

High Power PM Fiber Optic Coupler 1x2, 2x2

10, 20, 30W, 0.3dB loss, 18 – 25 ER, 480nm-2000nm



DATASHEET

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Features

- Low Loss
- High Reliability
- High ER

Applications

- Instrumentation
- Sensor

The HPPC Series high power PM fiber optic coupler is based on our fused biconical taper technology and compact packaging structure. It features good uniformity, low excess loss and very low polarization sensitivity. The device is ideal for splitting or combining light with exceptional performance over a wide wavelength range. The cost is related to the polarization extinction ratio grade level.

Specifications

Parameter	Min	Typical	Max	Unit
Coupling Ratio	1/99 to 50/50			%
Wavelength ^[1]	480		2300	nm
Wavelength Bandwidth		± 15		nm
Return Loss ^[5]		> 55		dB
Fiber Tensile Load		< 10		N
Default Connector Key		Slow axis		
Operating Temperature	-40		85	°C
Storage Temperature	-40		85	°C

Parameter		Grade U	Grade S	Grade P	Grade A	Unit
Center-Wavelength Max Optical Power ^[2] Excess Loss ^[3]	480nm (0.1W)				≤0.7	dB
	530nm (0.2W)			≤0.7	≤0.7	dB
	540nm (0.2W)			≤0.7	≤0.7	dB
	560nm (0.2W)			≤0.5	≤0.5	dB
	635nm (0.3W)			≤0.4	≤0.5	dB
	670nm (0.5W)			≤0.4	≤0.5	dB
	780nm (0.6W)			≤0.4	≤0.5	dB
	850nm (1W)			≤0.4	≤0.5	dB
	980nm (1.5W)		≤0.3	≤0.3	≤0.3	dB
	1060nm (1.5W)		≤0.3	≤0.3	≤0.3	dB
	1310nm (1.5W)		≤0.3	≤0.3	≤0.4	dB
	1480nm (1.5W)		≤0.3	≤0.3	≤0.4	dB
	1550nm (1.5W)	≤0.7	≤0.3	≤0.3	≤0.4	dB
	1600nm (1.5W)		≤0.3	≤0.3	≤0.4	dB
	2000nm (6W)			≤0.3	≤0.4	dB
Polarization Extinction Ratio ^[4]		≥25	≥20	≥18	≥16	dB
Coupling Ratio Tolerance						
Split Ratio: 50/50		±1.5	±2	±4	±6	%
Split Ratio: 40/60		±1.5	±2	±3	±5	%
Split Ratio: 30/70		±1.5	±1.5	±1.5	±2	%
Split Ratio: 20/80		±1.0	±1.0	±1.0	±1.0	%
Split Ratio: 10/90		±0.5	±0.5	±0.5	±0.5	%
Split Ratio: 5/95		±0.3	±0.3	±0.3	±0.3	%
Split Ratio: 1/99		±0.25	±0.25	±0.25	±0.25	%

Notes:

- [1]. Customer wavelength is available on request
- [2]. Without connector, connector reduces the optical power handling
- [3]. Without connector. Each connector adds 0.3dB and 0.5dB for short wavelength
- [4]. Without connector. Each connector adds 2dB
- [5]. Without connector. Each connector adds 5dB

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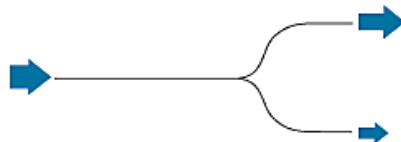
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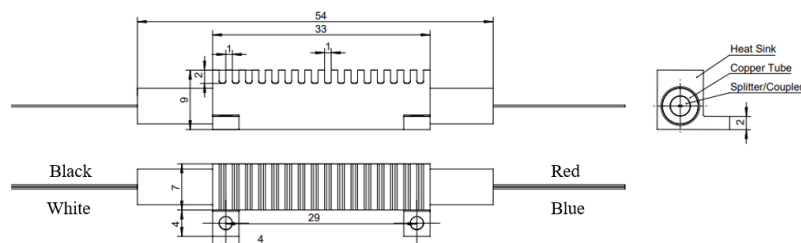
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Function Diagram

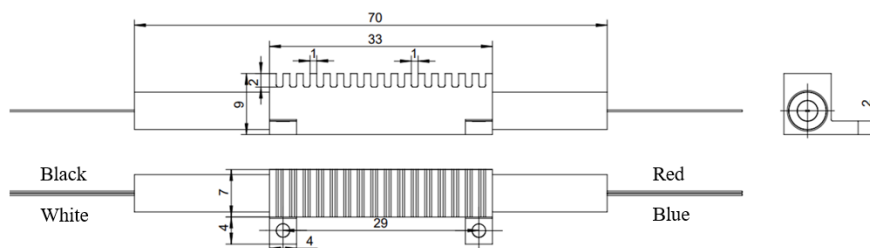


Mechanical Dimensions (mm)

Package 1



Package 2



*Product dimensions may change without notice. This is sometimes required for non-standard specifications.

Ordering Information

Prefix	Power	Wavelength	Grade	Package	Ratio	Port	Fiber Cover	Fiber Type	Connector Type
HPPC-	10W = 1 20W = 2 30W = 3 40W = 4	480 = A 530 = B 540 = C 560 = D 630 = E 670 = F 1480 = G 1060 = 1 1310 = 3 1550 = 5 780 = 7 850 = 8 980 = 9 1600 = 2 2000 = 4 2039 = H Special = 0	A = 5 P = 1 S = 2 U = 3 Aerospace ^[1] = A	1 = 1 2 = 2 Special = 0	01/99 = 1 02/98 = 2 05/95 = 3 10/90 = 4 15/85 = 5 20/80 = 6 30/70 = 7 40/60 = 8 50/50 = 9 0.5/99.5 = A Special = 0	1x2 = 1 2x2 = 2	250um = 1 900um tube = 3 Special = 0	Panda = 1 Special = 0	None = 1 FC/PC = 2 FC/APC = 3 SC/PC = 4 SC/APC = 5 ST/PC = 6 LC/PC = 7 LC/UPC = U Special = 0

[1]. Aerospace-grade package featuring an aluminum metal casing filled with a specially formulated RTV compound that is both vibration-resistant and thermally conductive, specifically designed to endure repeated thermal shock cycles from -45°C to 90°C.

Note: 1m fiber length is default. Other fiber length is available, please add the extension -xxm, such as – 2.0m after 9-digit. The customized fiber length may cause the long lead time and higher price.