



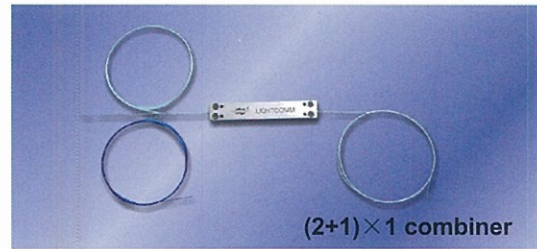
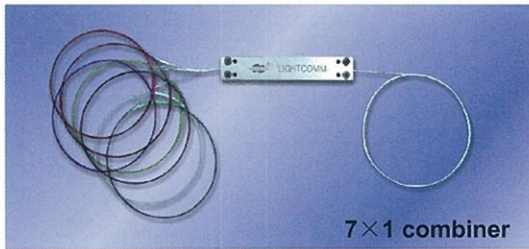
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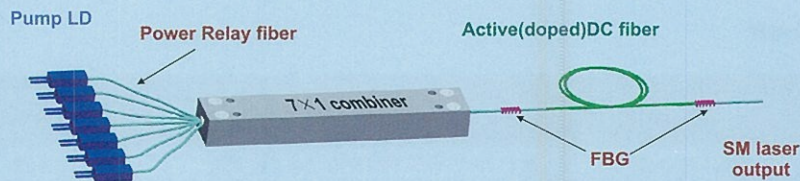
# Lightcomm Pump Combiner Introduction

Pump combiner is a passive component, which is built based on fused biconical taper (FBT) technique, widely used in fiber laser, fiber amplifier, high power EDFA, biomedical and sensor system etc..

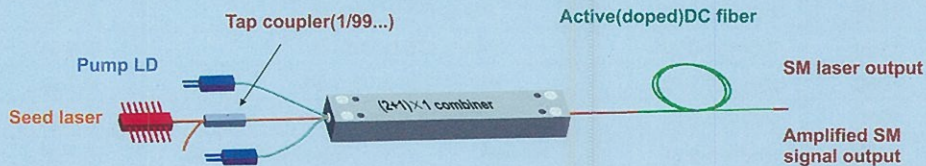
Lightcomm develops pump combiner based on the excellent knowledge and strong technique background, we'll always provide customer high quality, cost-effective product with friendly service.



## Typical Industrial Fiber Laser application

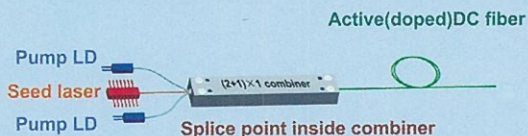


## Typical Fiber Amplifier and High Power EDFA for PON and CATV application



## High-end special combiner

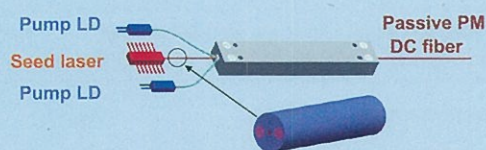
### ▶▶ Active fiber output combiner



### ▶▶ Key Feature

- ≥85% pump efficiency
- ≤0.5dB signal IL

### ▶▶ PM (2+1)×1 combiner



### ▶▶ Key Feature

- ≥85% pump efficiency
- Signal IL ≤0.5dB



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▶▶ N×1 pump combiner

Type	Working WL (nm)	Input pump	Output fiber	Pump Effi.(Min)
				Spec
3×1 and 4×1	800-1000	105/125 0.15 or 0.22	200/220 0.22	93%
3×1 and 4×1	800-1000	105/125 0.15 or 0.22	125 0.46	93%
6×1	800-1000	105/125 0.15	10/125 0.08/0.46	90%
6×1	800-1000	105/125 0.15	20/125 0.08/0.46	90%
6×1	800-1000	105/125 0.22	20/400 0.06/0.46	90%
6×1	800-1000	200/220 0.22	20/400 0.06/0.46	90%
7×1	800-1000	105/125 0.15	230/250 0.22	90%
7×1	800-1000	230/250 0.22	20/400 0.06/0.46	80%
7×1	800-1000	105/125 0.15	125 0.46	90%
7×1	800-1000	105/125 0.22	200 0.46	90%
7×1	800-1000	105/125 0.22	400/430 0.22	90%
7×1	800-1000	105/125 0.22	20/400 0.06/0.46	90%

▶▶ (N+1)×1 pump combiner

Type	Working WL (nm)	Input pump	Input signal	Output fiber	Signal IL	Pump Effi.
					Spec (Max)	Spec (Min)
(2+1)×1	1060	105/125 0.22	X /125 0.08/0.46 (X=6, 10, 15, 20)		0.5dB	90%
(2+1)×1	1550	105/125 0.22	8/125 0.14/0.46		0.5dB	90%
(2+1)×1	1060	200/220 0.22	25/250 0.06/0.46		0.5dB	90%
*PM (2+1)×1	1060	105/125 0.22	PM 10/125 0.08		0.5dB	85%
PM (2+1)×1	1060	105/125 0.22	PM 6/125 0.14/0.46		0.5dB	85%
PM (2+1)×1	1550	105/125 0.22	PM 8/125 0.14/0.46		0.5dB	90%
PM (2+1)×1	1060	200/220 0.22	PM 25/250 0.06/0.46		0.7dB	80~85%
(3+1)×1	1060	105/125 0.22	20/125 0.08/0.46		0.7dB	85%
(6+1)×1	1060	105/125 0.15	Hi1060	20/125 0.08/0.46	0.7dB	90%
(6+1)×1	1060	105/125 0.15	15/130 0.08/0.46		0.7dB	85%
(6+1)×1	1060	105/125 0.15	20/125 0.08/0.46		0.5dB	90%
(6+1)×1	1550	105/125 0.15	SMF-28	20/200 0.11/0.46	0.7dB	90%
(6+1)×1	1060	105/125 0.15	Hi1060	20/200 0.11/0.46	0.7dB	90%
(6+1)×1	1060	105/125 0.22	20/125 0.08/0.46	20/200 0.11/0.46	0.7dB	90%

Remark: \* The PM combiner's PER is ≥18dB, typical is ≥20dB.

▶▶ Other series combiner

Configuration	Type	Wavelength (nm)	Description
N×1	RGB combiner	Visible Range	Special fiber for short wavelength relay and color combine.
	0.22NA series	800~1100	Pump fiber and output fiber are all 0.22NA fiber. Such as 105/125, 200/220, 300/330, 400/440, 600/660...
N×1 assembled with (N+1)×1	7×1 with (6+1)×1	800~1100	Multi-class combiner assembly.

ADDITIONAL INFORMATION

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