



**FEATURES**

- Ultra-High Optical Output
- 850 nm IR Illuminator
- Very Uniform Optical Beam
- Standard 2-Lead TO-66 Electrically Isolated Package
- Ideal for Night Vision Illumination

**Electro-Optical Characteristics at 25°C**

Parameters	Test Conditions	Min	Typ	Max	Units
Total Power Output, $P_o$	$I_F = 300 \text{ mA}$	300	425		mW
Peak Emission Wavelength, $\lambda_P$	$I_F = 50 \text{ mA}$		850		nm
Spectral Bandwidth at 50%, $\Delta\lambda$	$I_F = 50 \text{ mA}$		40		nm
Half Intensity Beam Angle, $\theta$	$I_F = 50 \text{ mA}$		120		Deg
Forward Voltage, $V_F$	$I_F = 300 \text{ mA}$		4.8	5.4	Volts
Reverse Breakdown Voltage, $V_R$	$I_R = 10 \mu\text{A}$	5	30		Volts
Rise Time			100		nsec
Fall Time			100		nsec

**Absolute Maximum Ratings at 25°C Case**

Parameters	Units
Power Dissipation <sup>1</sup>	2.2 W
Continuous Forward Current	400 mA
Peak Forward Current (10 $\mu\text{s}$ , 200 Hz) <sup>2</sup>	1 A
Reverse Voltage	5 V
Lead Soldering Temperature (1/16" from case for 10 sec)	260°C

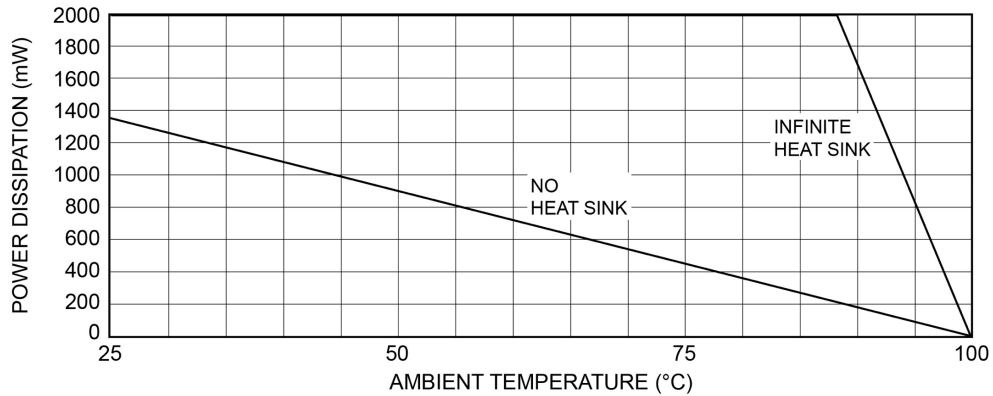
<sup>1</sup> Derate per thermal derating curve above 25°C.

<sup>2</sup> Derate linearly above 25°C.

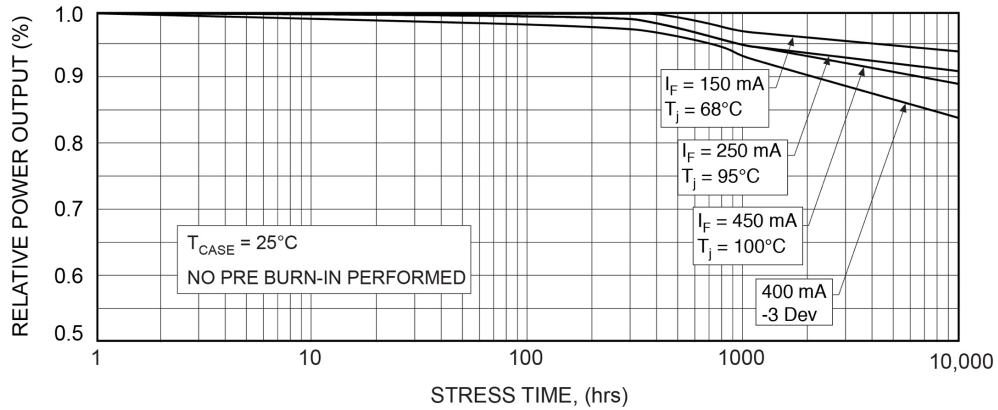
**Thermal Parameters**

Parameters	Units
Storage and Operating Temperature Range	-40°C to 100°C
Maximum Junction Temperature	100°C
Thermal Resistance, $R_{THJA}$	60°C/W Typical
Thermal Resistance, $R_{THJC}$	16°C/W Typical

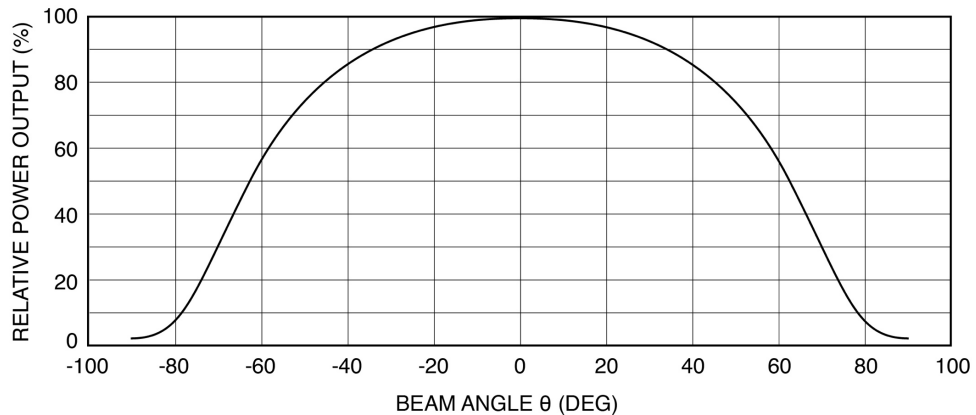
**Maximum Rated Thermal Derating Curve**



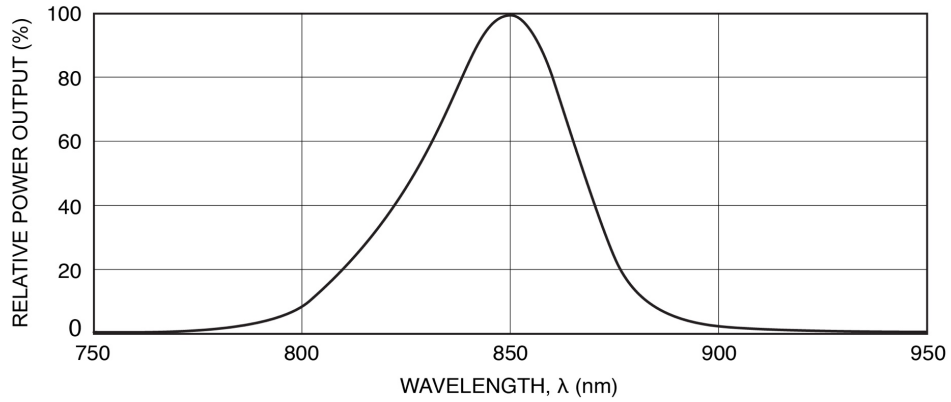
**Typical Degradation Curve**



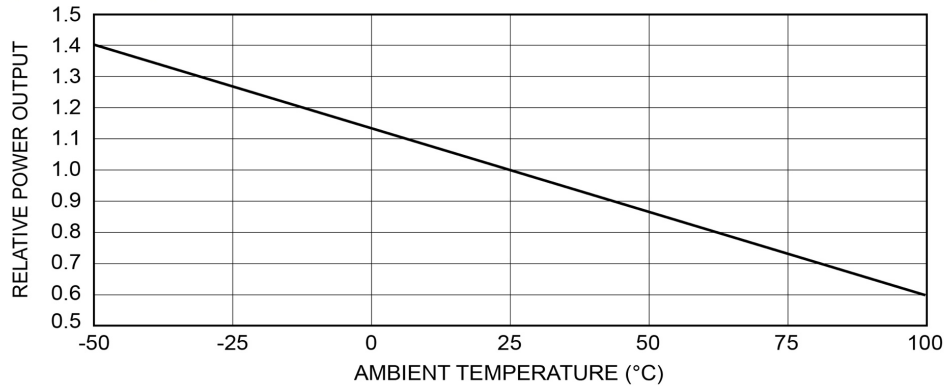
**Typical Radiation Pattern**



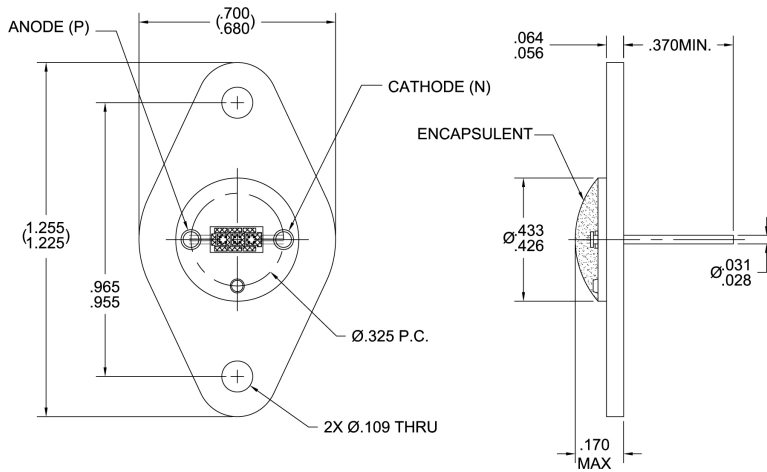
**Typical Spectral Output**



**Typical Power Output vs Temperature**



**Package Information**



All surfaces are gold plated. Dimensions are nominal values in inches unless otherwise specified.

Specifications are subject to change without prior notice.