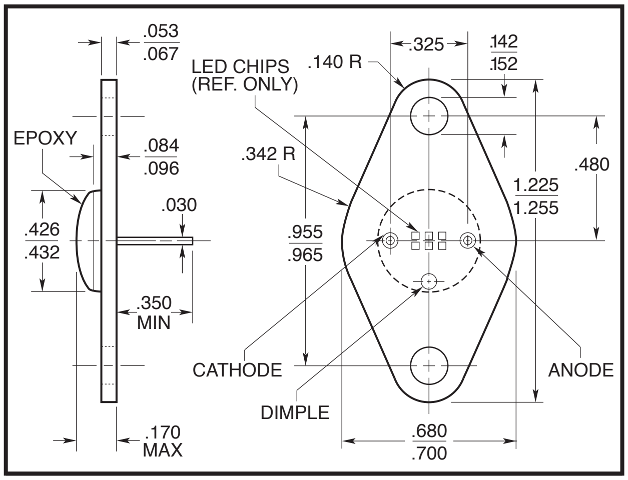
HIGH-POWER GaAlAs IRLED ILLUMINATOR — OD-666



FEATURES

- High reliability LPE GaAlAs IRLEDs
- Ultra high power output
- 880nm peak emission
- Six chips connected in series
- Very wide angle of emission
- Electrically isolated case

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

RoHS

ELECTRO-OPTICAL CHARACTERISTICS AT 25°C

PARAMETERS	TEST CONDITIONS	MIN	TYP	MAX	UNITS
Total Power Output, P_o	I_F = 300mA I_F = 6A	300	330 5000		mW
Peak Emission Wavelength, λ_P	I_F = 50mA		880		nm
Spectral Bandwidth at 50%, $\Delta\lambda$			80		nm
Half Intensity Beam Angle, θ			120		Deg
Forward Voltage, V_F	I_F = 300mA		9	10	Volts
Reverse Breakdown Voltage, V_R	I_R = 10µA	5	30		Volts
Capacitance, C	V_R = 0V		15		pF
Rise Time			2		µsec
Fall Time			2		µsec

ABSOLUTE MAXIMUM RATINGS AT 25°C CASE

Power Dissipation[1]	4W
Continuous Forward Current	400mA
Peak Forward Current (10µs, 400Hz)[2]	6A
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

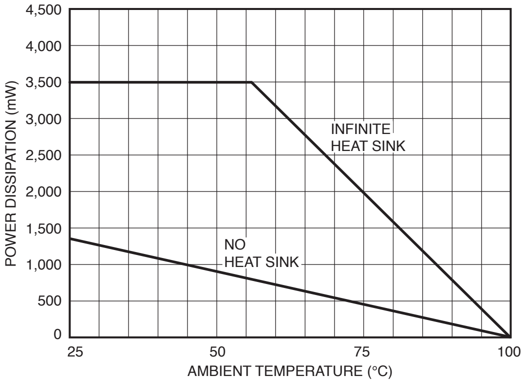
THERMAL PARAMETERS

Storage and Operating Temperature Range	-55°C to 100°C
Maximum Junction Temperature	100°C
Thermal Resistance, R_{THJA}[1]	60°C/W Typical
Thermal Resistance, R_{THJA}[2]	16°C/W Typical

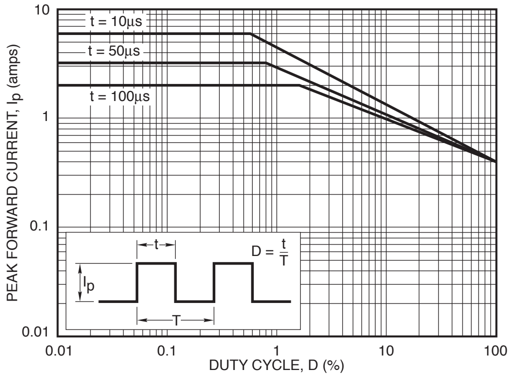
[1] Heat transfer minimized by measuring in still air with minimum heat conducting through leads
[2] Air circulating at a rapid rate to keep case temperature at 25°C

MAXIMUM RATINGS

THERMAL DERATING CURVE

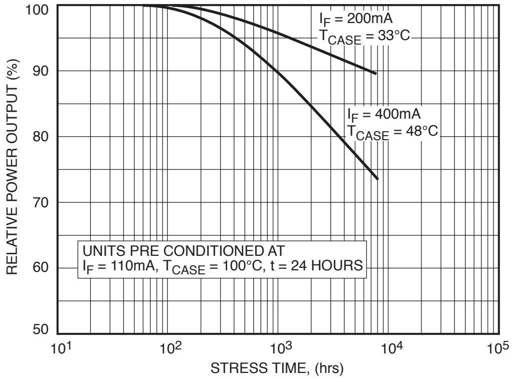


MAXIMUM PEAK PULSE CURRENT

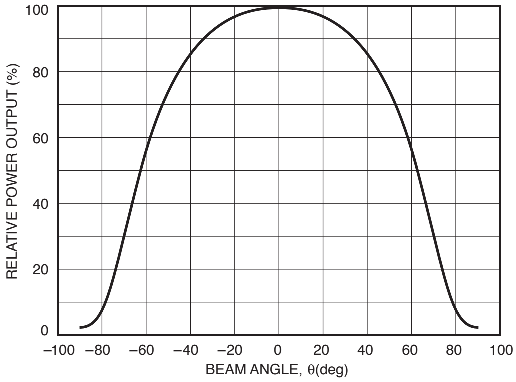


TYPICAL CHARACTERISTICS

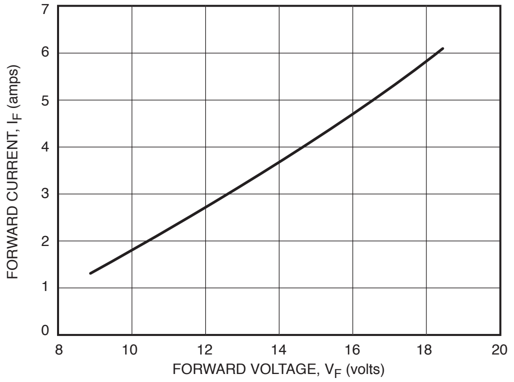
DEGRADATION CURVE



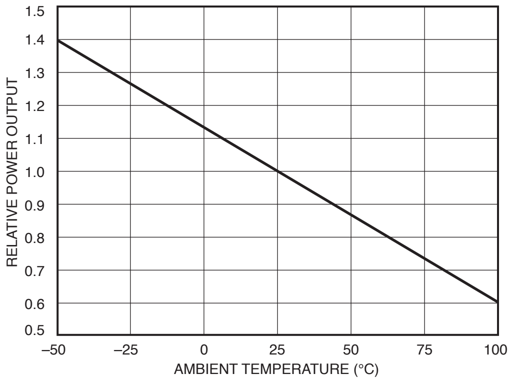
RADIATION PATTERN



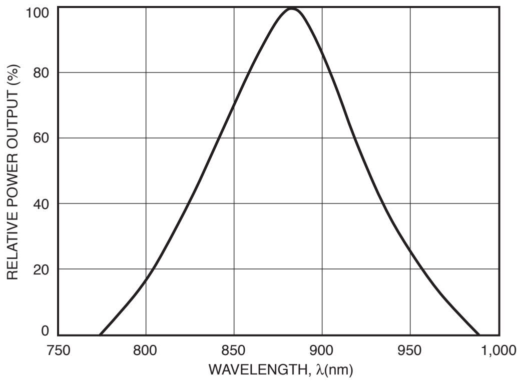
FORWARD I-V CHARACTERISTICS



POWER OUTPUT vs TEMPERATURE



SPECTRAL OUTPUT



POWER OUTPUT vs FORWARD CURRENT