

**FEATURES**

- High Reliability LPE GaAlAs IRLEDs
- Ultra-High-Power Output
- 880 nm Peak Emission
- Six Chips Connected in Series
- Very Wide Angle of Emission
- Electrically Isolated Case

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

Parameters	Test Conditions	Min	Typ	Max	Units
Total Power Output, $P_o$	$I_F = 300 \text{ mA}$ $I_F = 6 \text{ A}$	300	330 5000		mW
Peak Emission Wavelength, $\lambda_p$	$I_F = 50 \text{ mA}$		880		nm
Spectral Bandwidth at 50%, $\Delta\lambda$	$I_F = 50 \text{ mA}$		80		nm
Half Intensity Beam Angle, $\theta$	$I_F = 50 \text{ mA}$		120		Deg
Forward Voltage, $V_F$	$I_F = 300 \text{ mA}$		9	10	Volts
Reverse Breakdown Voltage, $V_R$	$I_R = 10 \mu\text{A}$	5	30		Volts
Capacitance, C	$V_R = 0 \text{ V}$		15		pF
Rise Time			2		$\mu\text{sec}$
Fall Time			2		$\mu\text{sec}$

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

Parameters	Units
Power Dissipation <sup>1</sup>	4 W
Continuous Forward Current	400 mA
Peak Forward Current (10 $\mu\text{s}$ , 400 Hz) <sup>2</sup>	6 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.

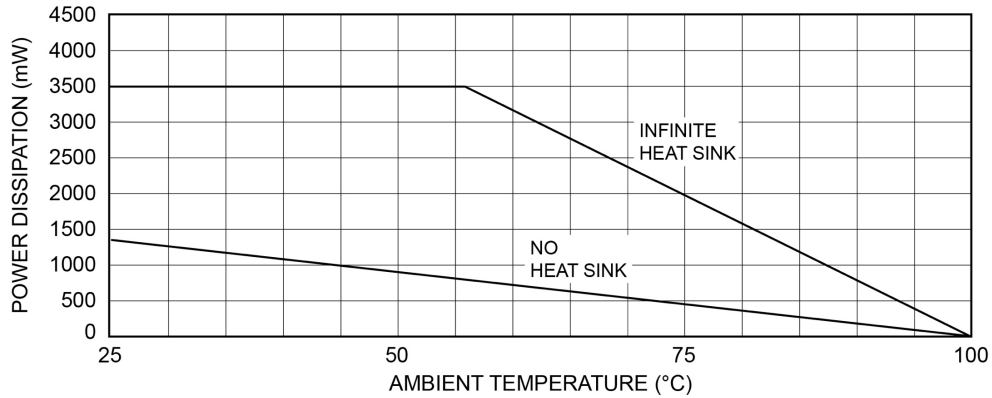
**Thermal Parameters**

Parameters	Units
Storage and Operating Temperature Range	-55°C to 100°C
Maximum Junction Temperature	100°C
Thermal Resistance, $R_{THJA}$ <sup>1</sup>	60°C/W Typical
Thermal Resistance, $R_{THJA}$ <sup>2</sup>	16°C/W Typical

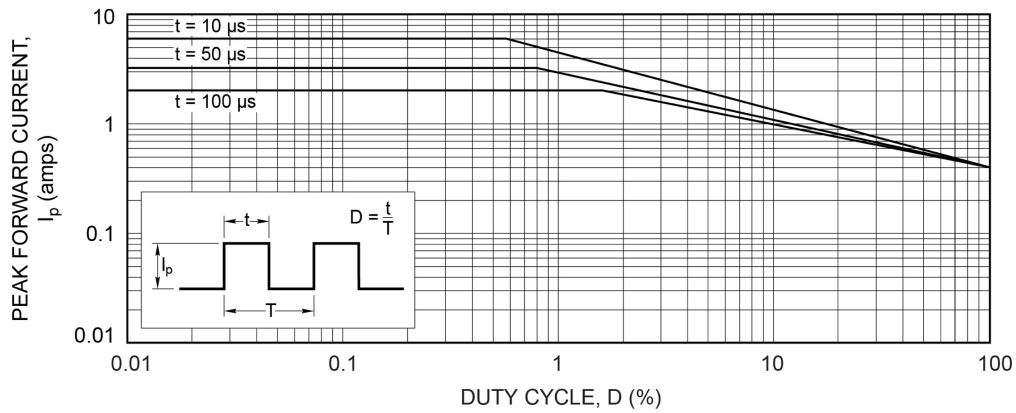
<sup>1</sup> Heat transfer minimized by measuring in still air with minimum heat conducting through leads.

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

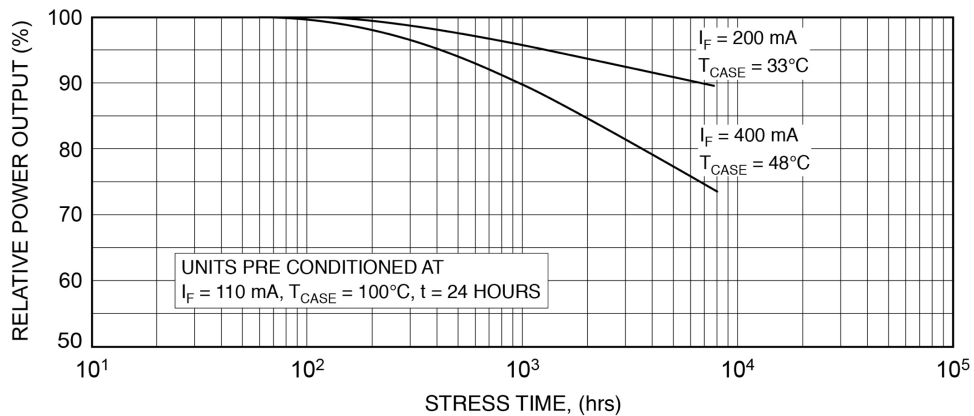
**Maximum Rated Thermal Derating Curve**



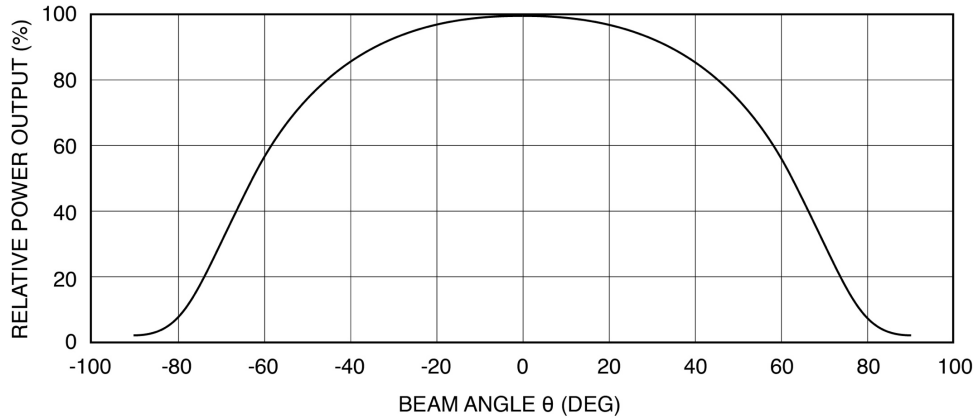
**Maximum Rated Peak Pulse Current**



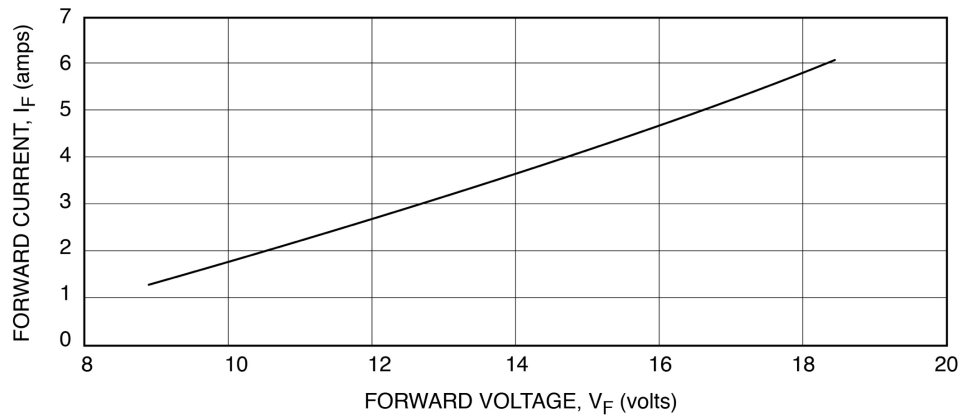
**Typical Degradation Curve**



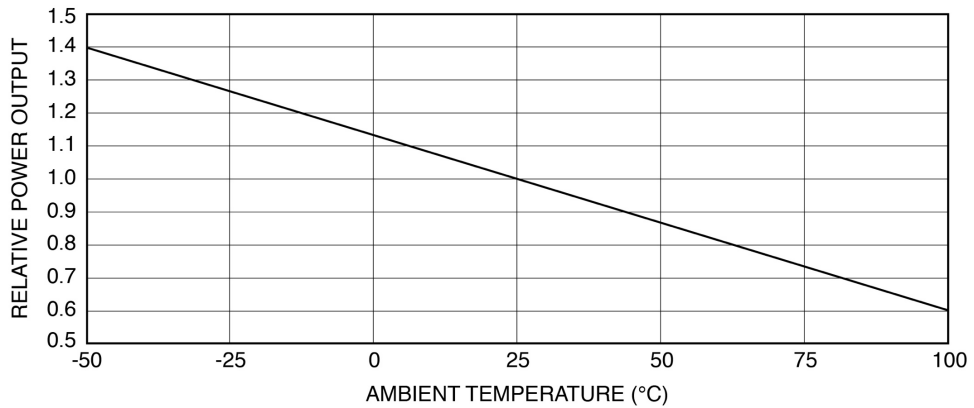
**Typical Radiation Pattern**



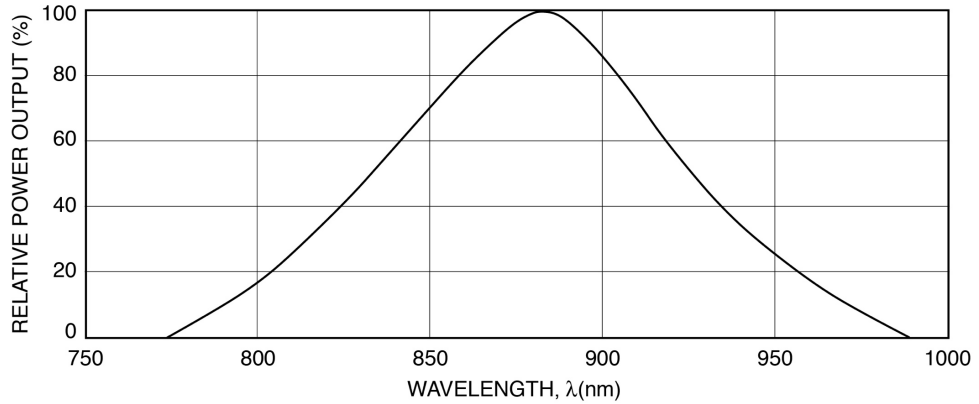
**Typical Forward I-V Characteristics**



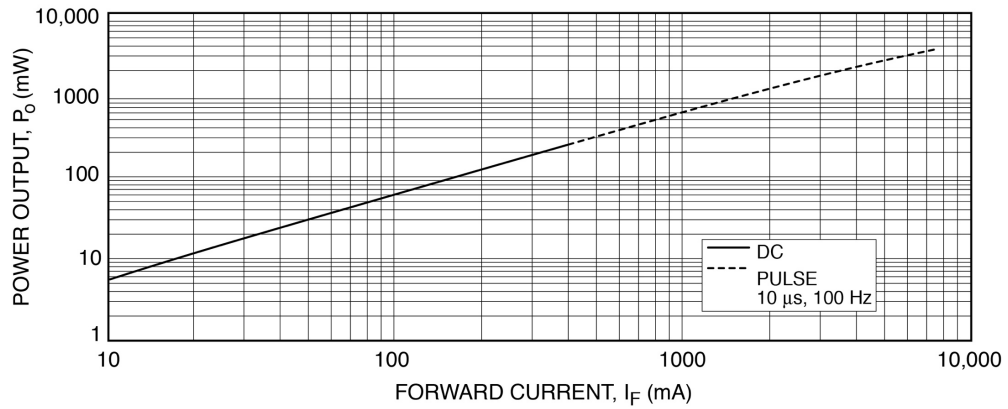
**Typical Power Output vs Temperature**



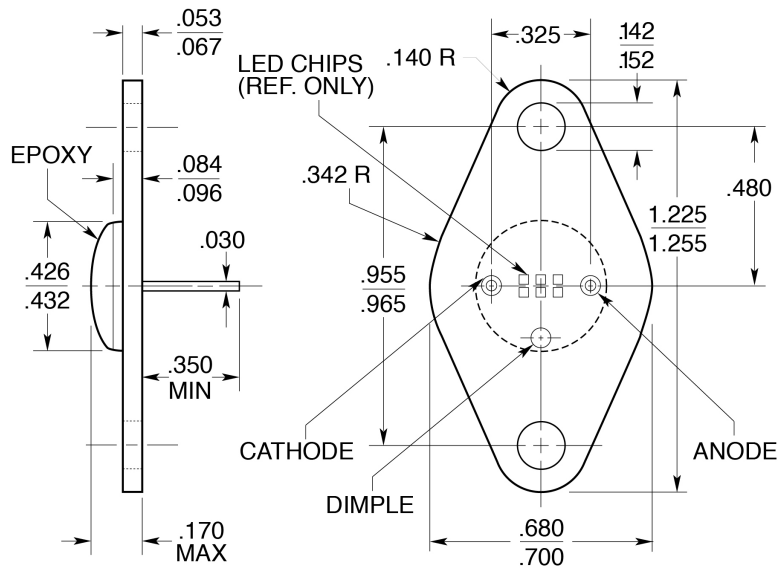
**Typical Spectral Output**



**Typical Power Output vs Forward Current**



**Package Information**



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

Specifications are subject to change without prior notice.