



**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 <sub>o</sub>	I <sub>F</sub> = 300 mA	300	425		mW
Peak Emission Wavelength, λ <sub>P</sub>	I <sub>F</sub> = 50 mA		850		nm
Spectral Bandwidth at 50%, Δλ	I <sub>F</sub> = 50 mA		40		nm
Half Intensity Beam Angle, θ	I <sub>F</sub> = 50 mA		120		Deg
Forward Voltage, V <sub>F</sub>	I <sub>F</sub> = 300 mA		4.8	5.4	Volts
Reverse Breakdown Voltage, V <sub>R</sub>	I <sub>R</sub> = 10 μA	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 μs, 200 Hz) <sup>2</sup>	1 A
Reverse Voltage	5 V
Lead Soldering Temperature (1/16" from case for 10 sec)	260°C

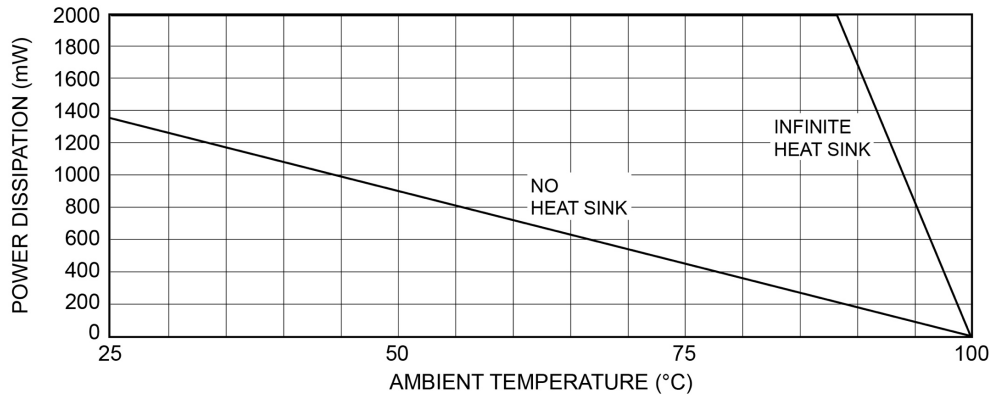
<sup>1</sup> Derate per thermal derating curve above 25°C.

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

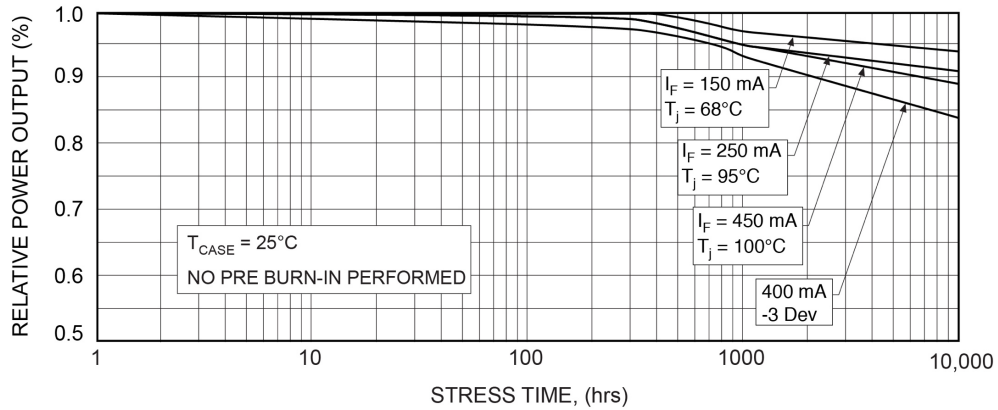
**Thermal Parameters**

Parameters	Units
Storage and Operating Temperature Range	-40°C to 100°C
Maximum Junction Temperature	100°C
Thermal Resistance, R <sub>THJA</sub>	60°C/W Typical
Thermal Resistance, R <sub>THJC</sub>	16°C/W Typical

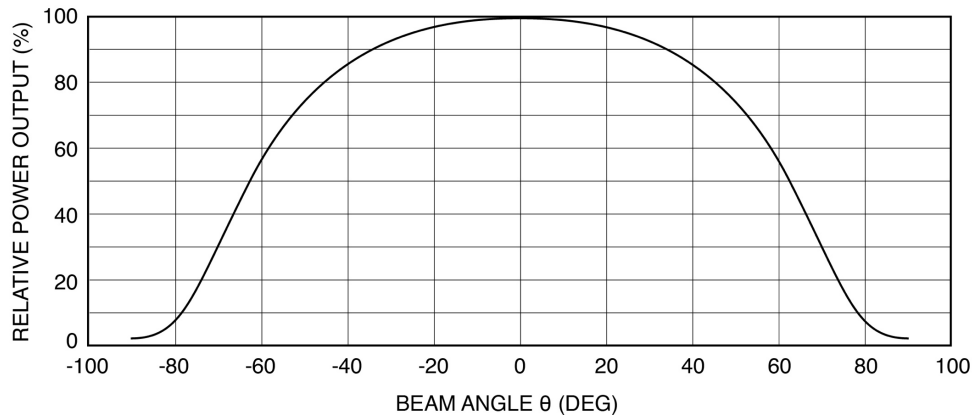
Maximum Rated Thermal Derating Curve



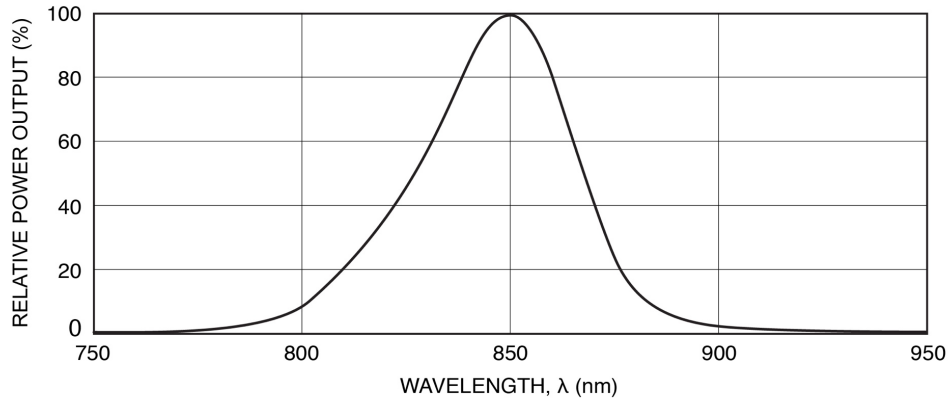
Typical Degradation Curve



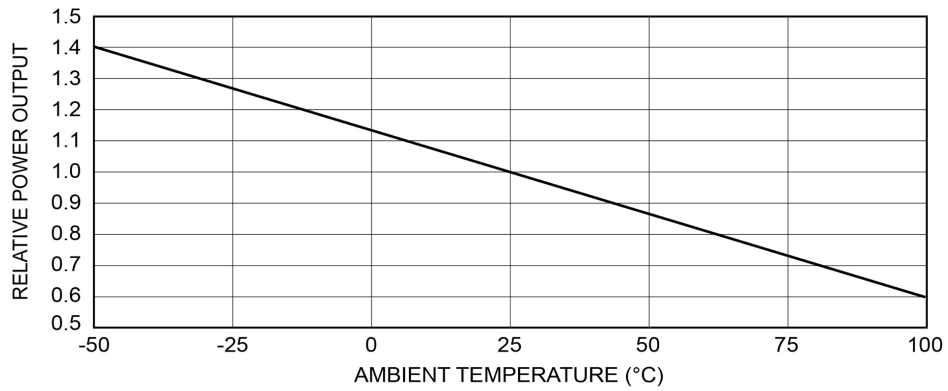
Typical Radiation Pattern



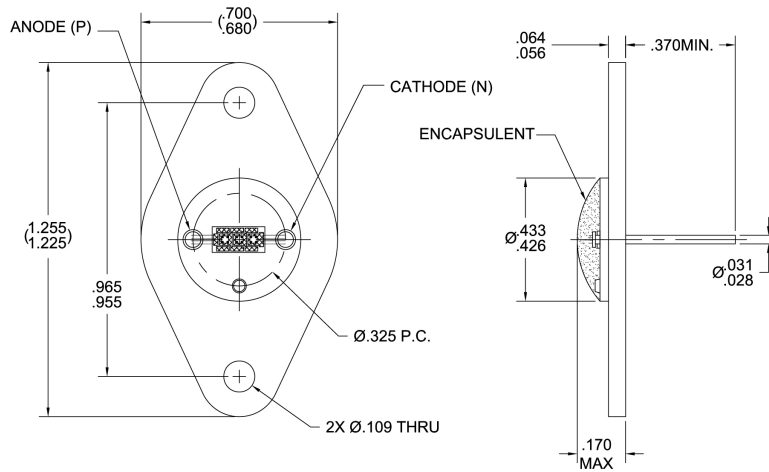
**Typical Spectral Output**



**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.