

Fused Coupler, Near Infrared



Key Features

- 700 to 1150 nm operation
- Available in any coupling ratio
- All fiber — no lens alignment
- No unwanted reflections
- Low light loss
- High power handling

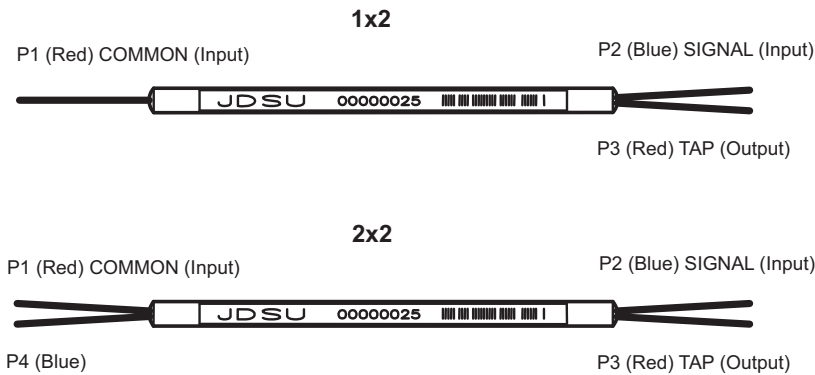
Applications

- Fiber lasers
- Sensors
- Avionics
- Biomedical equipment
- Research

The JDSU near infrared fused coupler splits or combines light at any selected wavelength from 700 to 1150 nm. Designed for applications in fiber laser, sensor and avionics applications, the coupler utilizes low loss fused fiber technology. No light leaves the fiber and therefore no alignment is required; and there are no unwanted reflections. Furthermore the output fiber pigtails may be directly integrated into beam delivery systems.

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Configuration



Insertion Loss

Coupling Ratio	Grade	Available Housing Option	Signal Path Insertion Loss ^{1,2} (Maximum)	Tap Path Insertion Loss ^{1,2} (Maximum)
10%	A	3, 4, 5, 6	0.9 dB	12.2 dB
10%	B	3, 4, 5, 6	1.1 dB	12.4 dB
20%	A	3, 4, 5, 6	1.5 dB	8.4 dB
20%	B	3, 4, 5, 6	1.7 dB	8.6 dB
30%	A	3, 4, 5, 6	2.2 dB	6.4 dB
30%	B	3, 4, 5, 6	2.4 dB	6.5 dB
40%	A	3, 4, 5, 6	3.0 dB	4.9 dB
40%	B	3, 4, 5, 6	3.2 dB	5.1 dB
50%	A	3, 4, 5, 6	3.8 dB	3.8 dB
50%	B	3, 4, 5, 6	4.0 dB	4.0 dB

1. Insertion loss at operating wavelength range (not including PDL, TDL or connector losses).
2. In 2x2 couplers with a coupling ratio of 20% or lower, insertion loss is not specified for launch through second input port (P4).

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Housing Option

Housing Code	Description	1x2, 2x2 Dimensions (mm)	Pigtail
3	Regular	3.0 (Ø) x 50 (L)	Primary-coated fiber
4	Ø 0.9 mm slim	3.0 (Ø) x 60 (L)	Ø 0.9 mm loose-tube
5	Ø 0.9 mm semi-ruggedized	5.0 (Ø) x 75 (L)	Ø 0.9 mm loose-tube
6	Ø 3.0 mm fully ruggedized	80 (L) x 10 (W) x 8 (H)	Ø 3.0 mm fan-out sleeving

Specifications

Parameter		Grade A	Grade B
Operating wavelength range ¹		Any wavelength within the 700 to 1150 nm range	
Excess loss	Typical	0.30 dB	0.50 dB
Return loss/Directivity	Minimum		50 dB
Pigtail tensile load	Maximum		5 N
Optical power handling	Maximum		4 W
Operating temperature range ²			-40 to 75 °C
Storage temperature range			-40 to 85 °C
Fiber type			Speciality fiber

1. Any specific wavelength point from within the range 633 to 850 nm may be selected. For wavelengths outside of this range, contact JDSU with specific requirements.

2. For connectorised component, operating temperature range is -5 to 75 °C.

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Ordering Information

For more information on this or other products and their availability, please contact your local JDSU account manager or JDSU directly at 1-800-498-JDSU (5378) in North America and +800-5378-JDSU worldwide or via e-mail at customer.service@jdsu.com.

Sample: FFS-060K31A10 (Fused Fiber Speciality Coupler, 1060 nm, 50/50 coupling ratio, regular housing, 1x2, A grade, 1 m pigtails, no connectors)

FFS-

Code	Wavelength (First Digit)
7	7xx nm
8	8xx nm
9	9xx nm
0	10xx nm
1	11xx nm

Code	Coupling Ratio ¹
A	10%
C	20%
E	30%
H	40%
K	50%

Code	Configuration
1	1x2
2	2x2

Code	Grade
A	Grade A
B	Grade B

Code	Connectors ^{2,4}
0	None
1	FC/PC
3	FC/APC
5	SC/APC
9	FC/UPC
A	SC/UPC
B	LC ⁵

Code	Wavelength (Second and Third Digit)
33	x33 nm
32	x32 nm
57	x57 nm

Code	Housing ²
3	Regular
4	Ø 0.9 mm slim
5	Ø 0.9 mm semi-ruggedised
6	Ø 3.0mm fully ruggedised

Code	Pigtail Length ³ (Minimum)
0	0.5 meter
1	1 meter

1. Other coupling ratio are available. Please contact JDSU for ordering codes of coupling ratios not listed.
2. Connectors may be fitted to housing types 4, 5 and 6. For connectorisation of housing type 3, please contact JDSU sales office.
3. Minimum pigtail length. Other pigtail lengths are available on request. When the pigtail has been modified to include a connector, pigtail length measurement includes the connector end face.
4. Excess Loss in specification table does not include connector losses.
5. LC connector is not available for housing code 6, fully ruggedised housing.

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