

# Pump/Combiner

## Active (2+1)×1 Combiner

A fiber optic active pump combiner (also called a doped fiber pump combiner) is manufactured by coupling the pump power directly into a doped fiber (e.g. erbium-ytterbium). In a traditional pump combiner application, the end-user splices the combiner's passive fiber output to a doped fiber, possibly resulting in back scattering. Lightel's active pump combiner eliminates the splice to the gain element and any backward signal to the pump lasers is reduced.

### Features

- High Optical-Optical Conversion Efficiency
- Stable and Reliable
- Custom Configurations Available

### Applications

- High Power Fiber Lasers
- Fiber Amplifiers



### Specifications

Parameter	Specification	
Port Configuration	(1+1)×1 or (2+1)×1	
Pump Wavelength	800~1000nm	
Signal Wavelength	1030~1080nm or 1550~1600nm	
Signal Input Fiber	DCF-EY-10/128	LMA-YDF-10/130 M
Pump Fiber	105/125 0.15NA/0.22NA	
Output Fiber	DCF-EY-10/128	LMA-YDF-10/130 M
Pump Efficiency	>90%	>90%
Signal Insertion Loss	<0.3 dB	<0.3 dB
Optical-optical Conversion Efficiency	>26%	>56%
Total Power Handling	30W	50W
Return Loss	>45 dB	
Pigtail	Standard 1m or custom	
Operating Temperature	0~75°C	
Storage Temperature	-40~85°C	

Note1: Values are referenced without connectors.

Note2: Other package dimensions and optical performances available by request.

### Ordering Information

A	P	C	-	-	-	-	-	-	-	-	-	-	-	-	-
Port Configuration	Wavelength	Pump Fiber	Signal Fiber	Output Fiber	Package Size(mm)	Special Code									
1: (1+1)×1 2: (2+1)×1	A: 1060nm B: 1550nm	18: MM-S105/125-15A 19: MM-S105/125-22A 20: MM-S200/220-22A	04: HI1060 NA:0.14 30: 10/125DC NA:0.08/0.46 72: DCF-UN-8/105/125-14	41: LMA-GDF-20/130-M NA:0.08/0.46 49: LMA-GDF-20/400-M NA:0.06/0.46 72: DCF-UN-8/105/125-14	1: D4.0xL60 SST 3: 75x12x8 8: 105x15x8										

Note: These are our most popular configurations. Contact Lightel Sales for custom port counts or alternative fibers.