

SERIES 100

POWER MONITORS FOR SINGLEMODE FIBER Integral Optical Tap and Photodiode



GR-468
Telcordia Qualified

EigenLight's Series 100 Fiber Optic Tap Power Monitors are used for in-line measurement of power in optical fiber. A miniature, hermetic package houses a stable optical tap and PIN photodiode. EigenLight's patented process maintains fiber continuity, avoiding lenses or partial reflectors. This provides exceptional performance and reliability for the most demanding power measurement applications.

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 SPECIFICATIONS¹

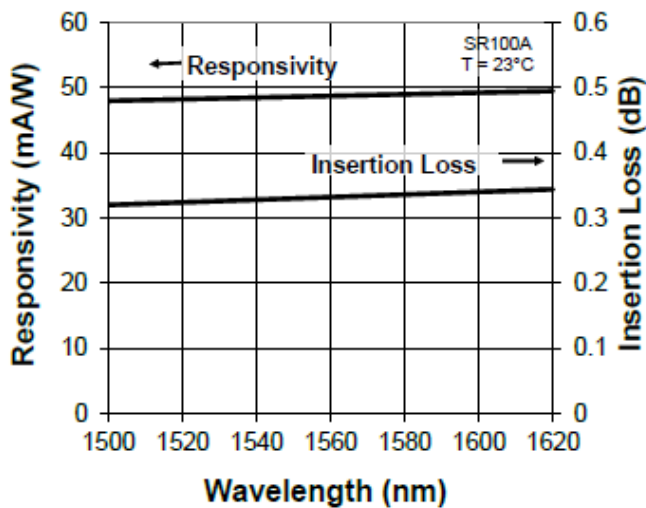
PARAMETER	SR100A/B	SR120A/B	SR140A/B	SR160A/B
Wavelength Range (nm)	1510 – 1610 (A) 1280 – 1580 (B)			
Responsivity ² (mA/Watt)	35-60 (A) 25-50 (B)	15-35 (A) 10-25 (B)	5-15 (A) 4-10 (B)	1-5 (A) 0.5-4 (B)
Polarization Stability ³ (dB)	<0.15	<0.20	<0.20	<0.25
Insertion Loss (dB)	<0.4	<0.2	<0.1	<0.05
Return Loss (dB)	>70	>70	>70	>70
Polarization- dependent Loss (dB)	<0.01	<0.01	<0.01	<0.01
Directivity ⁴ (dB)	>30	>20	>15	>10
Max. Optical Power (dBm)	+16	+18	+22	+26
Fiber Type ⁵	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

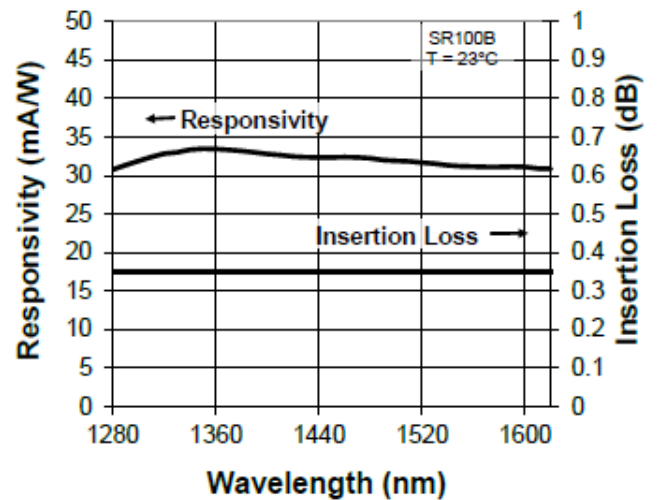
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Typical Performance (SR100)

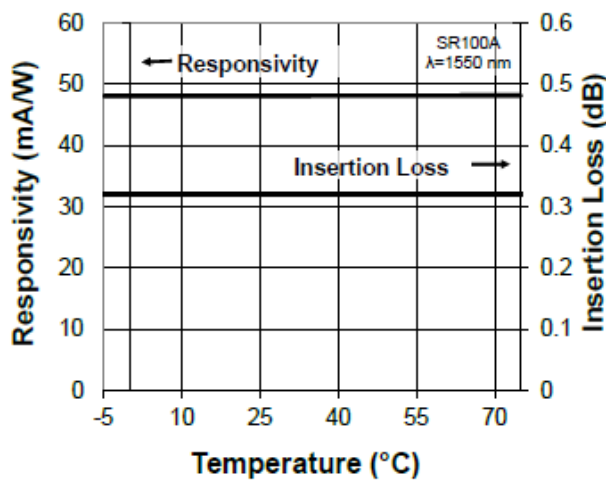
Spectral Dependence (Suffix "A")



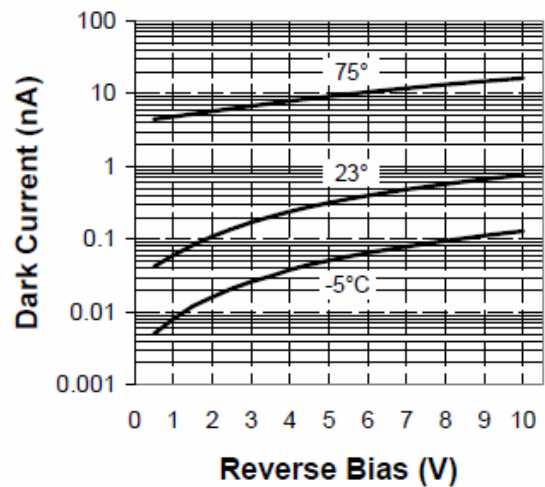
Spectral Dependence (Suffix "B")



Temperature Dependence

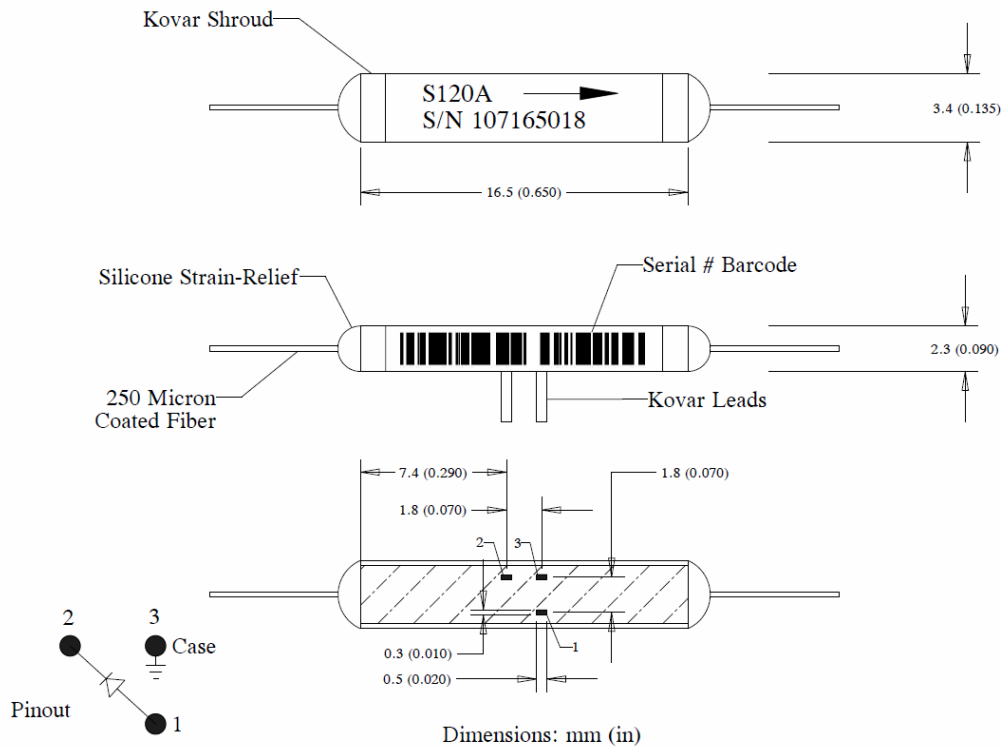


Dark Current vs. Bias Voltage



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Integral Optical Tap and Photodiode



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