aurora NETWORKS

OP9xS2S

Features

- Low insertion loss
- Dual operating wave-length windows (1310nm and 1550nm)
- Operating temperature range –40º to +85ºC
- Telcordia GR-1209 and GR-1221 qualified, providing excellent environmental and mechanical stability
- Variety of options for module package size, fiber jacket and connector types
- Epoxy-free on optical path

1x2 and 2x2 Optical Splitters / Combiners

N0-00 and R2-00 packaging options shown above

Aurora Networks' OP9xS2S series splitters and combiners have been designed with high uniformity, low insertion loss and polarization dependent loss. The product family of modules includes 1x2 and 2x2 splitters/combiners with balanced (50/50) outputs, and several varieties of both 1x2 and 2x2 splitters/combiners with unbalanced outputs (with split ratios ranging from 55/45 to 99/1). All modules are offered with optional SC/APC type connectors.

The splitters/combiners are available in two versions of packaging for outdoor use, one version ruggedized for easy handling and the second version, though not ruggedized, being smaller and easier to fit in a splice enclosure. Both versions are designed for use in an outdoor environment within a temperature range of -40º to +85ºC.

OP9*x*S2S — Product Specifications

Physical:

- Dimensions: (*See Ordering Information*.)
- Weight: 0.2 lbs (0.9 kg)

Environmental:

- Operating temperature range: –40º to +85ºC (–40º to 185ºF)
- Storage temperature range: –40º to +85ºC (–40º to 185ºF)
- Humidity: 5% to 95% non–condensing

Optical:

- Optical connectors: (*See Ordering Information*.)
- Operating wavelength (dual windows):
  1263.5 – 1357.5 nm and 1423.5 – 1617.5 nm
- Directivity, min: 55 dB
- Return loss, min: 55 dB
- Input power handling, max: 27 dBm
- Spectral flatness, max: 0.4 dB (typ <0.2 dB from 1530–1572nm)
- Polarization dependent loss, max: 0.15 dB

Insertion Losses:

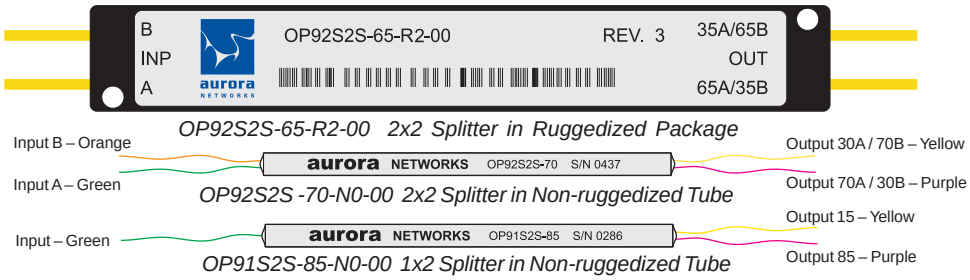
Part Number[1]	Splitter Type	Split Ratio [%]	Unbalanced Ratio [dB]	Insertion Loss [dB], typical (max)
OP91S2S-EQ-*xy-zz*	1x2	50 / 50	0	3.3 (3.6) / 3.3 (3.6)
OP91S2S-55-*xy-zz*	1x2	55 / 45	1	2.9 (3.1) / 3.8 (4.0)
OP91S2S-60-*xy-zz*	1x2	60 / 40	2	2.5 (2.9) / 4.3 (4.7)
OP91S2S-65-*xy-zz*	1x2	65 / 35	3	2.2 (2.6) / 4.9 (5.3)
OP91S2S-70-*xy-zz*	1x2	70 / 30	4	1.9 (2.3) / 5.6 (5.9)
OP91S2S-75-*xy-zz*	1x2	75 / 25	5	1.6 (1.9) / 6.3 (6.7)
OP91S2S-80-*xy-zz*	1x2	80 / 20	6	1.3 (1.7) / 7.3 (7.7)
OP91S2S-85-*xy-zz*	1x2	85 / 15	8	1.0 (1.2) / 8.6 (8.9)
OP91S2S-90-*xy-zz*	1x2	90 / 10	10	0.7 (1.0) / 10.3 (10.7)
OP91S2S-95-*xy-zz*	1x2	95 / 5	13	0.5 (0.7) / 13.5 (13.8)
OP91S2S-99-*xy-zz*	1x2	99 / 1	20	0.2 (0.4) / 19.8 (20.0)

Part Number[1]	Splitter Type	Split Ratio [%]	Unbalanced Ratio [dB]	Insertion Loss [dB], typical (max)
OP92S2S-EQ-*xy-zz*	2x2	50 / 50	0	3.3 (3.6) / 3.3 (3.6)
OP92S2S-55-*xy-zz*	2x2	55 / 45	1	2.9 (3.1) / 3.8 (4.0)
OP92S2S-60-*xy-zz*	2x2	60 / 40	2	2.5 (2.9) / 4.3 (4.7)
OP92S2S-65-*xy-zz*	2x2	65 / 35	3	2.2 (2.6) / 4.9 (5.3)
OP92S2S-70-*xy-zz*	2x2	70 / 30	4	1.9 (2.3) / 5.6 (5.9)
OP92S2S-75-*xy-zz*	2x2	75 / 25	5	1.6 (1.9) / 6.3 (6.7)
OP92S2S-80-*xy-zz*	2x2	80 / 20	6	1.3 (1.7) / 7.3 (7.7)
OP92S2S-85-*xy-zz*	2x2	85 / 15	8	1.0 (1.2) / 8.6 (8.9)
OP92S2S-90-*xy-zz*	2x2	90 / 10	10	0.7 (1.0) / 10.3 (10.7)
OP92S2S-95-*xy-zz*	2x2	95 / 5	13	0.5 (0.7) / 13.5 (13.8)
OP92S2S-99-*xy-zz*	2x2	99 / 1	20	0.2 (0.4) / 19.8 (20.0)

[1] *See Ordering Information for module package (x), fiber jacket (y) and connectorization (zz) options. (Insertion losses are the same for all options for each part number shown.)*

Package Options:

Three examples are shown (approximately full scale) in the figure at right. Output split ratio percentages are printed on the labels of ruggedized packages. For non-ruggedized tubes, the input and output fiber optic leads are color-coded as shown in the examples.



OP92S2S-65-R2-00 2x2 Splitter in Ruggedized Package

OP92S2S -70-N0-00 2x2 Splitter in Non-ruggedized Tube

OP91S2S-85-N0-00 1x2 Splitter in Non-ruggedized Tube

Ordering Information

O P 9 * S 2 S – * * – * * – * *

- **Optical Passive Module**
- **Number of Inputs per Splitter/Combiner (1 or 2)**
- **Splitter (Combiner) with 2 Outputs**
- **Split Ratio[2]**
- ****-** = Package, Fiber Jacket, and Connector Options[3]:**
  N0-00 = 250 µm bare fiber in 3x55 mm Non-ruggedized Tube,
  R2-00 = 2 mm fiber in 8.5x14x98 mm Ruggedized Package,
  R2-AS = 2 mm fiber in 89x51x9.2 mm Ruggedized S-Case with SC/APC Connectors

Notes

[2] *Specify split ratio for higher percentage value of two unbalanced outputs (55, 60, . . ., 95 or 99). Encode "EQ" for models with balanced outputs.*

[3] *Fiber length for all models is 1±0.15 meters.*

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