

FEATURES

- High reliability liquid-phase epitaxially grown GaAlAs
- 880nm peak emission for optimum matching with ODD-45W photodiode
- Wide range of linear power output
- Hermetically sealed TO-46 package
- Narrow angle for long distance applications
- OD-880F1 selected to meet minimum radiant intensity

All surfaces are gold plated. Dimensions are nominal values in inches unless otherwise specified. Window caps are welded to the case.

ELECTRO-OPTICAL CHARACTERISTICS AT 25°C

PARAMETERS	TEST CONDITIONS	MIN	TYP	MAX	UNITS
Total Power Output, P_o	OD-880F OD-880F1 $I_F = 100\text{mA}$	15	17 8		mW
Radiant Intensity, I_e	OD-880F OD-880F1 $I_F = 50\text{mA}$	120	135 160		mW/sr
Peak Emission Wavelength, λ_p	$I_F = 50\text{mA}$		880		nm
Spectral Bandwidth at 50%, $\Delta\lambda$			80		nm
Half Intensity Beam Angle, θ				8	
Forward Voltage, V_F	$I_F = 100\text{mA}$		1.55	1.9	Volts
Reverse Breakdown Voltage, V_R	$I_R = 10\mu\text{A}$	5	30		Volts
Capacitance, C	$V_R = 0\text{V}$		17		pF
Rise Time			0.5		μsec
Fall Time			0.5		μsec

ABSOLUTE MAXIMUM RATINGS AT 25°C CASE

Power Dissipation ¹	190mW
Continuous Forward Current	100mA
Peak Forward Current (10 μs , 400Hz) ²	3A
Reverse Voltage	5V
Lead Soldering Temperature (1/16" from case for 10sec)	240°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	350°C/W Typical
Thermal Resistance, R_{THJA} ²	115°C/W Typical

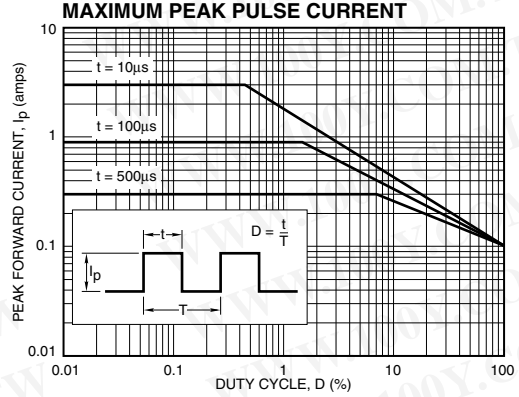
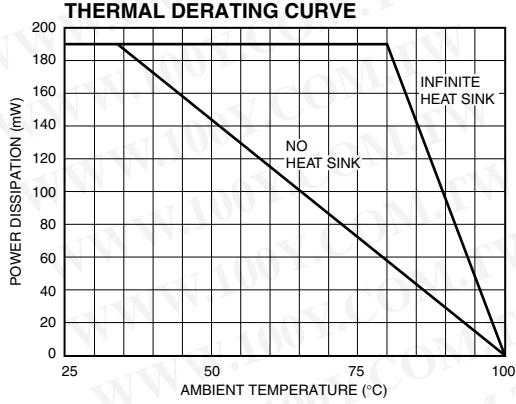
¹Heat transfer minimized by measuring in still air with minimum heat conducting through leads

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

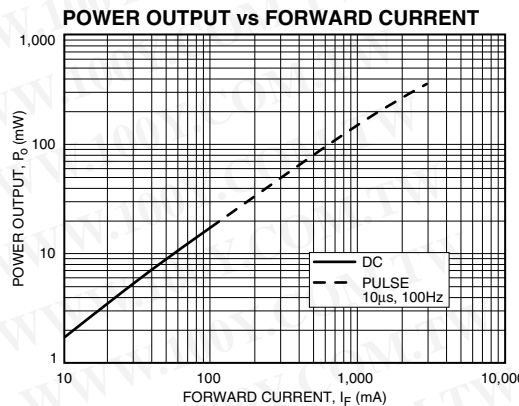
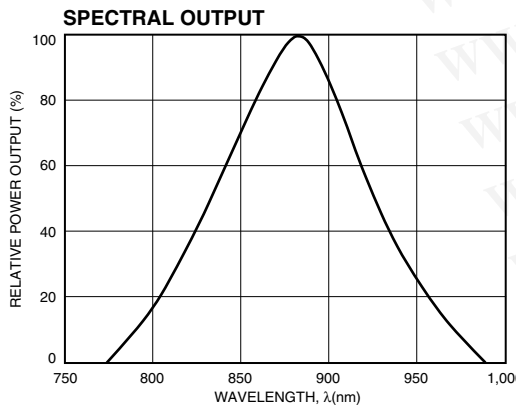
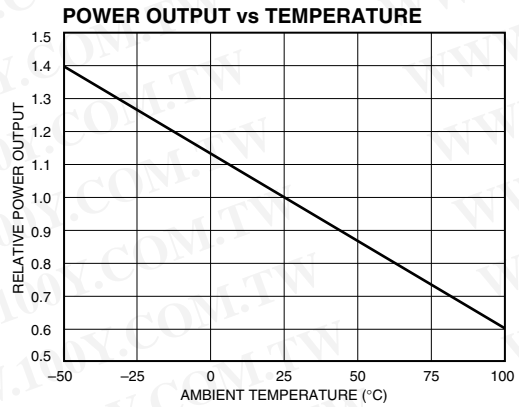
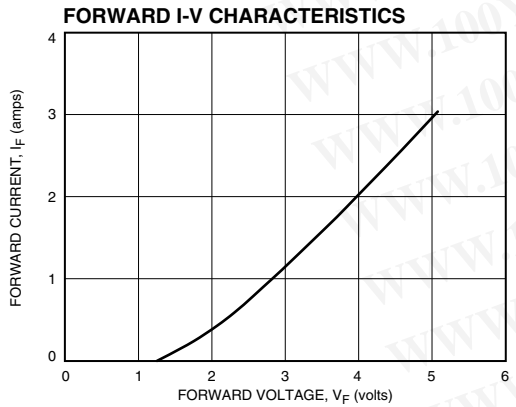
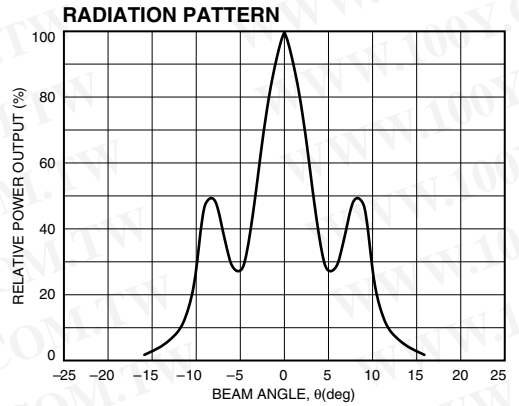
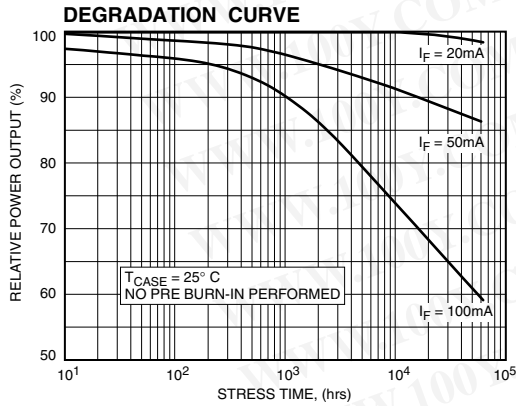
HIGH-POWER GaAlAs IR EMITTERS

OD-880F

MAXIMUM RATINGS



TYPICAL CHARACTERISTICS



OPTO DIODE CORP.

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