

# SERIES 100

## POWER MONITORS FOR SINGLEMODE FIBER Integral Optical Tap and Photodiode

**GR-468**  
Telcordia Qualified



**EigenLight's Series 100 Inline Power Monitors** combine a stable optical tap and PIN photodiode in a miniature, hermetic package. By utilizing a patented optical tap that scatters light out of the fiber core directly onto an integral detector, these devices maintain fiber continuity and avoid lenses or partial reflectors in the optical path to provide both exceptional performance and reliability.

### FEATURES

- Low Insertion Loss
- Return loss >70 dB
- PDL <0.01 dB
- High Directivity
- High Power capability
- Operating temperature range -5C to +75C

### APPLICATIONS

- Optical Terminal Equipment
- Coherent Systems
- Test Instrumentation
- Optical Switches
- Fiber Sensors
- Optical Amplifiers
- Optical Power Regulators

### STANDARD SPECIFICATIONS<sup>1</sup>

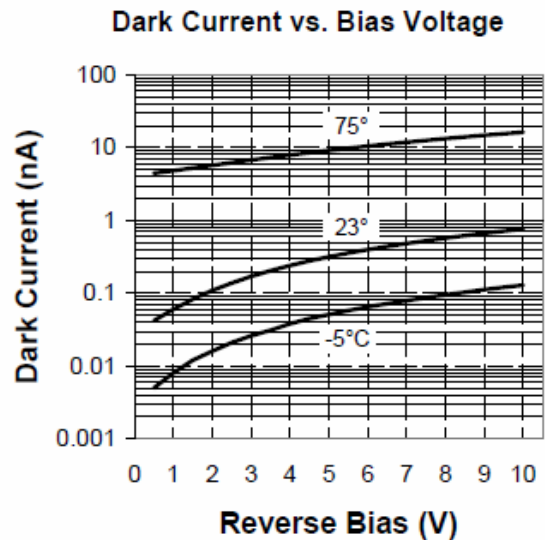
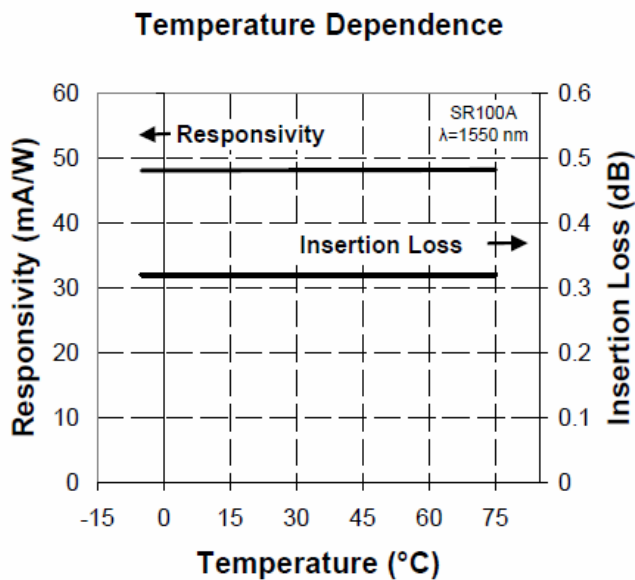
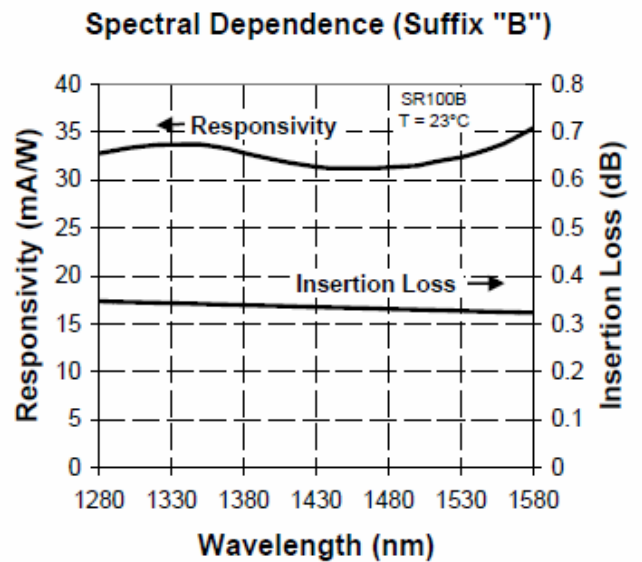
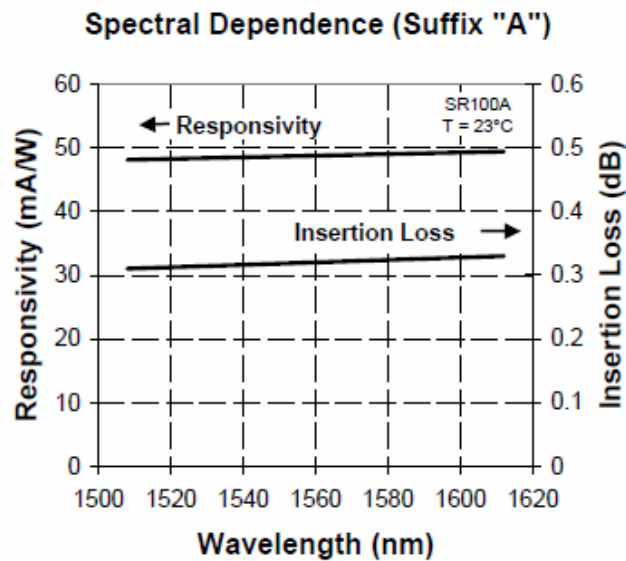
PARAMETER	SR100A/B	SR120A/B	SR140A/B	SR160A/B
Wavelength Range (nm)	1510 – 1610 (A) 1280 – 1580 (B)			
Responsivity <sup>2</sup> (mA/Watt)	35-60 (A) 25-50 (B)	15-35 (A) 10-25 (B)	5-15 (A) 4-10 (B)	1-5 (A) 0.5-4 (B)
Polarization Stability <sup>3</sup> (dB)	<0.15	<0.20	<0.20	<0.25
Insertion Loss (dB)	<0.4	<0.2	<0.1	<0.05
Return Loss (dB)	>70	>70	>70	>70
Polarization- dependent Loss (dB)	<0.01	<0.01	<0.01	<0.01
Directivity <sup>4</sup> (dB)	>30	>20	>15	>10
Max. Optical Power (dBm)	+16	+18	+22	+26
Fiber Type <sup>5</sup>	SMF28e			
Dark Current @ -5V, 23 C	<1 nA			
3 dB bandwidth @ -5V bias	>200 MHz			
Capacitance (pF)	<10			
Max. Forward Current (mA)	10			
Max. Reverse Current (mA)	5			
Max. Reverse Voltage (V)	10			
Operating Temperature	-5°C to +75 °C			
Storage Temperature	-40°C to +85°C			

1. Custom specifications available upon request
2. Ratio of photocurrent to optical power in fiber (measured at the output)
3. Change in responsivity with polarization
4. Sensitivity to forward directed light relative to backward directed light
5. Other fiber types available

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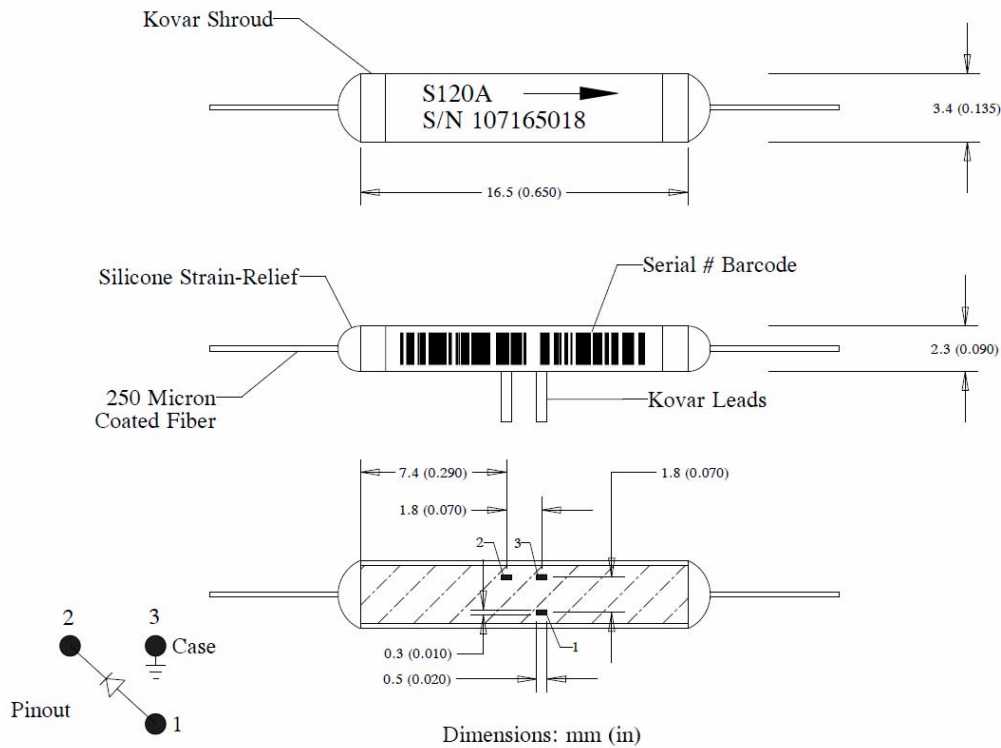
## Typical Performance (SR100)



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## Integral Optical Tap and Photodiode

### Dimensional Specifications



### Ordering Information

**Responsivity (mA/Watt)**

- 0 = 35-60 (A), 25-50 (B)
- 2 = 15-35 (A), 10-25 (B)
- 4 = 5-15 (A), 4-10 (B)
- 6 = 1-5 (A), 0.5-4 (B)

**Fiber Type**

- 0 = SMF28e 250 micron
- 1 = SMF28e 900 micron loose tube

**Connector Type**

See Table



**Wavelength Range**

- A = Standard, 1510 - 1610 nm
- B = Broadband, 1280 - 1580 nm

**Fiber Pigtail Length**

- 1 Meter Standard

### CONNECTOR TABLE

Code	Connector Type
10	FC
15	FC/APC
20	ST
25	ST/APC
30	SC
35	SC/APC
40	LC
45	LC/APC
50	MU
90	Bare Fiber