

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 ^[4]		> 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 Excess Loss ^[2]	480nm			≤0.7	dB
	530nm		≤0.7	≤0.7	dB
	540nm		≤0.7	≤0.7	dB
	560nm		≤0.5	≤0.5	dB
	635nm		≤0.4	≤0.5	dB
	670nm		≤0.4	≤0.5	dB
	780nm		≤0.4	≤0.5	dB
	850nm		≤0.4	≤0.5	dB
	980nm	≤0.3	≤0.3	≤0.3	dB
	1060nm	≤0.3	≤0.3	≤0.3	dB
	1310nm	≤0.3	≤0.3	≤0.4	dB
	1480nm	≤0.3	≤0.3	≤0.4	dB
	1550nm	≤0.7	≤0.3	≤0.3	dB
	1600nm	≤0.3	≤0.3	≤0.4	dB
	2000nm		≤0.3	≤0.4	dB
Polarization Extinction Ratio ^[3]	≥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. Each connector adds 0.3dB and 0.5dB for short wavelength
- [3]. Without connector. Each connector adds 2dB
- [4]. Without connector. Each connector adds 5dB

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+1 781-935-1200

sales@agiltron.com

www.agiltron.com

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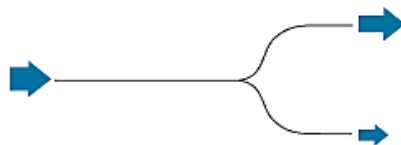
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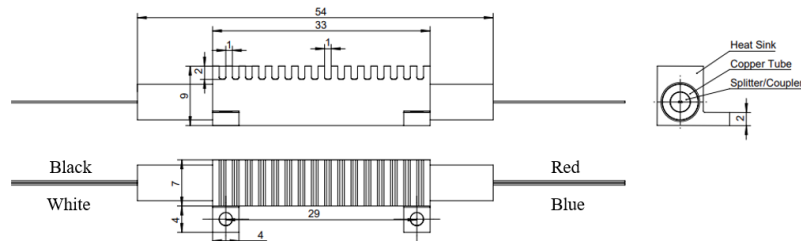
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Function Diagram

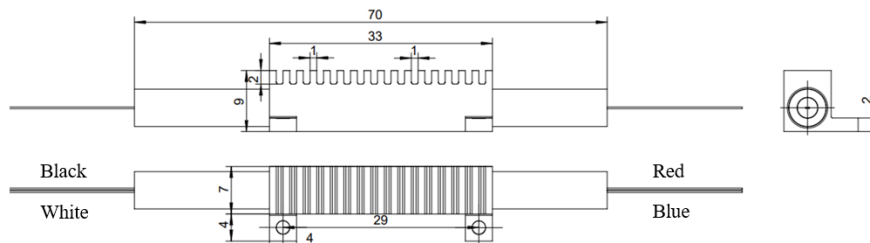


Mechanical Dimensions (mm)

Package 1



Package 2



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

Ordering Information (Part Number)

Prefix	Power	Wavelength	Grade	Package	Ratio	Port	Fiber Cover	Fiber Type	Connector Type ^[2]
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.

[2]. The default connector configuration uses fiber with 0.9 mm buffer protection. The connector cannot be installed directly onto bare fiber because the bare fiber is prone to damage during shipping. However, the connector can be assembled on bare fiber if a 3 cm protective loose tube is added for reinforcement. The customer may remove this protective tube after testing. The optical power handling of a standard connector is less than 0.5 W for SMF-28 fiber and decreases further for smaller-core fibers.

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

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