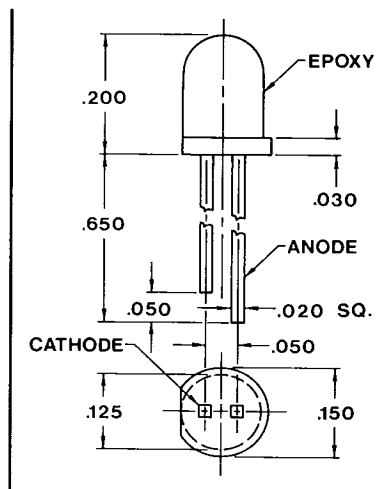


HIGH-POWER GaAlAs PLASTIC IR EMITTERS

T-1 OD-8830

OPTO DIODE CORP

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FEATURES

- Cost effective plastic package
- Super high-power output
- 880 nm peak emission
- High reliability LPE IRLED chips
- High quality small T-1 package
- 100% test

All dimensions are nominal values in inches unless otherwise specified.

PRODUCT DESCRIPTION

The OD-8830 series are super high-power Gallium Aluminum Arsenide infrared emitting diodes in T-1 plastic packages. They emit 880 nm non-coherent infrared radiant energy when forward biased. These IRLED's are intended for use, as low-cost emitters, in a wide range of applications such as data transmission, intrusion alarms, smoke detectors, remote control, and optical switches.

ELECTRO-OPTICAL CHARACTERISTICS AT 25°C

PARAMETERS	TEST CONDITIONS	MIN	TYP	MAX	UNITS
Total Power Output, P_o	$I_F = 20 \text{ mA}$	5.0	5.5		mW
OD-8830A		4.0	4.5		mW
OD-8830B		3.0	3.5		mW
OD-8830C					
Peak Emission Wavelength, λ_p	$I_F = 20 \text{ mA}$		880		nm
Spectral Bandwidth at 50%, $\Delta\lambda$			80		nm
Half Intensity Beam Angle, θ			30		deg
Rise Time, t_r			0.5		μsec
Fall Time, t_f			0.5		μsec
Forward Voltage, V_F	$I_F = 20 \text{ mA}$		1.3	1.6	volts
Reverse Breakdown Voltage, V_R	$I_R = 10 \mu\text{A}$	5	30		volts



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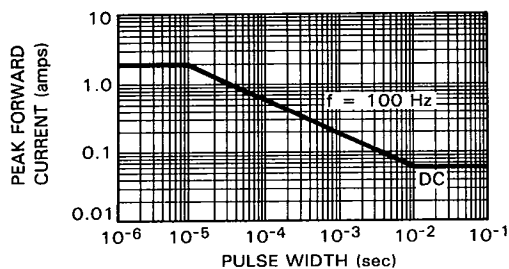
T-1 OD-8830

ABSOLUTE MAXIMUM RATINGS AT 25°C

Power Dissipation*	100 mW
Continuous Forward Current	60 mA
Pulse Forward Current (10 μ s, 100 Hz)	2A
Reverse Voltage	5V
Storage and Operating Temperature Range	-55°C to 100°C
Lead Soldering Temperature (1/16" from case for 10 sec.)	240°C

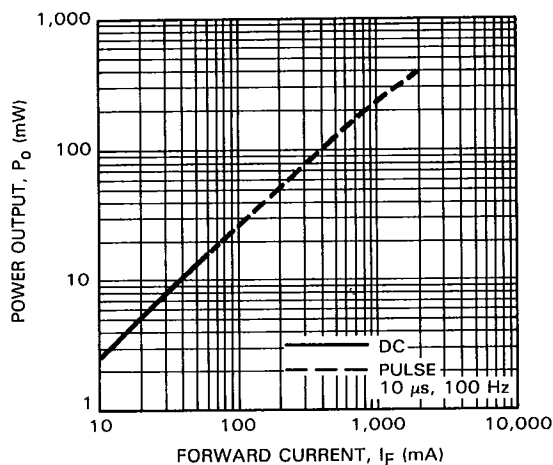
*Derate linearly 1.3 mW/°C above 25°C.

MAXIMUM PEAK PULSE CURRENT vs PULSE WIDTH



TYPICAL CHARACTERISTICS

POWER OUTPUT vs FORWARD CURRENT



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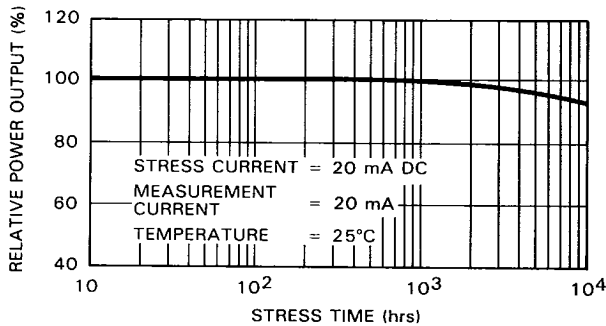
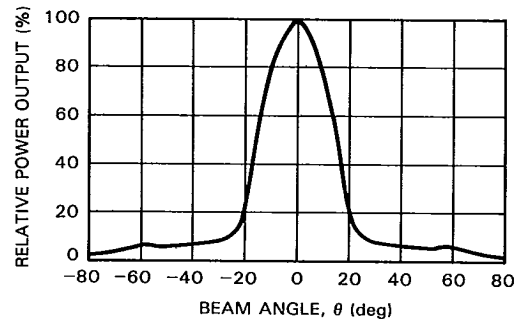
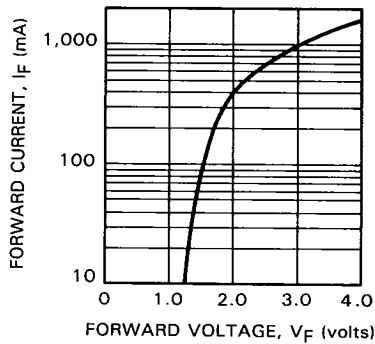
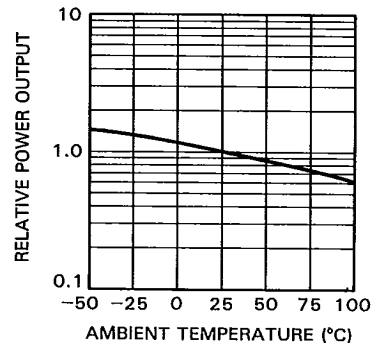
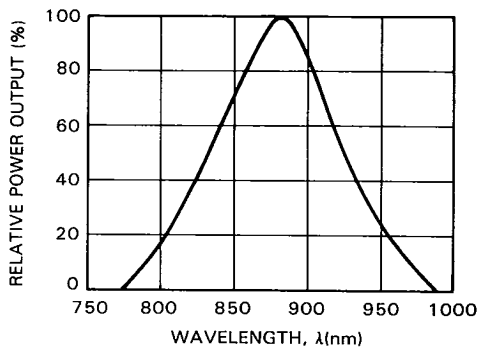
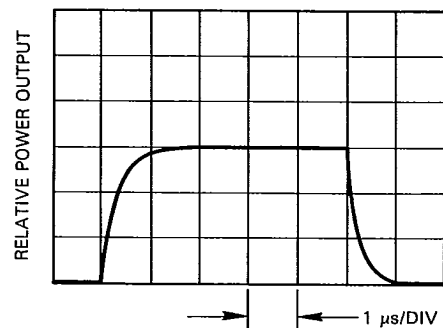
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TYPICAL CHARACTERISTICS (Cont.)**TYPICAL POWER OUTPUT DEGRADATION CURVE****TYPICAL RADIATION PATTERN****FORWARD I-V CHARACTERISTICS****POWER OUTPUT vs TEMPERATURE****SPECTRAL OUTPUT****OPTICAL OUTPUT PULSE**

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