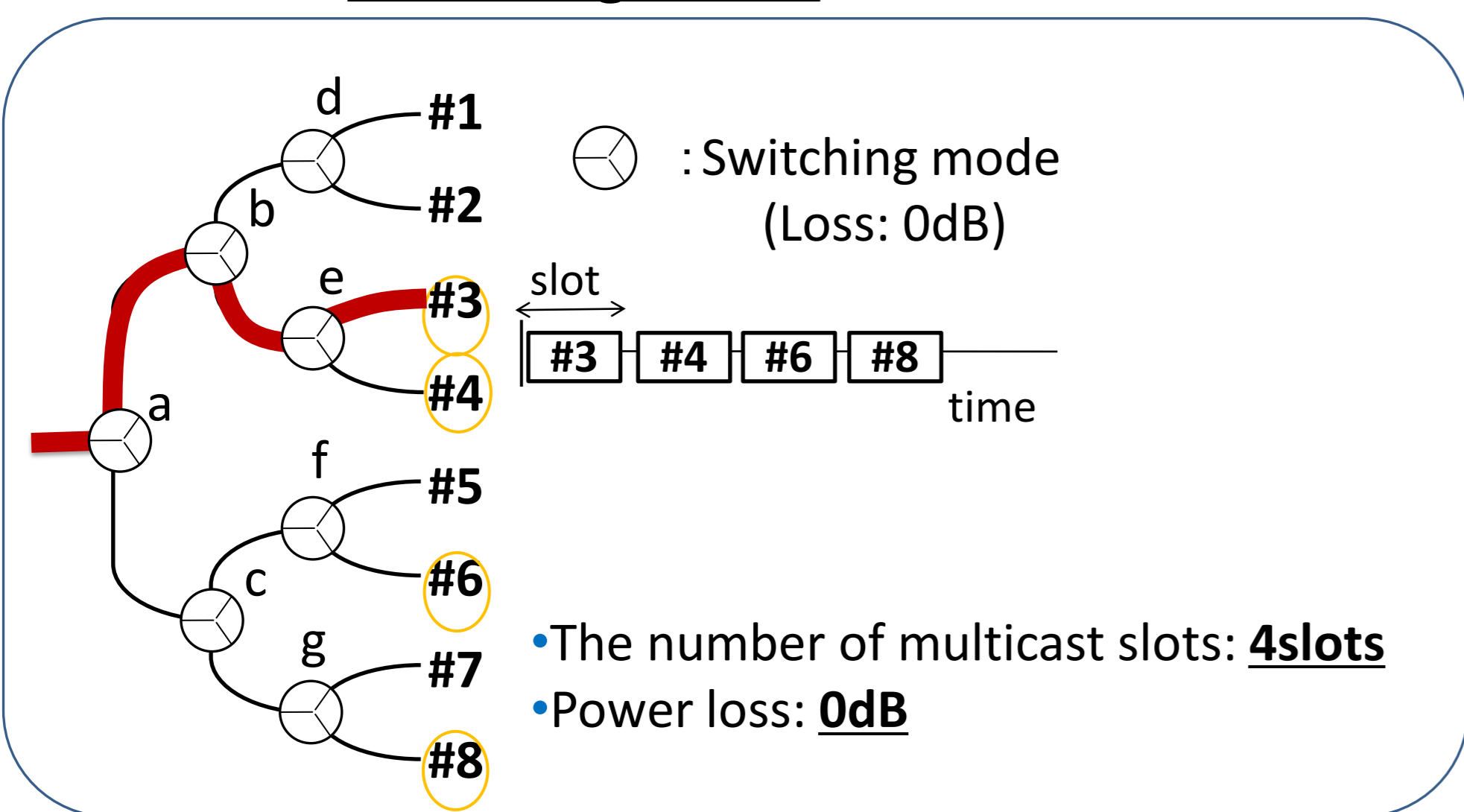
- Optical switch chip:
- switches by 10ns high speed
 - low power consumption
- Mach-Zehnder type wave-guide:
- switches by changing voltage

Optical power is output in **different distribution ratio** by applying the variable voltage.

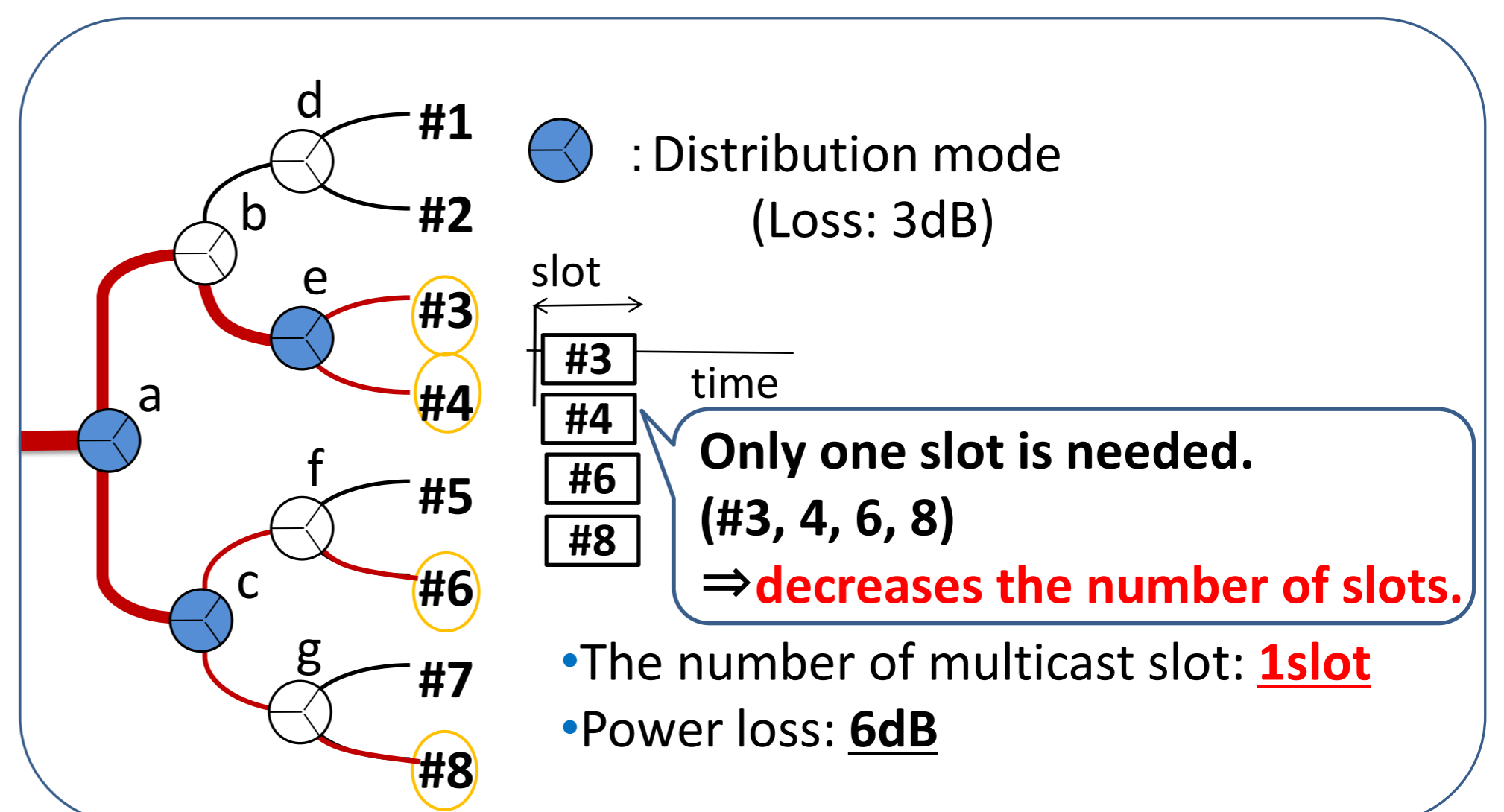


Difference of switching mode and distribution mode

Switching mode

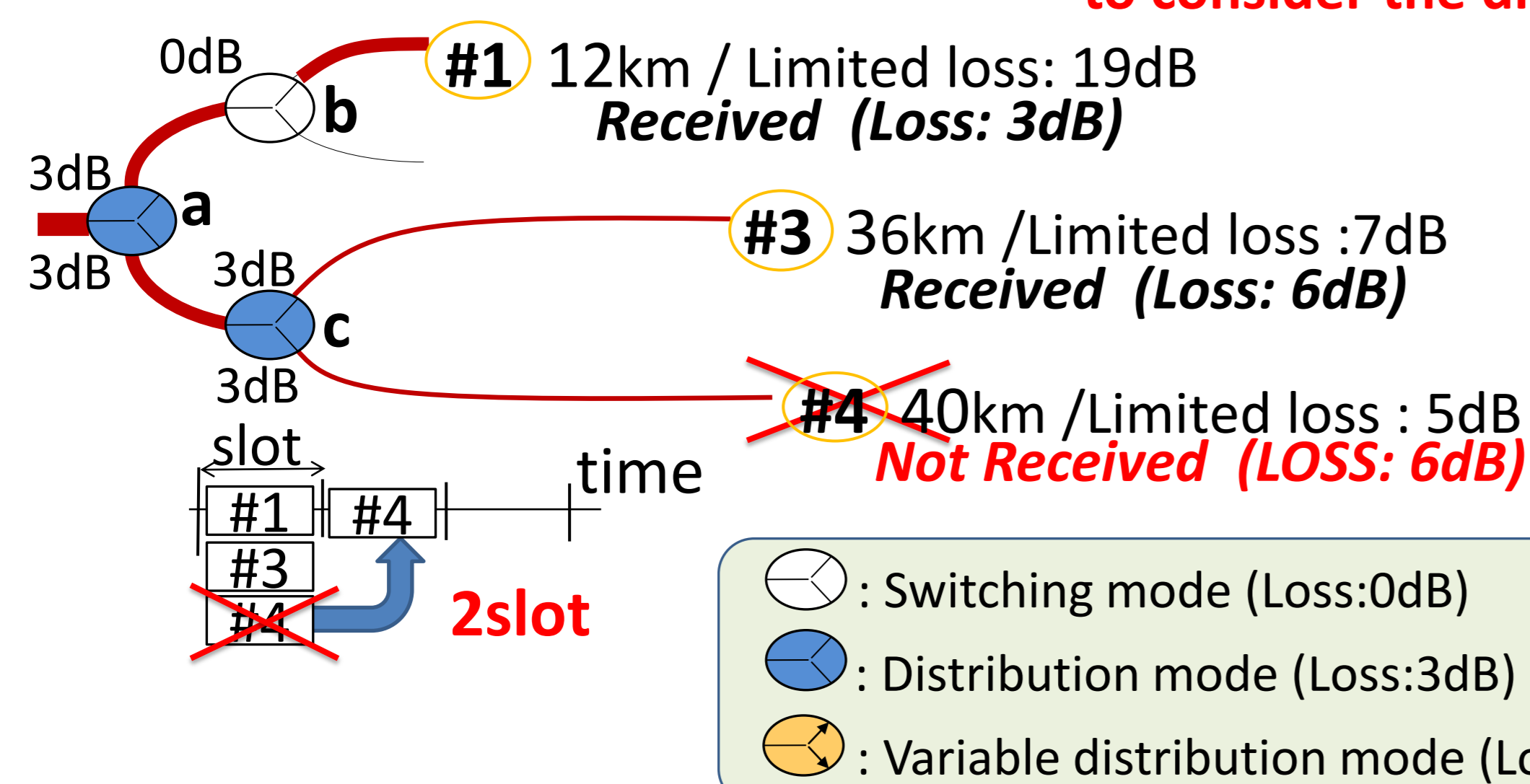


Distribution mode

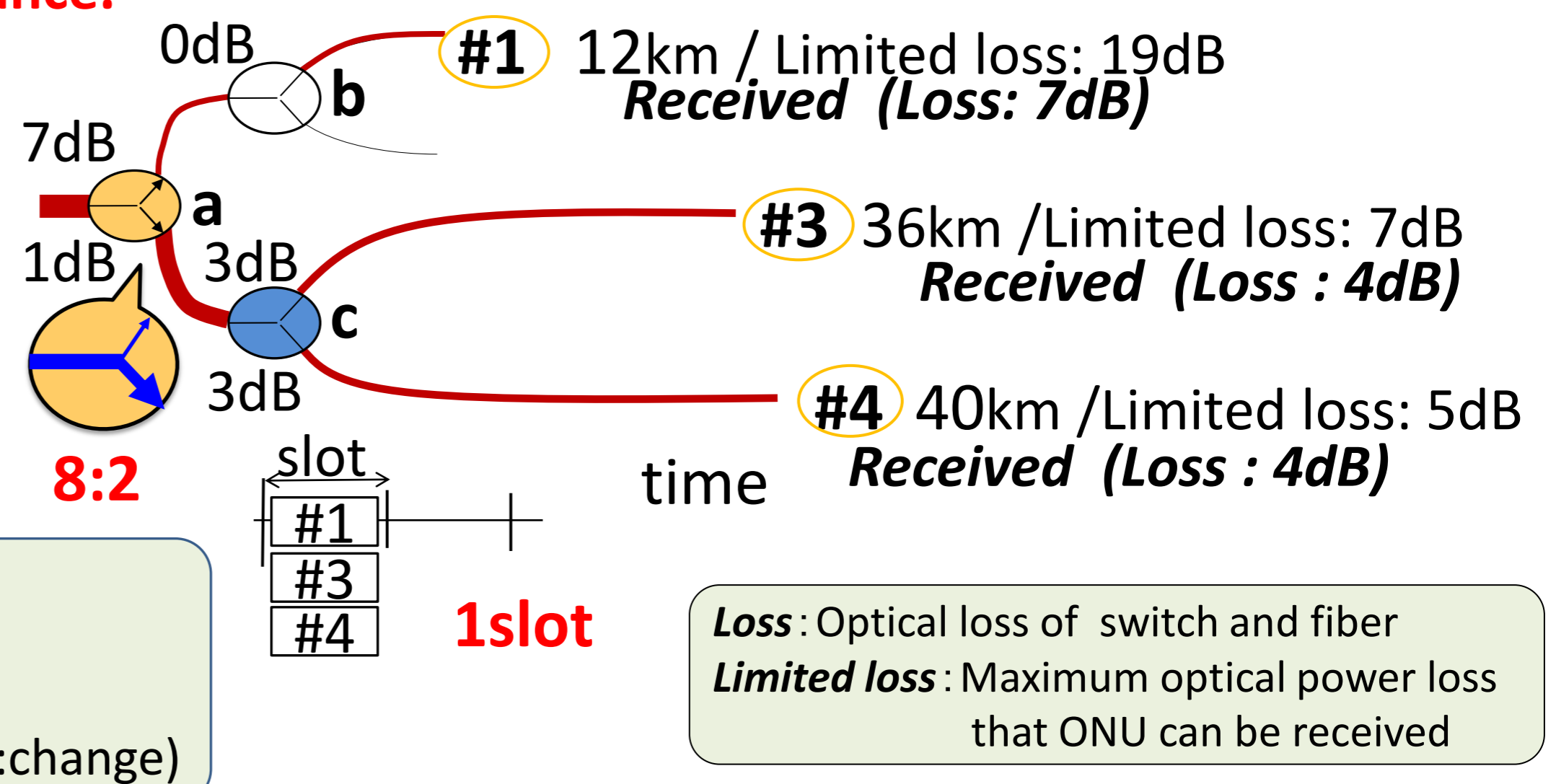


Multicast slot allocation with variable distribution mode(proposal)

Conventional: (Only 5:5)



Proposal: Any distribution ratio(2:8, 3:7, 5:5)



Proposed scheme adjusts any distribution ratio, improves the bandwidth.