

## (N+1)×1 Backward High Power Signal and Pump Combiner

### 1.0 Description

The High Power Signal and Pump Combiner (HSP) is designed for combining pump laser and signal laser into the main double cladding fiber. The SPC can be applied in forward, backward or double-end pumping schemes.

### 2.0 Optical and Operation Specifications

Item	Specifications	Min.	Typ.	Max.	Unit	Notes
2.01	Signal wavelength	1000	1060	1100	nm	
2.02	Pump wavelength	800	915	1000	nm	
2.03	Polarization	Random				PM Customizable
2.04	Operation regime	CW				
2.05	Fiber length		1.5		m	Default
2.06	Operating temperature range	0		+70	°C	
2.07	Storage temperature	-40		+85	°C	
2.08	Cooling Method	Bottom conduction cooling				

### 3.0 Typical fiber combinations

Item	Confi.	Pump Fiber	Signal Fiber	Output Fiber	Power Handling	Pump Efficiency	Signal Power	Signal IL	Note
3.01	(6+1)×1	105/125 106.5/125 135/155	X/250DCF	Y/130DCF Y/250DCF	300W/leg	97%	2kW	0.2dB	X,Y=14, 20, 25, 30 X≤Y
3.02			X/400DCF	Y/250DCF Y/400DCF	300W/leg	97%	2kW	0.2dB	X,Y=20, 25, 30 X≤Y
3.03		200/220 220/242 225/240	20/400DCF	Y/250DCF Y/400DCF	600W/leg	97%	3kW	0.2dB	Y=20, 25, 30
3.04			25/400DCF	Y/250DCF Y/400DCF	600W/leg	97%	3kW	0.2dB	Y=25, 30
3.05			30/400DCF	Y/250DCF Y/400DCF	600W/leg	97%	3kW	0.2dB	Y=30
3.06	(18+1)×1	105/125 106.5/125	X/250 DCF	Y/130 DCF	150W/leg	96%	3kW	0.2dB	X,Y=20, 25, 30 X≤Y
3.07			X/400 DCF	Y/130 DCF Y/250 DCF	150W/leg	96%	3kW	0.2dB	X,Y=20, 25, 30 X≤Y
3.08		135/155	X/400 DCF	Y/130 DCF Y/250 DCF	150W/leg	96%	3kW	0.2dB	X,Y=20, 25, 30 X≤Y

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#### 4.0 Mechanical specifications and drawings

Item	Specifications	Unit	Notes	
4.01	Module's Dimensions	150*15*12	mm	Bottom conduction cooling

#### 5.0 Ordering information

HSP-①-②-③-④-⑤-⑥/⑦-⑧/⑧-⑨		
<b>①: Port combination</b> 61 - (6+1) 1 181 - (18+1) 1	<b>②: Signal propagation direction</b> F - Forward B - Backward	<b>③: Pump fiber type</b> M01 - 105/125, 0.22NA M03 - 135/155, 0.22NA ect.
<b>④: Signal input fiber type</b> D17 - 20/400 DCF, 0.06NA D07 - 25/400 DCF, 0.06NA D08 - 30/400 DCF, 0.06NA ect.	<b>⑤: Signal output fiber type</b> D03 - 20/250 DCF, 0.06NA D04 - 25/250 DCF, 0.06NA D05 - 30/250 DCF, 0.06NA ect.	<b>⑥: Pump power per port</b> 200 - 200W 400 - 400W 600 - 600W ect.
<b>⑦: Handling signal power</b> 1.0 - 1000W 1.5 - 1500W 2.0 - 2000W 3.0 - 3000W 5.0 - 5000W ect.	<b>⑧/⑧: Input/Output fiber length</b> 1.0-1.0m 1.5-1.5m Default 2.0-2.0m ect.	<b>⑨: Package type</b> A - Aluminum package 150*15*12 S - Specify
For example: <b>HSP-61-B-M03-D17-D03-400/2.0-1.5/1.5-A</b>		