

IOAP-MOD

9201



## FEATURES

- Zero-chirp versions available for optimum link design
- True hermetic, qualified to Telcordia™ GR-468-CORE
- Separate DC bias electrode for long-term stability & reliability
- Low drive voltage for ease of use with wide range of commercially available drivers
- Integrated attenuator option available in same package for DWDM pre-emphasis
- Polarization maintaining fiber version available on output for RZ modulation schemes

## APPLICATIONS

- Ideal for OC192 C-band & L-band DWDM applications

## OC192 10 Gb/s amplitude modulator

The 10 Gb/s modulator has been designed specifically to exceed the requirements of OC192. Supplied in a hermetic package, qualified to Telcordia™ GR-468-CORE, this product ensures high reliability and performance at all times.



## Electro-Optical Performance

Parameter	Min	Value Typ	Max	Units
<b>Optical</b>				
Operating Wavelength	1525	-	1605	nm
Insertion Loss	3.0	3.5	5.7	dB see note 1
On/Off Extinction Ratio (DC)	20	-	-	dB
Optical Return Loss	-	-	-45	dB

**Electrical**

<b>RF Port</b>				
Chirp	-	0 ±0.2	-	see note 2
<b>S11 Return Loss</b>				
0.13 - 3 GHz	-	-	-14	dB
3 - 9 GHz	-	-	-10	dB
9 - 15 GHz	-	-	-6	dB
S21 Electro-Optical Bandwidth (-3 dBe)	8.0	9.0	-	
V <sub>pi</sub> (at 10Gb/s PRBS into 50Ω)	4.9	-	6.1	V
Extinction Ratio (at 10Gb/s PRBS)	12.0	14.0	-	dB
Rise/Fall Time (10%/90%)	-	35	45	ps

Parameter	Specification
<b>Fiber</b>	
Input	Fujikura SM-15-P-8/125-UV/UV-400
Output	Corning SMF-28 or Fujikura SM-15-P-8/125-UV/UV-400

**Packaging** (details available upon request)

RF Connection	Anritsu K-Connector <sup>3</sup>
DC Ground Pins	DC feedthroughs

**Environmental**

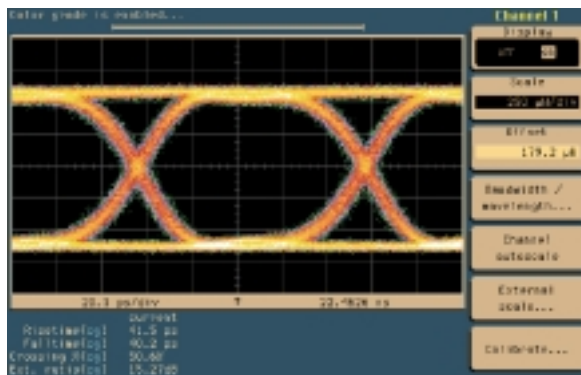
Qualification & Reliability	True hermetic to GR-468-CORE
Operating Temperature	0°C to 70°C
Storage Temperature	-40°C to 80°C

**Notes**

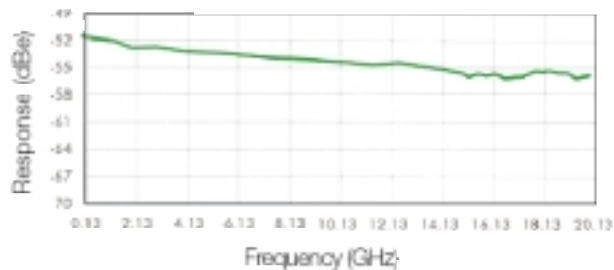
1. Insertion loss specification includes temperature, wavelength and life derating
2. Other chirp values are available on a custom basis.
3. K is a trademark of the Anritsu Corporation
4. Contact SDL for details of a compatible range of digital drivers

## Performance

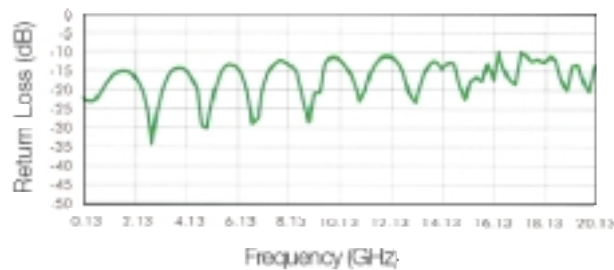
Eye Diagram



Frequency Response (S21)

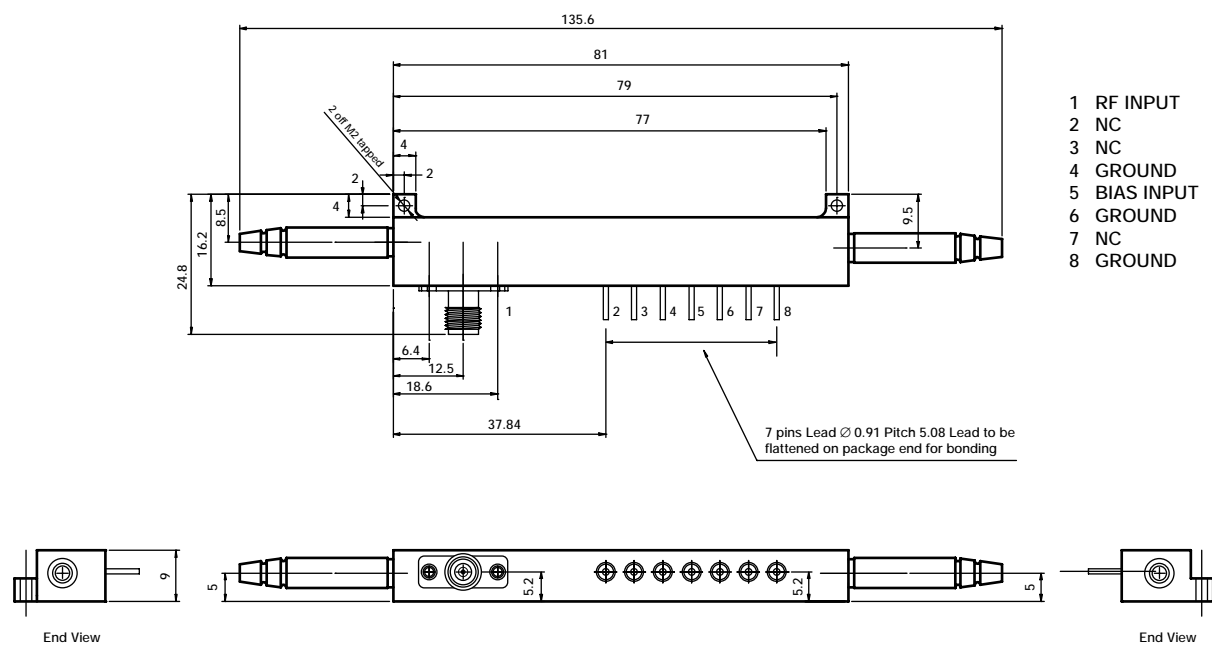


Electrical Return Loss (S11)



## Outline Drawing

- Dimensions in millimeters except where indicated



## Ordering Information

### Part Numbers & Options

IOAP-MOD-92XX-N-M-P

Defines Output Tap Coupler Option

0 = No coupler (supplied as standard)

1 = 1% tap coupler (available to special order at additional cost)

Defines Output Connector Type

F = FC/PC connector (supplied as standard, at no additional cost)

B = Bare Fiber (available to special order at no additional cost)

Defines Input Connector Type

F = FC/PC connector (supplied as standard, at no additional cost)

B = Bare Fiber (available to special order at no additional cost)

Defines Output Fiber Type

01 = Corning SMF

02 = Panda PMF

### Examples:

Model Number	Description
IOAP-MOD9201-F-F-0	10Gb/s amplitude modulator; input fiber Panda PMF; output fiber Corning SMF; Super FC/PC connectorized
IOAP-MOD9202-F-F-0	10Gb/s amplitude modulator; input fiber Panda PMF; output fiber Panda PMF; Super FC/PC connectorized



SDL, Inc.  
80 Rose Orchard Way  
San Jose, CA 95134-1365  
Tel: 408-943-9411  
Fax: 408-943-1430  
E-mail: sales@sdli.com

SDL Integrated Optics Ltd.  
3-4 Waterside Business Park  
Eastways, Witham, Essex  
CM8 3YQ, United Kingdom  
Tel: +44 1376 502110  
Fax: +44 1376 502125  
E-mail: sdliosales@sdli.com

And for the latest information on all SDL products please visit our web site:

[www.sdli.com](http://www.sdli.com)

All statements, technical information and recommendations related to the products herein are based upon information believed to be reliable or accurate. However, the accuracy or completeness thereof is not guaranteed, and no responsibility is assumed for any inaccuracies. The user assumes all risks and liability whatsoever in connection with the use of a product or its application. SDL reserves the right to change at any time without notice the design, specifications, function, fit or form of its products described herein, including withdraw at any time of a product herein as offered for sale. SDL makes no representations that the products herein are free from any intellectual property claims of others.