

## GPON 8-Channel Line Combiner Pair ZLC2G5G-A/ZLC2G5G-B

### Description

ZLC2G5G-A/ZLC2G5G-B combiner pair combines 8 GPON lines and increases the fiber usage efficiency by 8 folds. In addition, the combiner pair extends the GPON transmission distance, significantly,

### Features

- 8 GPON OLTs and 8 ONU branches are connected by a single fiber.
- GPON transmission distance can be increased to longer than 50 km.
- The number of ONUs per ONU branch is increased significantly.
- Standard OLT and ONU can be used.

### Related Product

- ZLC2G5G-A/ZLC2G5G-B for GPON.

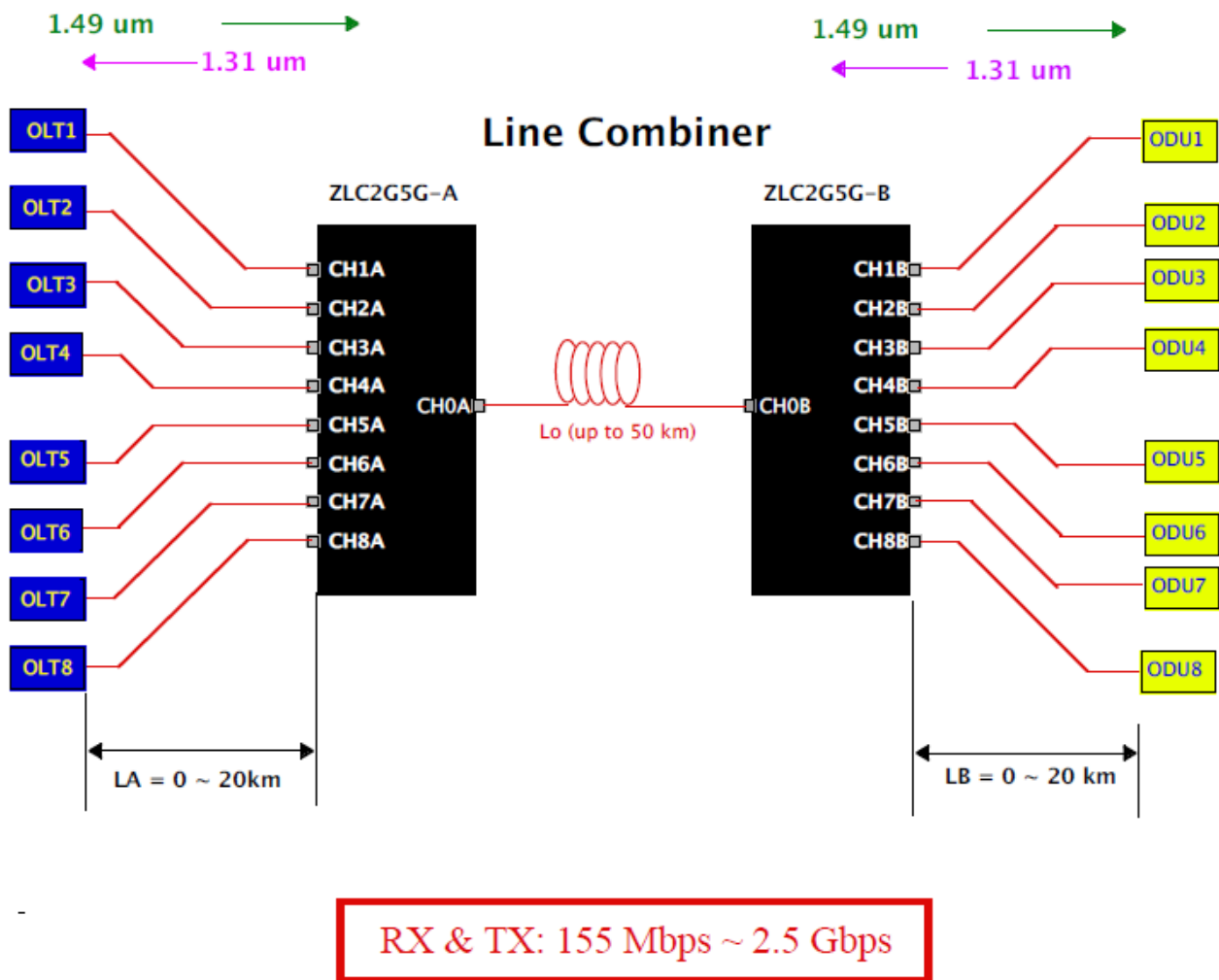


Figure 1: Illustration of 8-channel line combiner

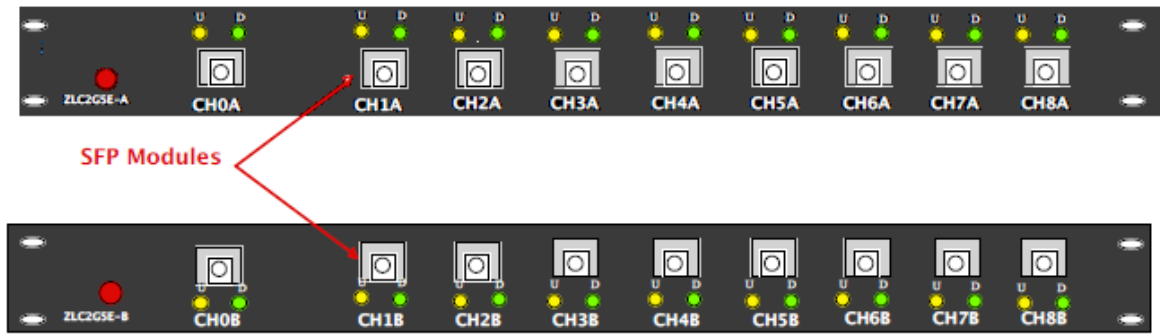


Figure 2(A): Illustration of front panels of the combiner pair



Figure 2(B): Photograph of ZLC2G5G-A

Figures 2 (A) and (B) show the front panel of the line combiner pair and photograph of ZLC2G5G-A. The combiner pair is built in 19 inches rack. The optical modules are SFP type for easy maintenance. The optical connectors are SC/UPC.

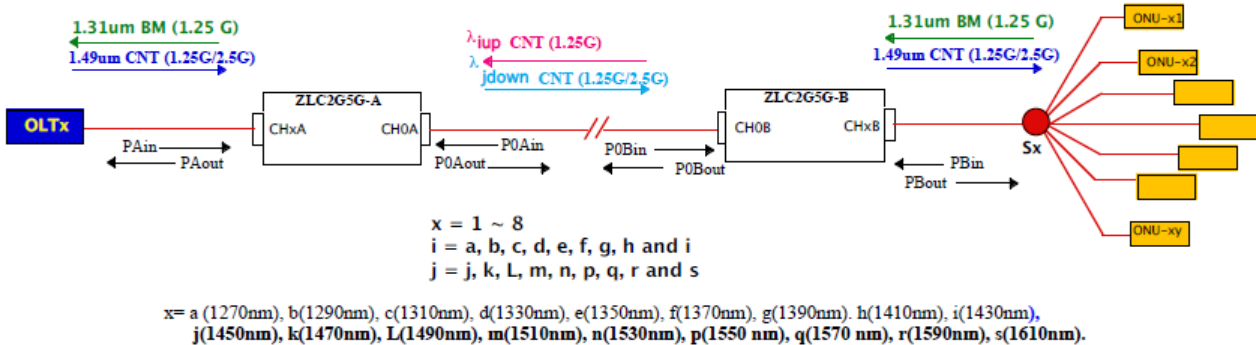


Figure 3: Illustration of optical paths

Figure 3 illustrates the optical paths from the OLTs to ONUs via line combiner pair. The OLTs and ONUs are standard, in which the wavelengths on the downstream and upstream are 1.49  $\mu\text{m}$  and 1.31  $\mu\text{m}$ , respectively.

**Table 1: Optical Power specification**

Parameters	Description	Values
PAin	1.49 um Continuous Incoming Optical Power to CHxA	-24 dBm (Min), 0 dBm (Max)
PAout	1.31 um Burst-Mode Output Optical Power from CHxA	- 2 ~ 0 dBm
POAin	$\lambda_{iup}$ Burst-Mode Incoming Optical Power to CH0A	-24 dBm (Min), 0 dBm (Max)
POAout	$\lambda_{jdown}$ Continuous Output Optical Power from CH0A	- 2 ~ 0 dBm
POBin	$\lambda_{jdown}$ Continuous Incoming Optical Power to CH0B	-24 dBm (Min), 0 dBm (Max)
POBout	$\lambda_{iup}$ Burst-Mode Output Optical Power from CH0B	- 2 ~ 0 dBm
PBin	1.31 um Burst-Mode Incoming Optical Power to CHxB	-26 dBm (Min), -8 dBm (Max)
PBout	1.49 um Continuous Output Optical Power from CHxB	+1.5dBm ~ +3dBm

**Table 2: CWDM Wavelength Designation**

Upstream, $\lambda_{iup}$ , 1.25 Gbps Burst-Mode		Downstream, $\lambda_{jdown}$ , 1.25/2.5 Gbps Continuous	
i = a	1270 nm	j = j	1450 nm
i = b	1290 nm	j = k	1470 nm
i = c	1310 nm	j= L	1490 nm
i = d	1330 nm	j = m	1510 nm
i = e	1350 nm	j = n	1430 nm
i = f	1370 nm	j = p	1550 nm
i = g	1410 nm	j = q	1570 nm
i = h	1430 nm	j = r	1590 nm

**Table 3: Operating Condition**

<b>Operating Condition</b>					
<b>Symbol</b>	<b>Parameter</b>	<b>Min.</b>	<b>Typ</b>	<b>Max</b>	<b>Unit</b>
Top	Operating Temperature	0		70	oC
Vapp	Power Supply Voltage	5		12	V (DC)
Pop	Power Consumption/unit		24		W