



FEATURES

- Super High-Power Output
- 880 nm Peak Emission
- Three Chips Connected in Series
- TO-66 Header for Good Heat Dissipation
- 100% Tested for Power Output
- Electrically Isolated Case

Electro-Optical Characteristics at 25°C

Parameters	Test Conditions	Min	Тур	Max	Units
Total Power Output, P _o	I _F = 300 mA I _F = 8 A	150	170 3500		mW
Peak Emission Wavelength, λ _P	$I_F = 50 \text{ mA}$		880		nm
Spectral Bandwidth at 50%, Δλ	$I_F = 50 \text{ mA}$		80		nm
Half Intensity Beam Angle, θ	I _F = 50 mA		120		Deg
Forward Voltage, V _F	I _F = 300 mA		4.5	5	Volts
Reverse Breakdown Voltage, V _R	I _R = 10 μA	5	30		Volts
Capacitance, C	V _R = 0 V		30		pF
Rise Time			1		μsec
Fall Time			1		μsec

Absolute Maximum Ratings at 25°C Case

Parameters	Units		
Power Dissipation ¹	2 W		
Continuous Forward Current	400 mA		
Peak Forward Current (10 μs, 400 Hz) ²	8 A		
Reverse Voltage	5 V		
Lead Soldering Temperature (1/16" from case for 10 sec)	260°C		

¹ Derate per thermal derating curve 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} ¹	60°C/W Typical		
Thermal Resistance, R _{THJA} ²	16°C/W Typical		

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

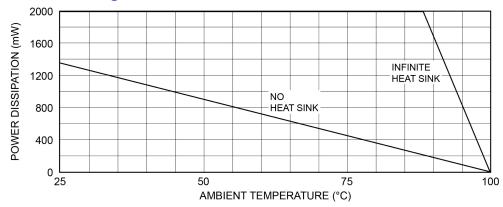
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² Derate linearly above 25°C.

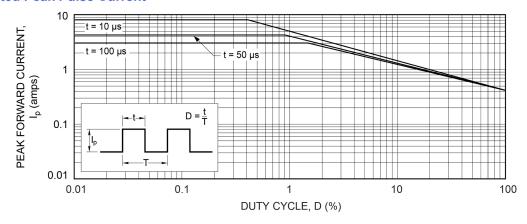
 $^{^2\}mbox{Air}$ circulating at a rapid rate to keep case temperature at 25°C.



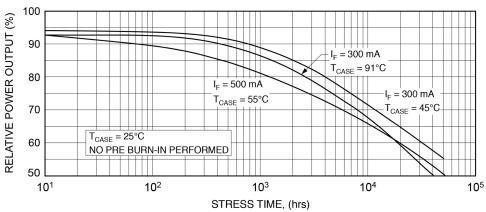
Maximum Rated Thermal Derating Curve



Maximum Rated Peak Pulse Current



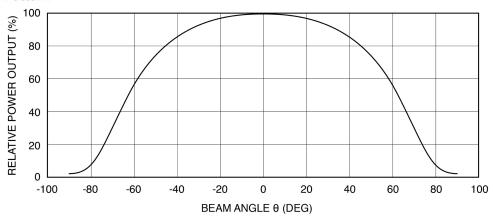
Typical Degradation Curve



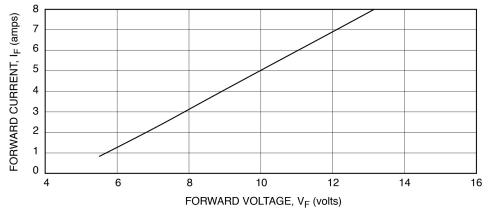
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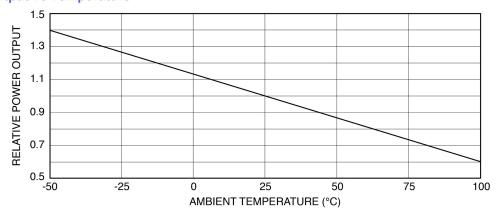
Typical Radiation Pattern



Typical Forward I-V Characteristics



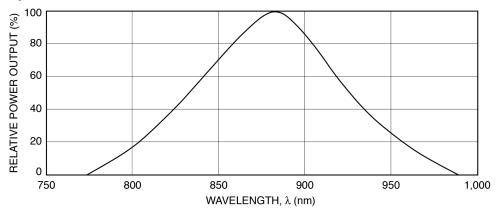
Typical Power Output vs Temperature



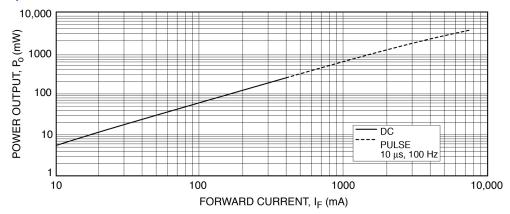
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Typical Spectral Output



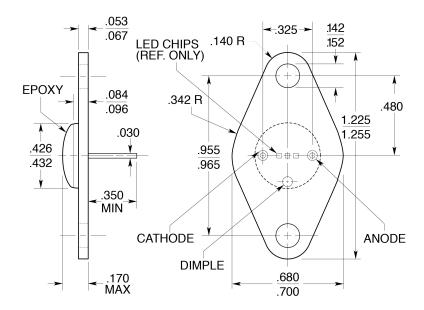
Typical Power Output vs Forward Current



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Package Information



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

Specifications are subject to change without prior notice.

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