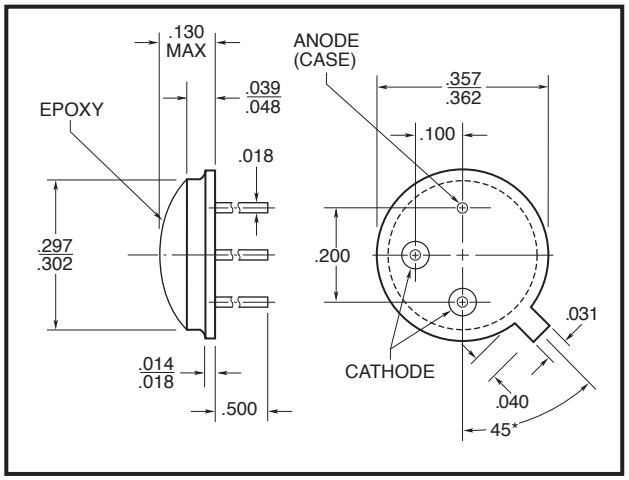
SUPER HIGH-POWER GaAlAs IR EMITTERS OD-100



FEATURES

- Ultra high power output
- Four wire bonds on die corners
- Very uniform 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.

Pb
RoHS

ELECTRO-OPTICAL CHARACTERISTICS AT 25°C

PARAMETERS	TEST CONDITIONS	MIN	TYP	MAX	UNITS
Total Power Output, P_o	I_F = 500mA I_F = 10A	80	100 1300		mW
Radiant Intensity, I_e	I_F = 500mA		60		mW/sr
Peak Emission Wavelength, λ_P	I_F = 50mA		880		nm
Spectral Bandwidth at 50%, $\Delta\lambda$			80		nm
Half Intensity Beam Angle, θ			110		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]	1000 mW
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

[1]Derate per Thermal Derating Curve above 25°C
[2]Derate linearly above 25°C

THERMAL PARAMETERS

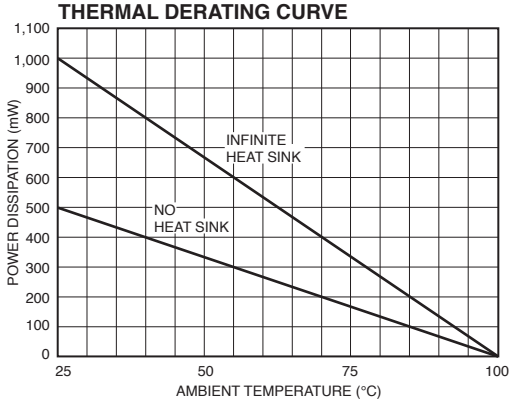
Storage and Operating Temperature Range	-55°C to 100°C
Maximum Junction Temperature	100°C
Thermal Resistance, R_{THJA}[1]	145°C/W Typical
Thermal Resistance, R_{THJA}[2]	75°C/W Typical

[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

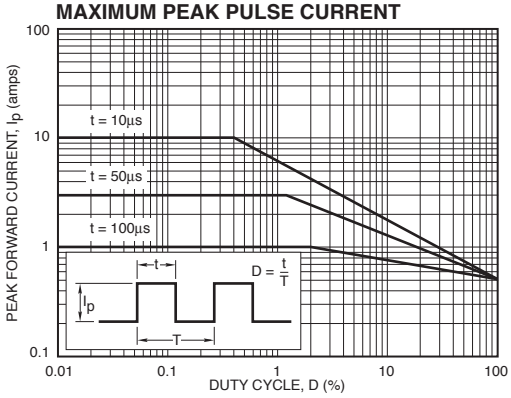
OPTO DIODE CORP.
750 Mitchell Road, Newbury Park, California 91320
Phone: (805) 499-0335, Fax: (805) 499-8108
Email: sales@optodiode.com, Website: www.optodiode.com

MAXIMUM RATINGS

THERMAL DERATING CURVE

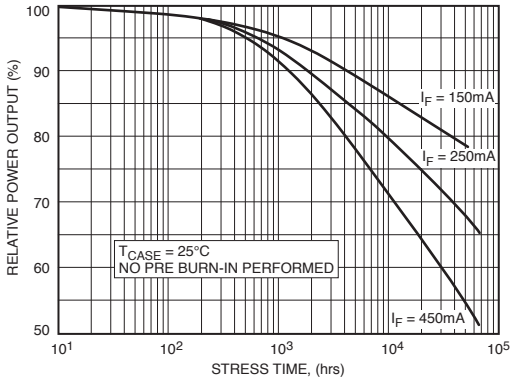


MAXIMUM PEAK PULSE CURRENT

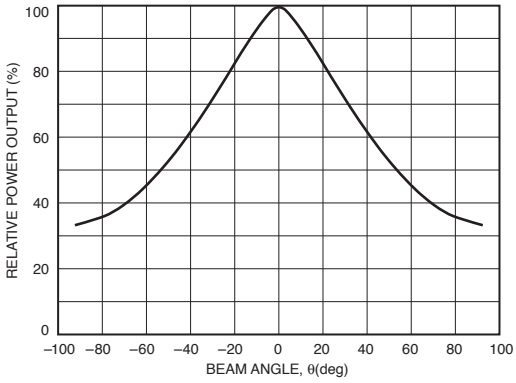


TYPICAL CHARACTERISTICS

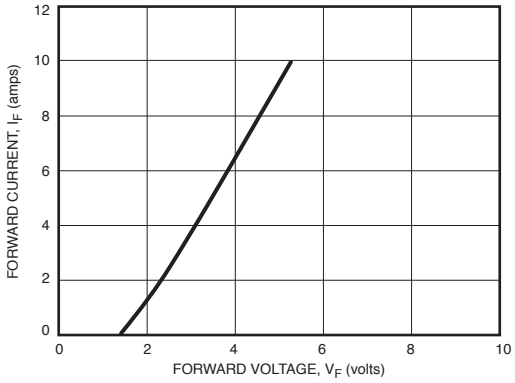
DEGRADATION CURVE



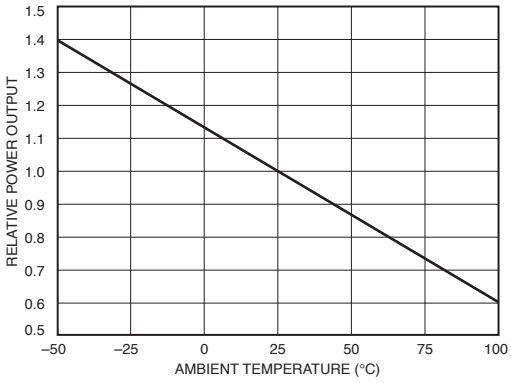
RADIATION PATTERN



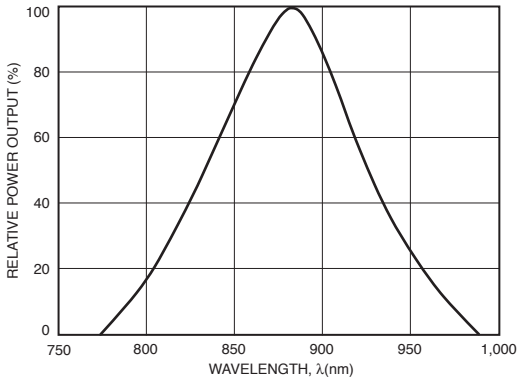
FORWARD I-V CHARACTERISTICS



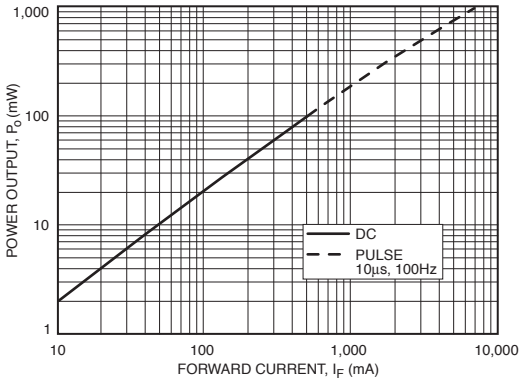
POWER OUTPUT vs TEMPERATURE



SPECTRAL OUTPUT



POWER OUTPUT vs FORWARD CURRENT



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