

# Optical Passives (OSP)

## OP91S2Q, OP91S4D

### Quad 1x2 and Dual 1x4 Optical Splitters/Combiners

## FEATURES

- Low insertion loss
- Wide operating wavelength windows suitable for CWDM applications
- Operating temperature range  $-40^{\circ}$  to  $+85^{\circ}\text{C}$
- Telcordia GR-1209 and GR-1221 qualified, providing excellent environmental and mechanical stability
- MPO connectors with eight outputs
- Epoxy-free on optical path



## PRODUCT OVERVIEW

ARRIS's OP91S2Q and OP91S4D field splitters provide four separate 1x2 splitters and two 1x4 splitters, respectively, in ruggedized packages. These splitters/combiners have been designed with high uniformity and low insertion and polarization dependent loss. This product family offers balanced outputs on a standard MPO connector. Both products are designed for use in an outdoor environment within a temperature range of  $-40^{\circ}$  to  $+85^{\circ}\text{C}$ .

## SPECIFICATIONS

Characteristics	Specification															
<b>Physical</b>																
Dimensions	3.8" L x 3.1" W x 0.3" H (9.6 cm x 7.8 cm x 0.8 cm)															
Weight	0.2 lb (0.9 kg)															
<b>Environmental</b>																
Operating Temperature Range	-40° to +85°C (-40° to +185°F)															
Storage Temperature Range	-40° to +85°C (-40° to +185°F)															
Humidity	5% to 95% non-condensing															
<b>Optical</b>																
Optical connectors	See Ordering Information															
Splitter types (equal outputs)	<ul style="list-style-type: none"> <li>OP91S2Q: 4 independent 1x2 splitters</li> <li>OP91S4D: 2 1x4 splitters (INP A to OUTA, fibers 1-4 to MPO connector; and INP B to OUTB, fibers 5-8 to MPO connector)</li> </ul>															
Passband wavelength	<ul style="list-style-type: none"> <li>OP91S2Q: 1263.5-1357.5 nm and 1423.5-1655 nm</li> <li>OP91S4D: 1263.5-1655.0 nm</li> </ul>															
Directivity, min	55 dB															
Spectral flatness max (typ.)	<p><b>For OP91S2Q:</b></p> <ul style="list-style-type: none"> <li>0.25 (0.15) dB for the higher-output port and 1530–1560 nm</li> <li>0.35 (0.25) dB for the higher-output port and 1260–1360 nm</li> <li>0.45 (0.35) dB for the higher-output port and 1420–1620 nm</li> <li>0.4 dB for the lower-output port of 50/50, 55/45, 60/40, 65/35, and 70/30 splitters</li> <li>0.5 dB for the lower-output port of 75/25, 80/20, and 85/15 splitters</li> <li>0.6 dB for the lower-output port of 90/10, 95/5, and 99/1 splitters</li> </ul> <p><b>For OP91S4D:</b> 0.25 dB for 1263.5–1655 nm</p>															
Input power handling, max	27 dBm															
Polarization dependent loss, max	0.15 dB															
Model-dependent parameters																
	<table border="1"> <thead> <tr> <th>Model Number</th> <th>Splitter Type</th> <th>Insertion Loss, max, with conns (dB)</th> <th>Uniformity, max (dB)</th> <th>Return Loss, min (dB)</th> </tr> </thead> <tbody> <tr> <td>OP91S2Q-EQ-R2-MP</td> <td>Quad 1x2</td> <td>3.5</td> <td>0.4</td> <td>55</td> </tr> <tr> <td>OP91S4D-EQ-R2-MP</td> <td>Dual 1x4</td> <td>7.5</td> <td>0.7</td> <td>50</td> </tr> </tbody> </table>	Model Number	Splitter Type	Insertion Loss, max, with conns (dB)	Uniformity, max (dB)	Return Loss, min (dB)	OP91S2Q-EQ-R2-MP	Quad 1x2	3.5	0.4	55	OP91S4D-EQ-R2-MP	Dual 1x4	7.5	0.7	50
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OP91S4D-EQ-R2-MP	Dual 1x4	7.5	0.7	50												

**NOTE:** Fiber length for all models is minimum 1 meter.

## ORDERING INFORMATION

Part Number	Description
OP91S2Q-EQ-R2-MP	Four 1x2 balanced splitters with 2 mm jacketed fibers in 96x78x8 mm ruggedized "F" case, with four SC/APC input connectors and one MPO/APC output connector
OP91S4D-EQ-R2-MP	Two 1x4 balanced splitters with 2 mm jacketed fibers in 96x78x8 mm ruggedized "F" case, with two SC/APC input connectors and one MPO/APC output connector

## RELATED PRODUCTS

Optical Transmitters	Optical Passives
Digital Return	Optical Patch Cords
Optical Nodes	Installation Services

## Customer Care

Contact Customer Care for product information and sales:

- United States: 866-36-ARRIS
- International: +1-678-473-5656

**Note:** Specifications are subject to change without notice.

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