

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 _o	I _F = 500mA I _F = 10A	40	50 600		mW
Radiant Intensity, I _e	I _F = 500mA		500		mW/sr
Peak Emission Wavelength, λ _p			880		nm
Spectral Bandwidth at 50%, Δλ	I _F = 50mA		80		nm
Half Intensity Beam Angle, θ			7		Deg
Forward Voltage, V _F	I _F = 500mA		1.65	2	Volts
Reverse Breakdown Voltage, V _R	I _R = 10μA	5	30		Volts
Capacitance, C	V _R = 0V		90		pF
Rise Time			0.7		μSEC
Fall Time			0.7		μsec

ABSOLUTE MAXIMUM RATINGS AT 25°C CASE

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

¹Derate per Thermal Derating Curve above 25°C

²Derate linearly above 25°C

THERMAL PARAMETERS

Storage and Operating Temperature Range	-55°C to 100°C
Maximum Junction Temperature	100°C
Thermal Resistance, R _{THJA} ¹	150°C/W Typical
Thermal Resistance, R _{THJA} ²	60°C/W Typical

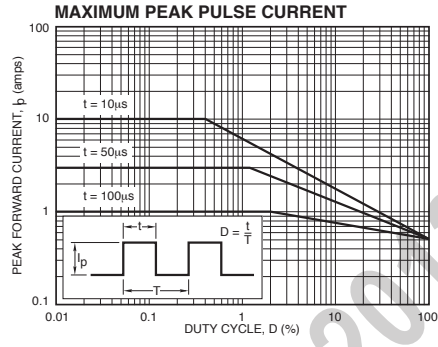
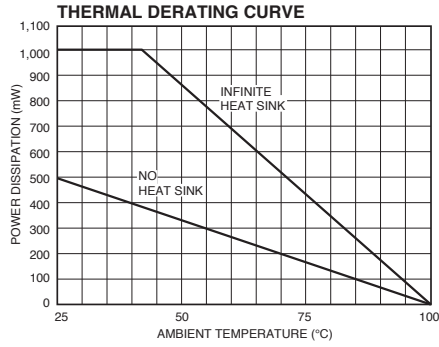
¹Heat transfer minimized by measuring in still air with minimum heat conducting through leads

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



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MAXIMUM RATINGS



TYPICAL CHARACTERISTICS

