

**FEATURES**

- Ultra high power output
- Four wire bonds on die corners
- Very narrow optical beam
- Standard 3-lead TO-39 hermetic package
- Chip size .030 x .030 inches

All surfaces are gold plated. Dimensions are nominal values in inches unless otherwise specified. Two cathode pins **must be** externally connected together.



**ELECTRO-OPTICAL CHARACTERISTICS AT 25°C**

PARAMETERS	TEST CONDITIONS	MIN	TYP	MAX	UNITS
Total Power Output, P <sub>o</sub>	I <sub>F</sub> = 500mA I <sub>F</sub> = 10A	40	50 600		mW
Radiant Intensity, I <sub>e</sub>	I <sub>F</sub> = 500mA		500		mW/sr
Peak Emission Wavelength, λ <sub>p</sub>	I <sub>F</sub> = 50mA		880		nm
Spectral Bandwidth at 50%, Δλ			80		nm
Half Intensity Beam Angle, θ			7		Deg
Forward Voltage, V <sub>F</sub>	I <sub>F</sub> = 500mA		1.65	2	Volts
Reverse Breakdown Voltage, V <sub>R</sub>	I <sub>R</sub> = 10μA	5	30		Volts
Capacitance, C	V <sub>R</sub> = 0V		90		pF
Rise Time			0.7		μSEC
Fall Time			0.7		μsec

**ABSOLUTE MAXIMUM RATINGS AT 25°C CASE**

Power Dissipation <sup>1</sup>	1000mW
Continuous Forward Current	500mA
Peak Forward Current (10μs, 400Hz) <sup>2</sup>	10A
Reverse Voltage	5V
Lead Soldering Temperature (1/16" from case for 10sec)	260°C

<sup>1</sup>Derate per Thermal Derating Curve above 25°C

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

**THERMAL PARAMETERS**

Storage and Operating Temperature Range	-55°C to 100°C
Maximum Junction Temperature	100°C
Thermal Resistance, R <sub>THJA</sub> <sup>1</sup>	150°C/W Typical
Thermal Resistance, R <sub>THJA</sub> <sup>2</sup>	60°C/W Typical

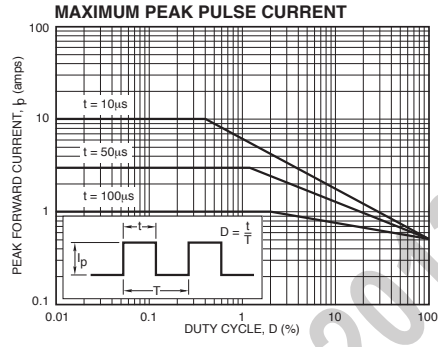
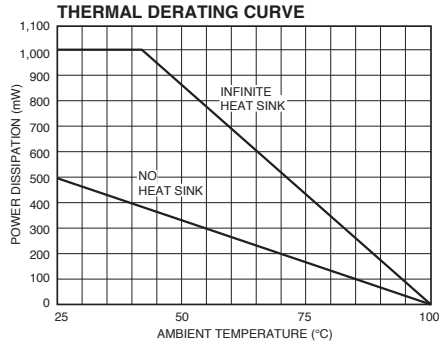
<sup>1</sup>Heat transfer minimized by measuring in still air with minimum heat conducting through leads

<sup>2</sup>Air circulating at a rapid rate to keep case temperature at 25°C

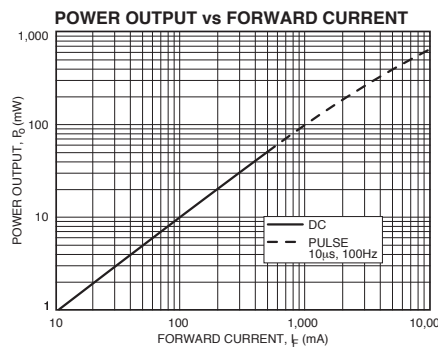
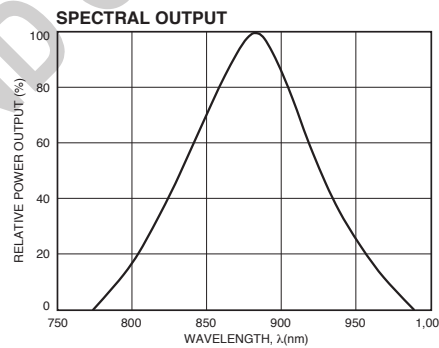
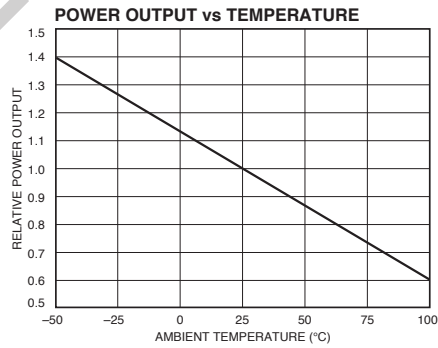
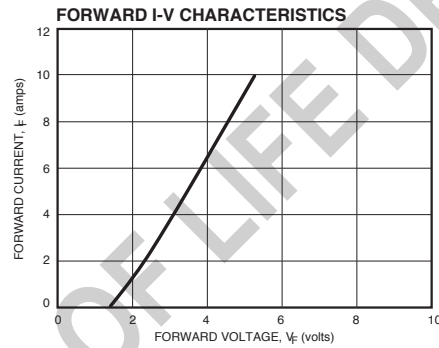
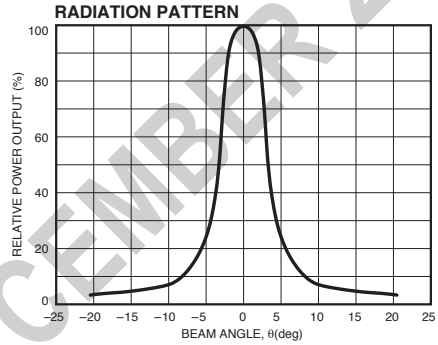
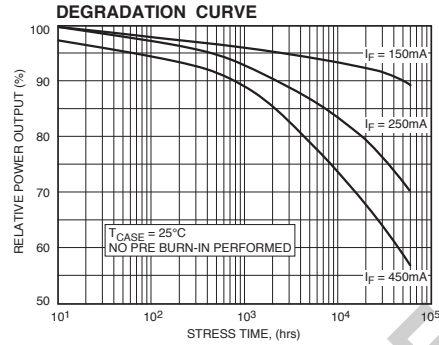


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MAXIMUM RATINGS



TYPICAL CHARACTERISTICS



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