



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 | Typ | 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 mA | | 880 | | nm |
| Spectral Bandwidth at 50%, Δλ | I _F = 50 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.

² Derate linearly above 25°C.

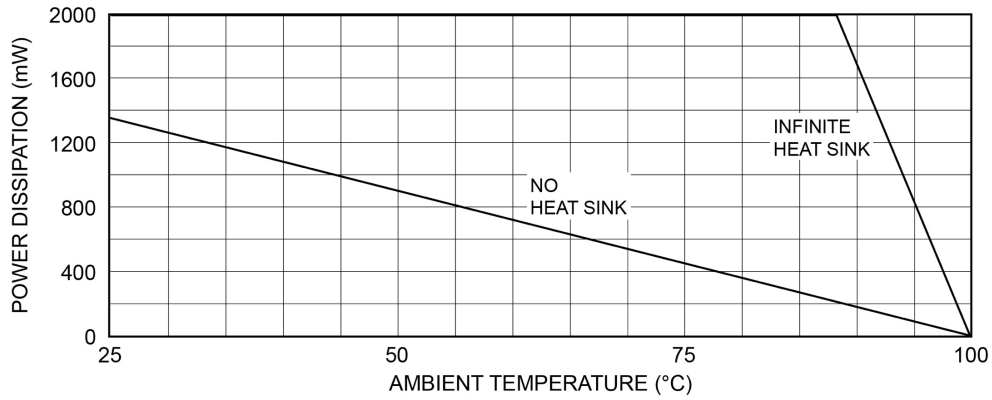
Thermal Parameters

| Parameters | Units |
|--|----------------|
| Storage and Operating Temperature Range | -55°C to 100°C |
| Maximum Junction Temperature | 100°C |
| Thermal Resistance, R _{THJA} ¹ | 60°C/W Typical |
| Thermal Resistance, R _{THJA} ² | 16°C/W Typical |

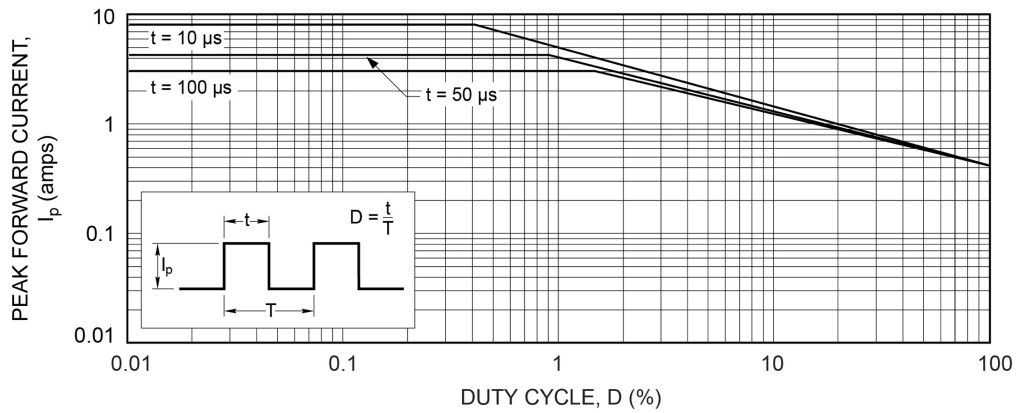
¹ Heat transfer minimized by measuring in still air with minimum heat conducting through leads.

² Air circulating at a rapid rate to keep case temperature at 25°C.

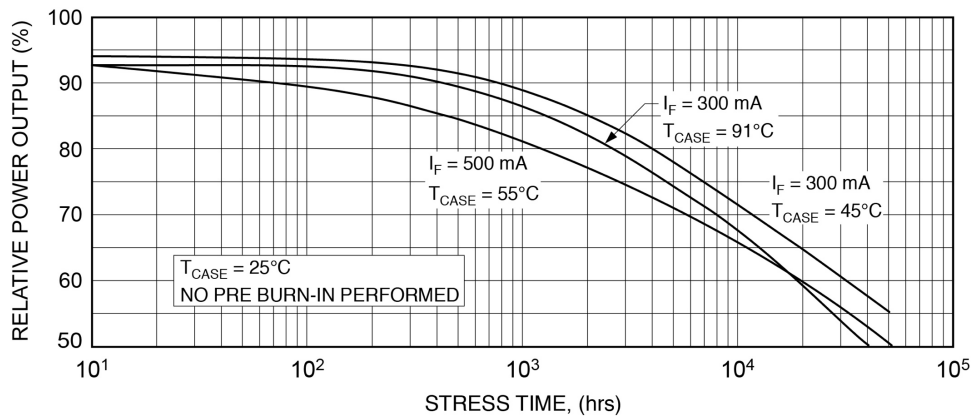
Maximum Rated Thermal Derating Curve



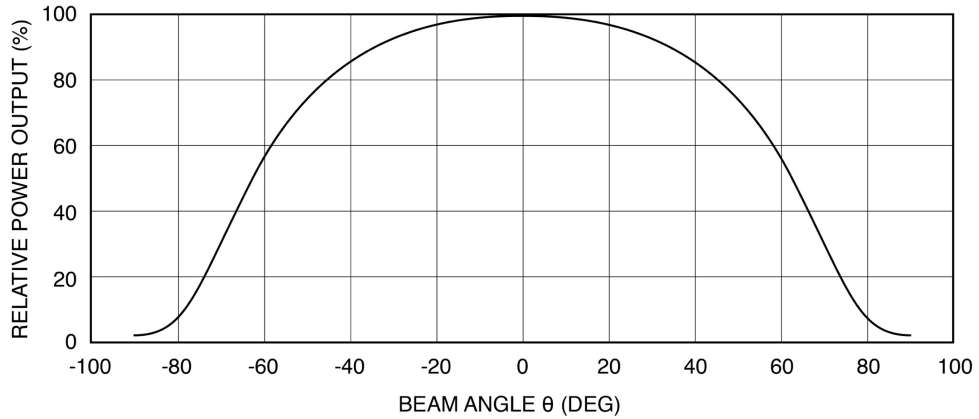
Maximum Rated Peak Pulse Current



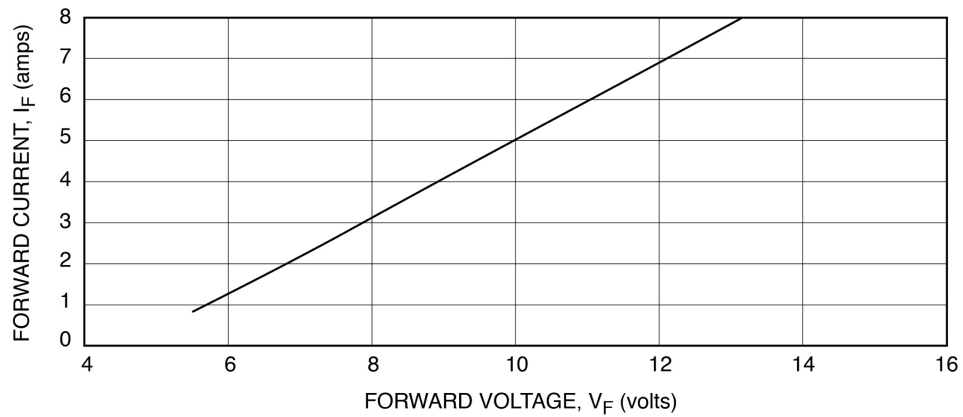
Typical Degradation Curve



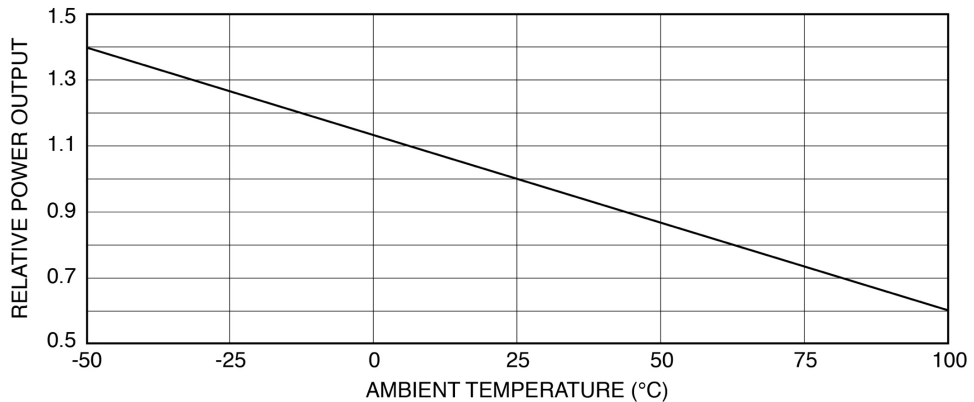
Typical Radiation Pattern



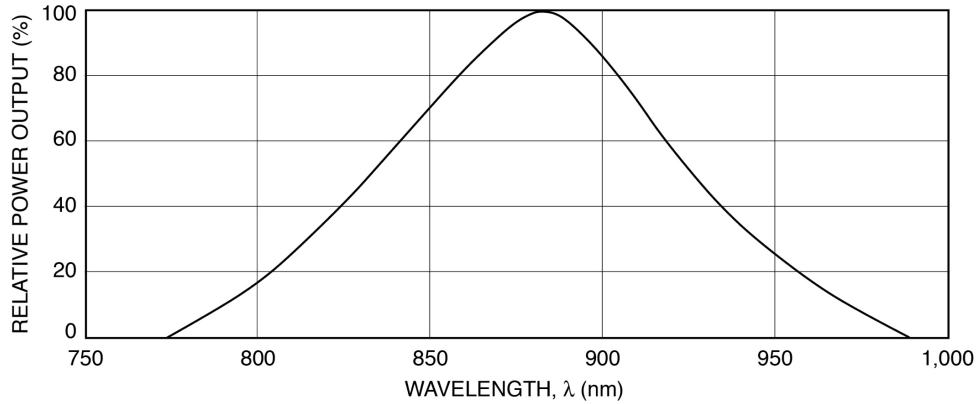
Typical Forward I-V Characteristics



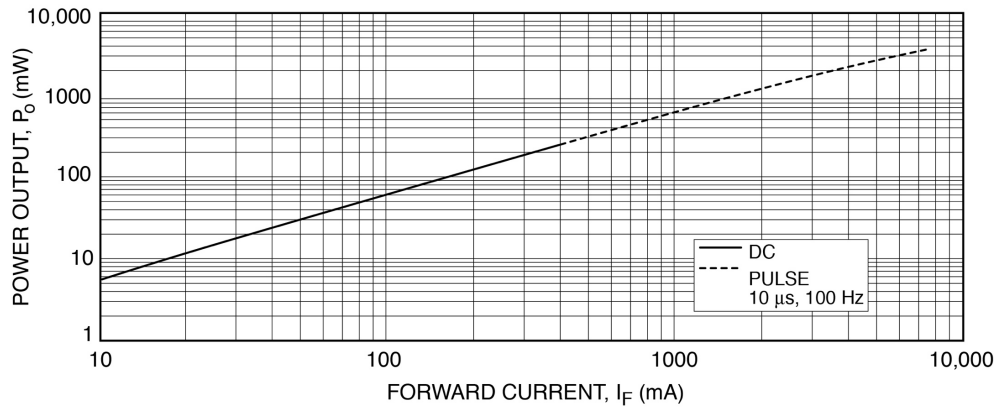
Typical Power Output vs Temperature



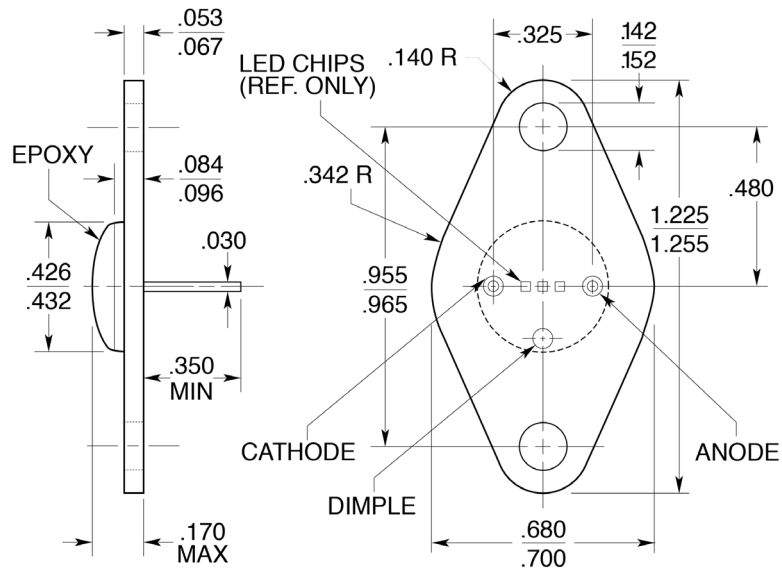
Typical Spectral Output



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.