

# High Power NXM Fiber Optical Coupler

## (SM, PM, 1xN, 10W, 20W, 30W)

### Product Description

Photonwares' fiber couplers are used to split or combine light with minimal optical loss from one to multiple fibers. These components are manufactured using the fused biconical taper process on fully software controlled automatic fabrication stations. The process consists of placing two or more fibers adjacent to each other, then fusing and stretching them to create a central coupling region. These couplers are packaged in a thermal expansion matching silica substrate, providing exceptional mechanical and environmental stability.

Our high power series of fiber optical couplers are tested over 10W CW. With additional heat sink packaging, we offer coupler up to 40W CW. Various configurations of NxM in SM, PM, and MM are available in a metal box by cascading 2x2. We further offer beam expanded high power fiber optical connectors.



### Performance Specifications

SM/PM Coupler	Parameter				Unit
Wavelength	433,589,633,780, 830,980,1064		1310,1480,1550,1950, 2000,2050,2100		nm
Bandwidth	±15				nm
Excess Loss	Grade P	Grade A	Grade P	Grade A	
	≤0.8	≤1.0	≤0.5	≤0.6	dB
Split Ratio Tolerance	± 7	± 8	± 5	± 5	%
Polarization E/R	≥17	≥15	≥18	≥16	dB
Splitting Ratio	Grade P		Grade A		
	Through t	Coupling	Through t	Coupling	
5:90:5	± 2.5	± 1.5	± 3.0	± 1.8	dB
10:80:10	± 2.8	± 1.6	± 3.2	± 2.0	dB
15:70:15	± 3.0	± 1.8	± 3.5	± 2.4	dB
20:60:20	± 3.3	± 2.0	± 3.7	± 2.5	dB
25:50:25	± 3.5	± 2.4	± 4.0	± 3.0	dB
30:40:30	± 4.0	± 3.0	± 5.0	± 4.0	dB
33:33:33	± 6.0	± 6.0	± 8.0	± 8.0	
35:30:35	± 4.0	± 5.0	± 5.0	± 6.0	
40:20:40	± 3.0	± 6.0	± 6.0	± 7.0	dB
Optical Power Handling	< 3				W
Operating Temperature	-40~85				℃
Storage Temperature	-40~85				℃
Package Dimension *	250um : Φ)3.0x(L)54				mm
	900um : Φ)4.0x(L)70				
	2/3mm Cable : (L)90x(W)16x(H)9				

\* Other package options available on request

### Features

- Low Loss
- High Reliability

### Applications

- Gain Control
- Power Equalizer

## Optical Path Diagram

## Ordering Information

HFCP-	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
	Wavelength	Power	Configuration (NxM)	Split Ratio*	Fiber Type		Connector Type
	433nm=04 589nm=05 633nm=06 780nm=07 830nm=08 980nm=09 1064nm=10 1310nm=13 1480nm=14 1550nm=15 1950nm=19 2000nm=20 2050nm=25 2100nm=21 Special=00	10W =1 20W =2 30W =3 40W =4	2x2 =22 1x4 =14 NxM= NM Special=0	1 = 01/99 2 = 02/98 3 = 05/95 4 = 10/90 5 = 20/80 6 = 30/70 7 = 40/60 8 = 50/50 0 = Special	250μm=1 2mm =2 3mm =3 900um=4 Special= 0	SM28=1 60 μm =2 50 μm =3 Panda= 4 Special=0	None = 1 FC / PC = 2 FC / APC = 3 Special = 0

- Customer can order special configuration with a diagram in the PO