

# High Voltage Opto-diode - Axial Lead

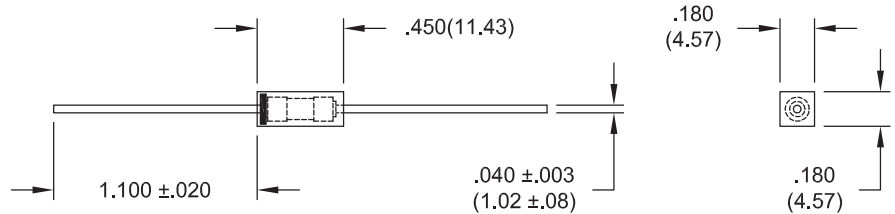
Original Released: 03-06-09

**0.5 A • 3000ns**

ELECTRICAL CHARACTERISTICS AND MAXIMUM RATINGS														
Part Number	Working Reverse Voltage (V <sub>rw</sub> )	Average Rectified Current (I <sub>o</sub> )		Reverse Current @ V <sub>rw</sub> (I <sub>r</sub> )		Forward Voltage (V <sub>f</sub> )		1 Cycle Surge Current t <sub>p</sub> =8.3ms (I <sub>fsm</sub> )	Repetitive Surge Current (I <sub>frm</sub> )	Reverse Recovery Time (3) (T <sub>rr</sub> )	Thermal Impedance θ <sub>J-L</sub>			Junction Cap. @50VDC @ 1kHz (C <sub>j</sub> )
		Volts	55°C(1)	100°C(2)	25°C	100°C	25°C		25°C	25°C	25°C	L=000	L=.125	L=.250
	Amps		Amps	Amps	μA	μA	Volts	Amps	Amps	Amps	ns	°C/W	°C/W	°C/W
OZ100SG	10000	0.50	0.25	1.0	25	12.0	0.60	25	5.0	3000	6	9	15	8.0
(1)TL=55°C L=0.375" (2)TL=100°C L=0.375" (3)I <sub>f</sub> =0.5A, I <sub>r</sub> =1.0A, I <sub>rr</sub> =0.25A *Op.Temp.= -65°C to +175°C Stg.Temp.= -65°C to +200°C														

Markings:  
B VMI  
A OZ100SG  
N D/C  
D

Tolerance:  
XXX ±.010



Dimensions: In. (mm) • All temperatures are ambient unless otherwise noted. • Data subject to change without notice.



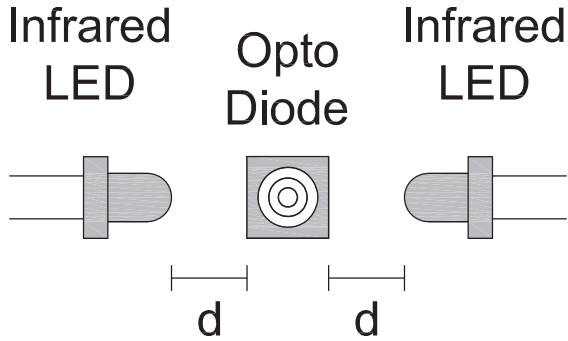
**Voltage Multipliers Inc.**

8711 W. Roosevelt Ave.  
Visalia, CA 93291 USA

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Fax: 559.651.0740

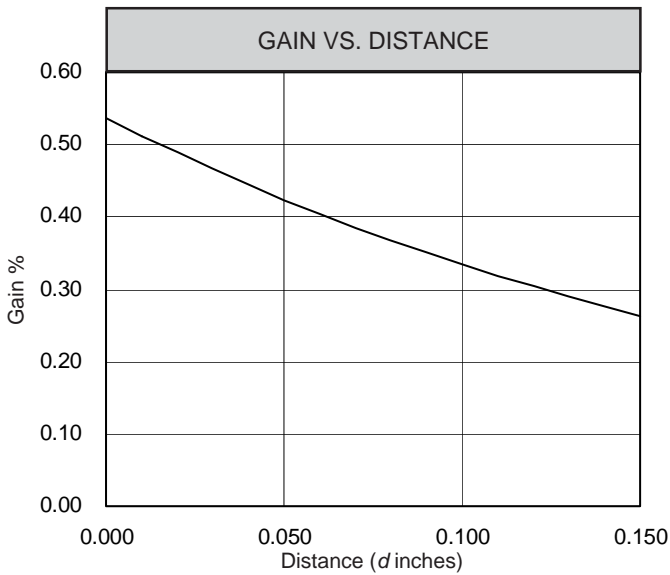
www.voltagemultipliers.com  
www.highvoltagepowersupplies.com

## Typical HV Opto-Coupler Configuration

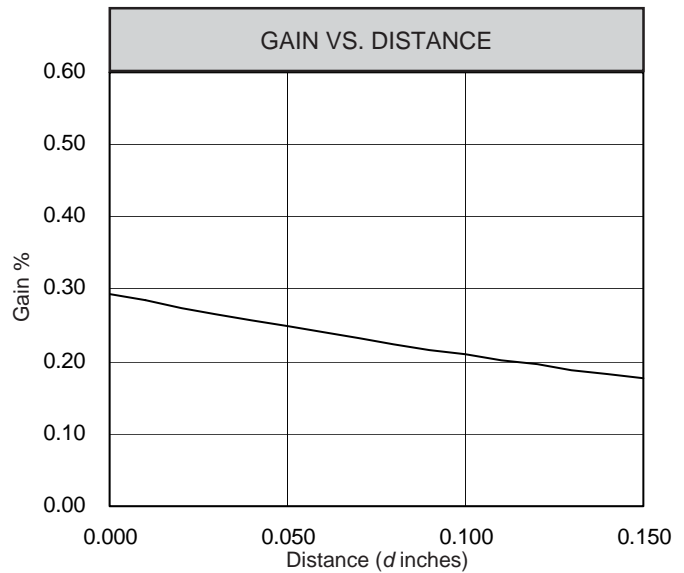


- LEDs placed in close proximity to opto-diode.
- Gain of configuration is determined by:
 
$$\frac{I_{\text{OPTO}}}{I_{\text{LED}}} \times 100\%$$
- Gain is dependent on:
  - Distance ( $d$ ) of LEDs from opto-diode.
  - Wavelength of LED light ( $\lambda_{\text{LED}}$ ).
  - Intensity of LED light ( $\Phi_e$ ).
  - Optical properties of medium between LEDs and opto-diode.

$\lambda_{\text{LED}} = 940 \text{ nm}, \Phi_{e \text{ min}} = 40 \text{ mW/sr}$



$\lambda_{\text{LED}} = 890 \text{ nm}, \Phi_{e \text{ min}} = 50 \text{ mW/sr}$



Both configurations use  $V_{\text{OPTO}} = 10\text{kV}$  and two LEDs

# OZ100SG

