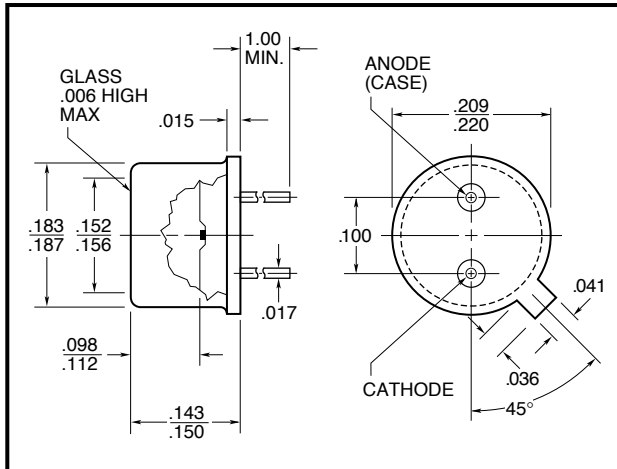


**FEATURES**

- 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
- Wide emission angle to cover a large area

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	$I_F = 100\text{mA}$	18	20		mW
Radiant Intensity, I_e			16		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			80		Deg
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

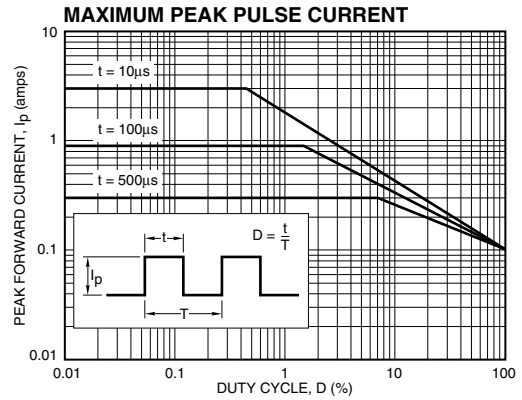
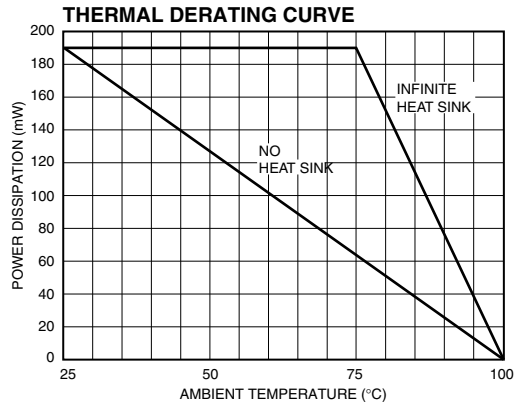
THERMAL PARAMETERS

Storage and Operating Temperature Range	-55°C TO 100°C
Maximum Junction Temperature	100°C
Thermal Resistance, R_{THJA} ¹	400°C/W Typical
Thermal Resistance, R_{THJA} ²	135°C/W Typical

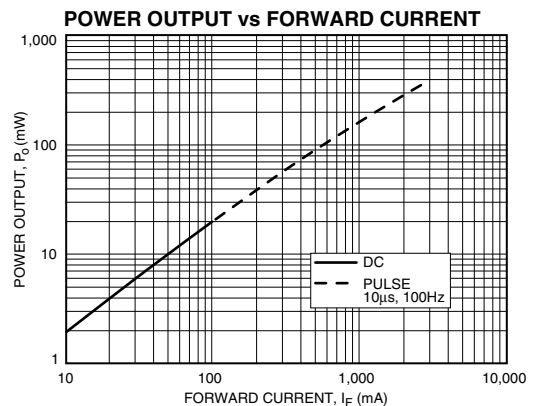
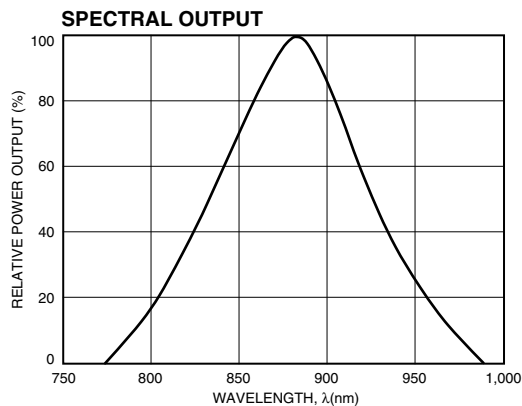
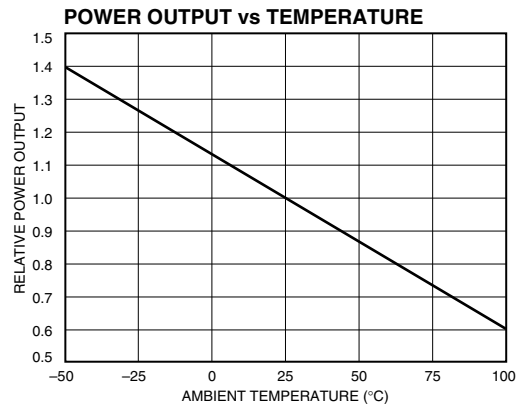
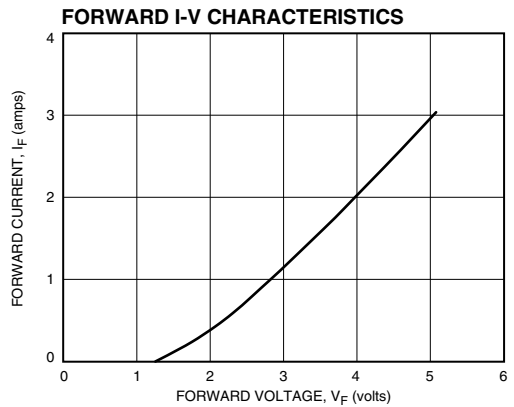
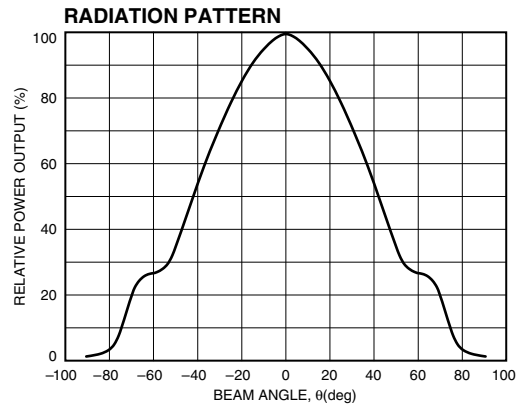
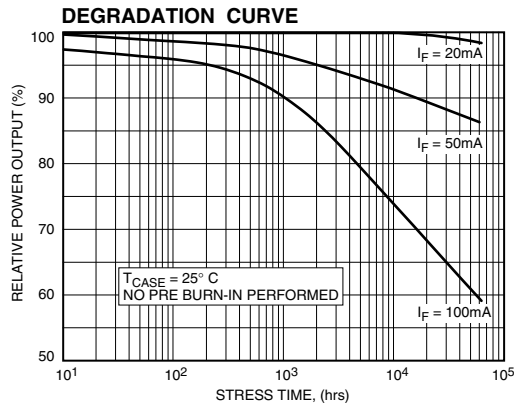
¹Heat transfer minimized by measuring in still air with minimum heat conducting through leads

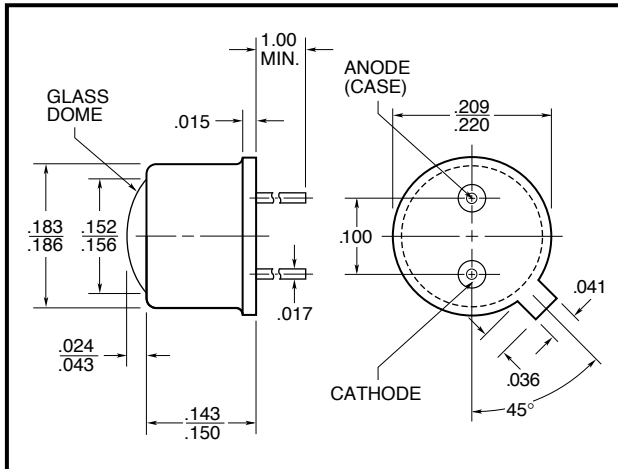
²Air circulating at a rapid rate to keep case temperature at 25°C

MAXIMUM RATINGS



TYPICAL CHARACTERISTICS



**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
- Medium emission angle for best coverage/power density

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	$I_F = 100\text{mA}$	18	20		mW
Radiant Intensity, I_e			50		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			35		Deg
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

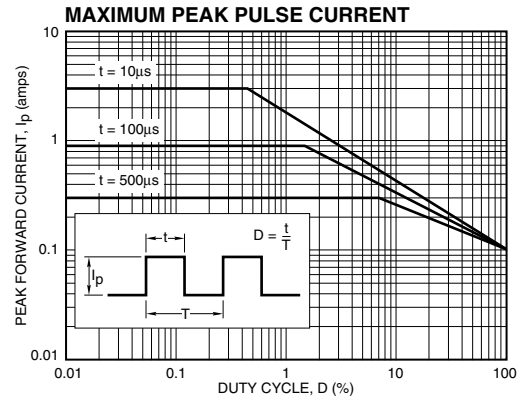
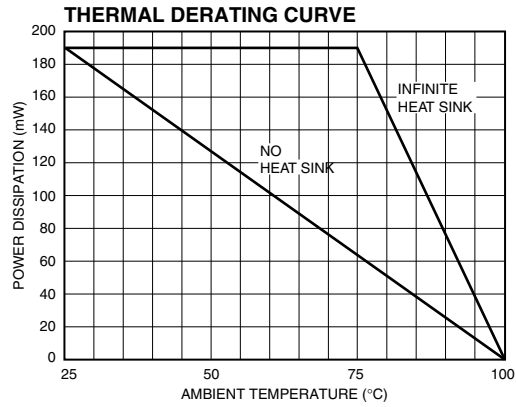
THERMAL PARAMETERS

Storage and Operating Temperature Range	-55°C TO 100°C
Maximum Junction Temperature	100°C
Thermal Resistance, R_{THJA} ¹	400°C/W Typical
Thermal Resistance, R_{THJA} ²	135°C/W Typical

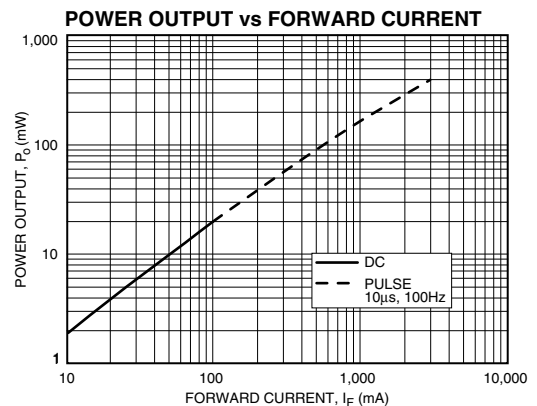
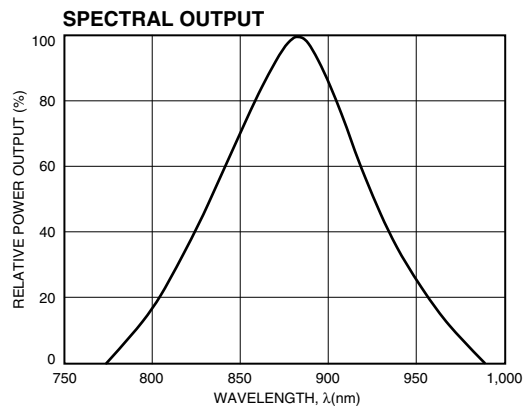
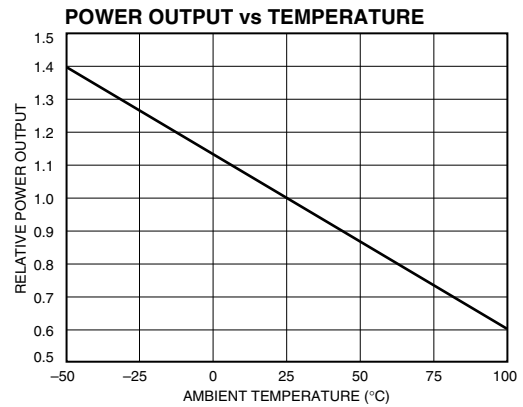
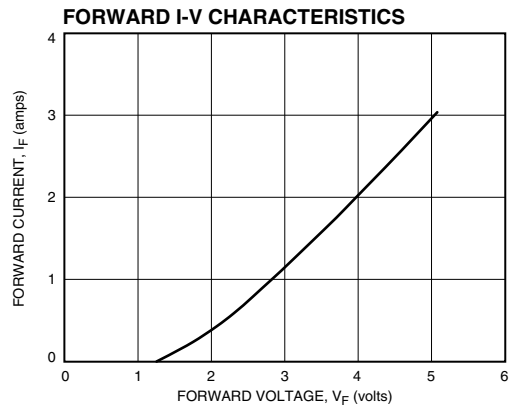
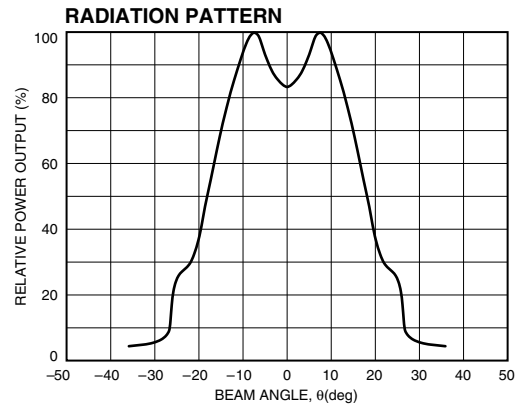
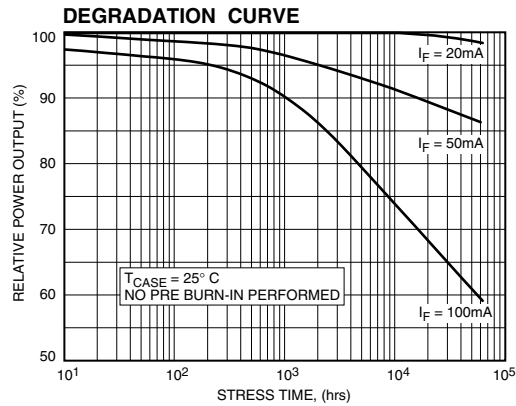
¹Heat transfer minimized by measuring in still air with minimum heat conducting through leads

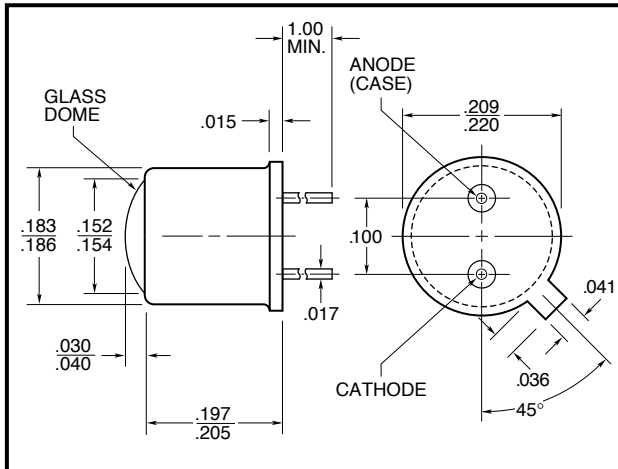
²Air circulating at a rapid rate to keep case temperature at 25°C

MAXIMUM RATINGS



TYPICAL CHARACTERISTICS



**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	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		Deg
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

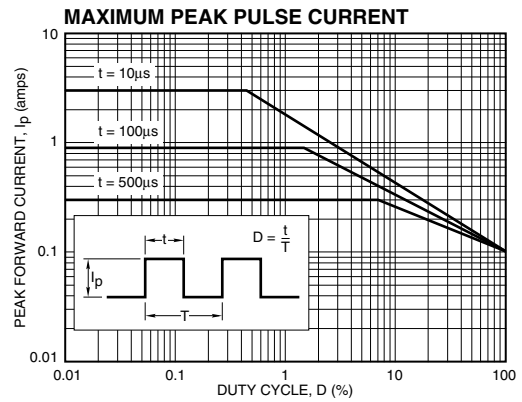
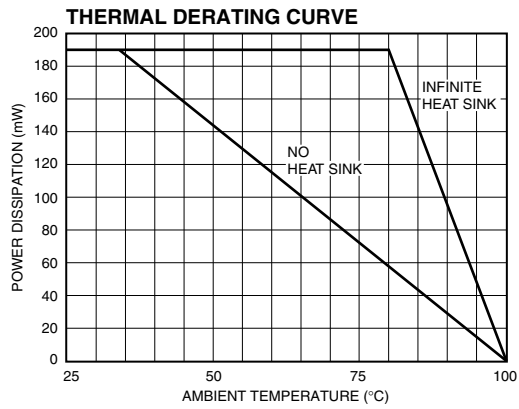
THERMAL PARAMETERS

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

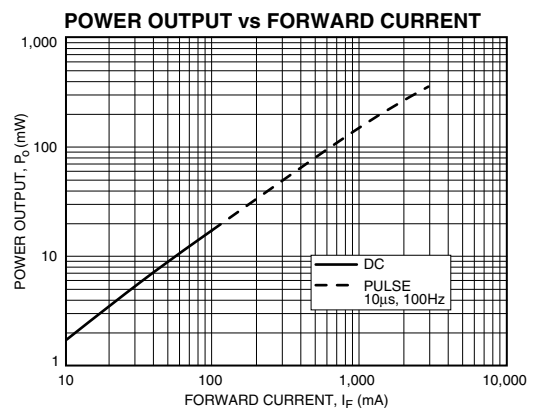
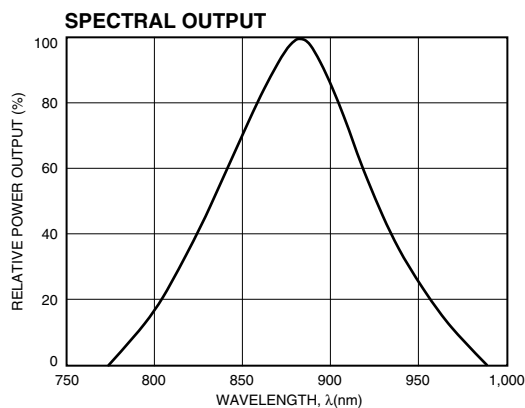
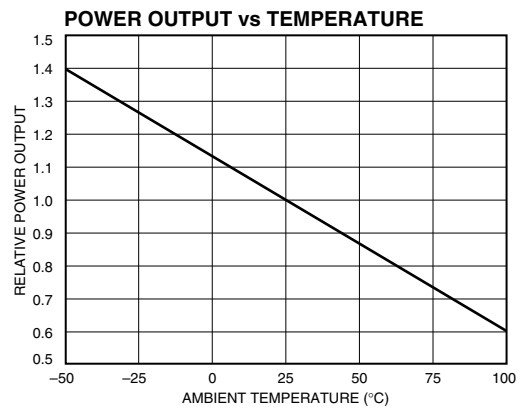
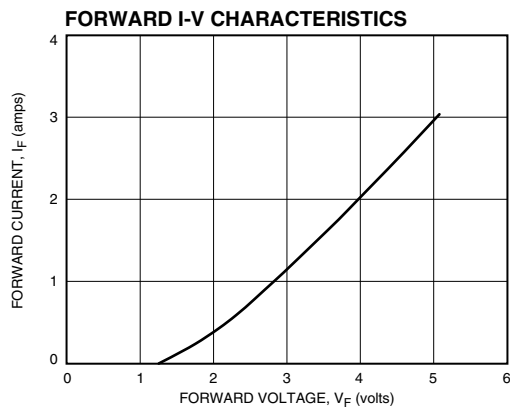
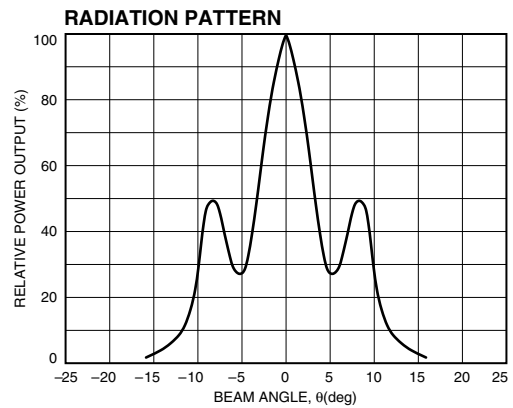
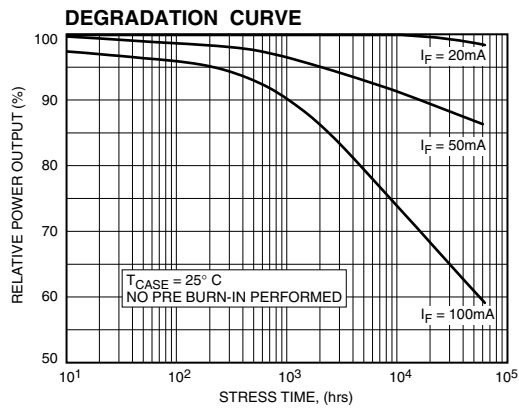
¹Heat transfer minimized by measuring in still air with minimum heat conducting through leads

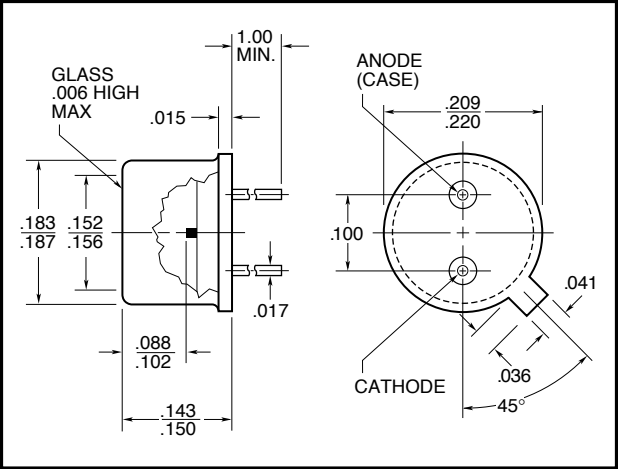
²Air circulating at a rapid rate to keep case temperature at 25°C

MAXIMUM RATINGS



TYPICAL CHARACTERISTICS





- FEATURES
- Open center of emission
 - High reliability liquid-phase epitaxially grown GaAlAs
 - Hermetically sealed TO-46 package
 - OD-148-C chip used

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	I _F = 100mA	8	10		mW
Peak Emission Wavelength, λ _P	I _F = 50mA		880		nm
Spectral Bandwidth at 50%, Δλ			80		nm
Half Intensity Beam Angle, θ			95		Deg
Forward Voltage, V _F	I _F = 100mA		1.55	1.9	Volts
Reverse Breakdown Voltage, V _R	I _R = 10μA	5	30		Volts
Capacitance, C	V _R = 0V		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 (10μs, 400Hz) ²	3A
Reverse Voltage	5V
Lead Soldering Temperature (1/16" from case for 10sec)	240°C

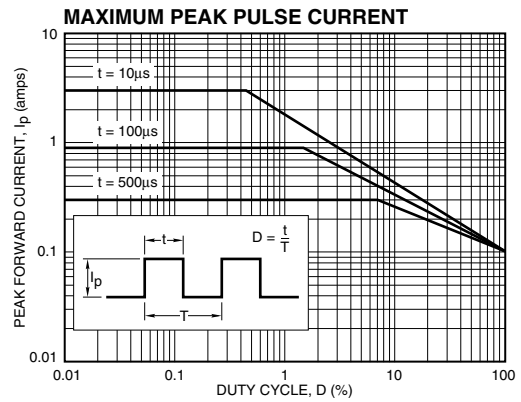
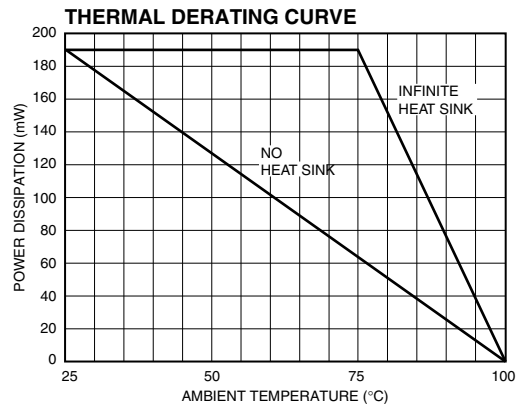
¹Derate per Thermal Derating Curve above 25°C
²Derate linearly above 25°C

THERMAL PARAMETERS

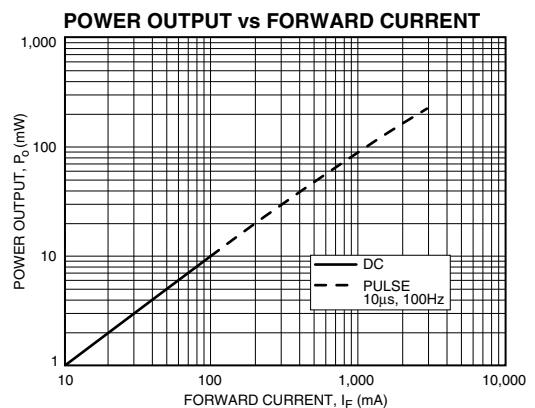
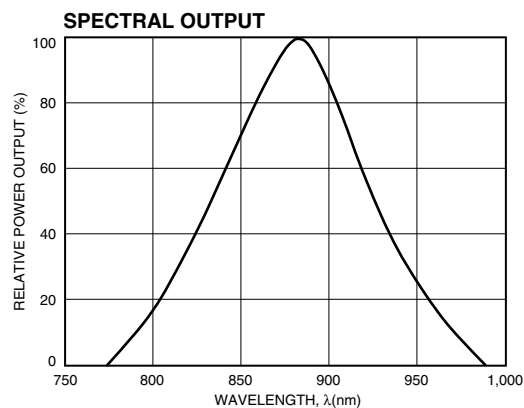
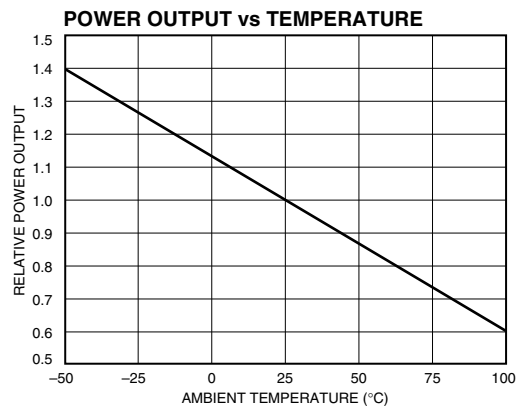
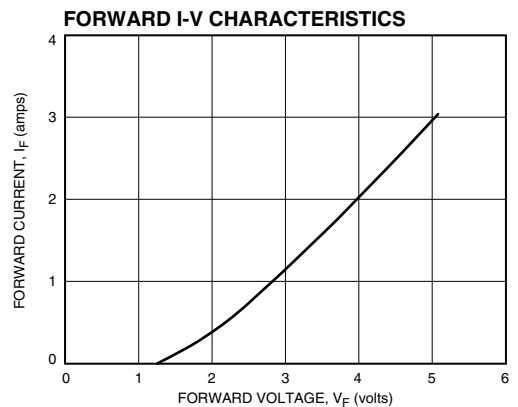
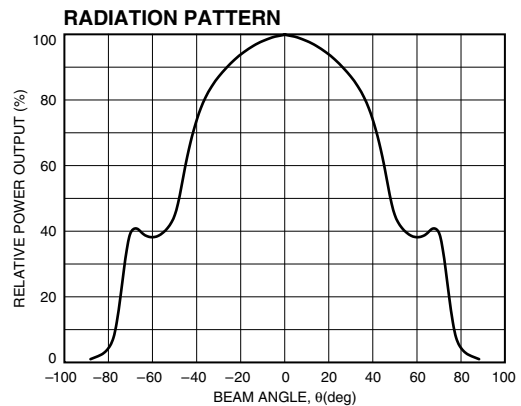
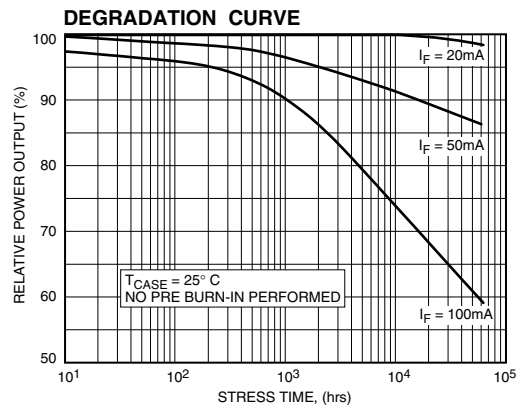
Storage and Operating Temperature Range	-55°C TO 100°C
Maximum Junction Temperature	100°C
Thermal Resistance, R _{THJA} ¹	400°C/W Typical
Thermal Resistance, R _{THJA} ²	135°C/W Typical

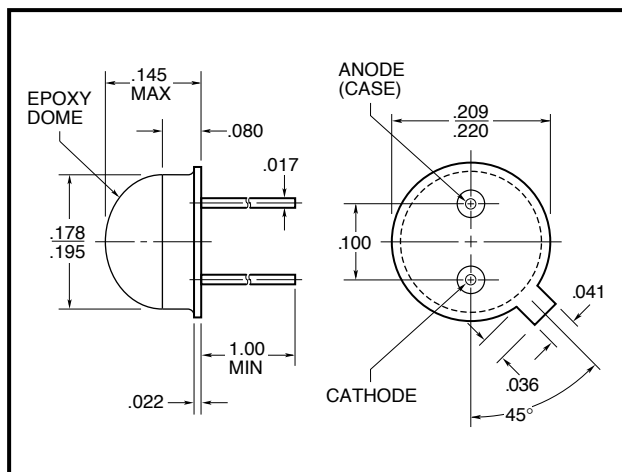
¹Heat transfer minimized by measuring in still air with minimum heat conducting through leads
²Air circulating at a rapid rate to keep case temperature at 25°C

MAXIMUM RATINGS



TYPICAL CHARACTERISTICS



**FEATURES**

- High reliability liquid-phase epitaxially grown GaAlAs
- 880nm peak emission
- High uniform output
- TO-46 Header

All dimensions are nominal in inches unless otherwise specified.

ELECTRO-OPTICAL CHARACTERISTICS AT 25°C

PARAMETERS	TEST CONDITIONS	MIN	TYP	MAX	UNITS
Total Power Output, P_o	$I_F = 100\text{mA}$	20	30		mW
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			90		Deg
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

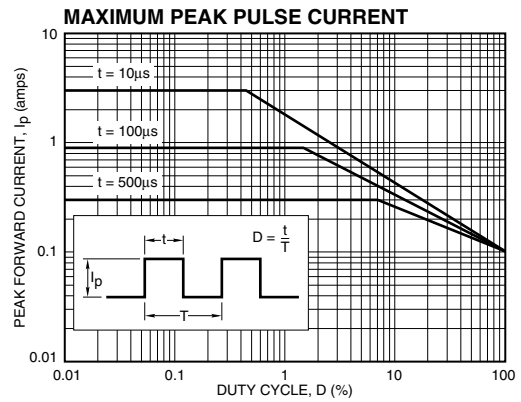
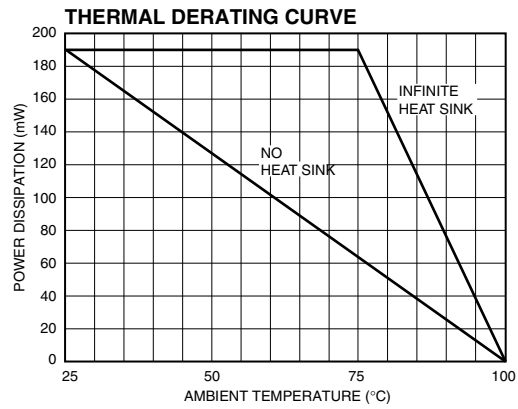
THERMAL PARAMETERS

Storage and Operating Temperature Range	-55°C TO 100°C
Maximum Junction Temperature	100°C
Thermal Resistance, R_{THJA} ¹	400°C/W Typical
Thermal Resistance, R_{THJA} ²	135°C/W Typical

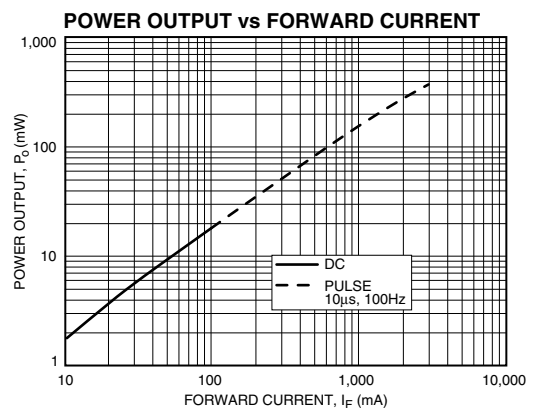
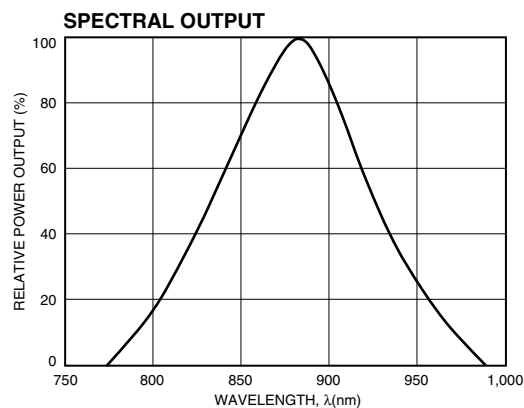
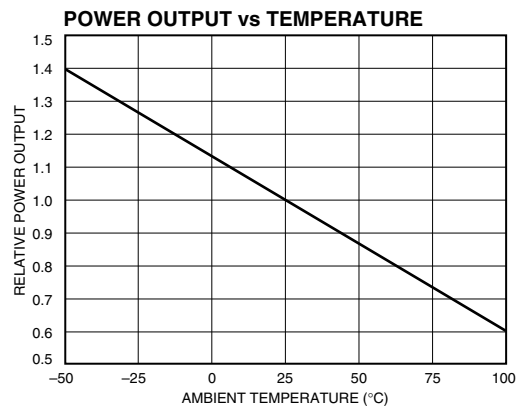
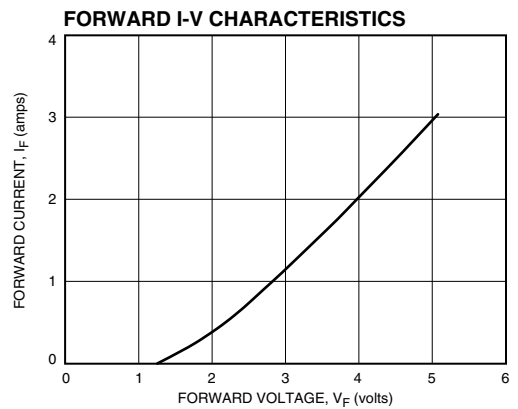
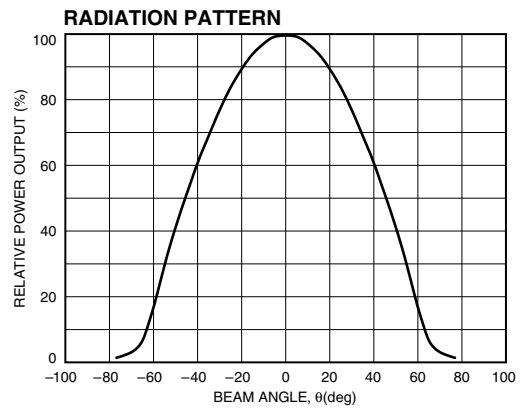
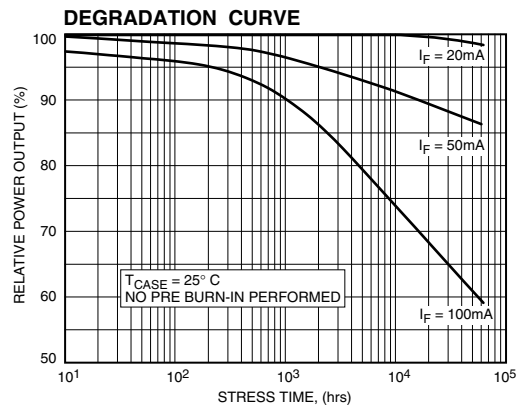
¹Heat transfer minimized by measuring in still air with minimum heat conducting through leads

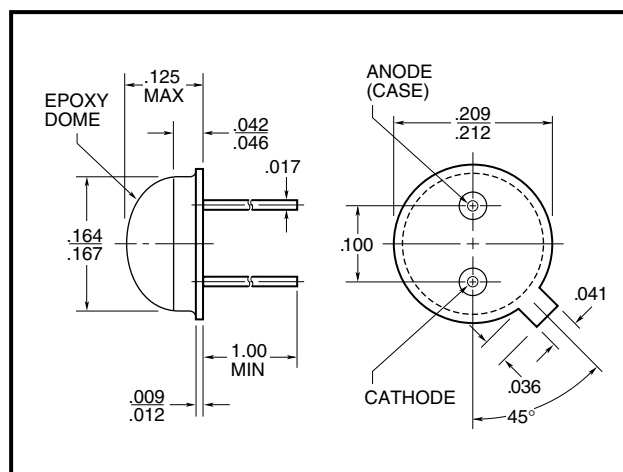
²Air circulating at a rapid rate to keep case temperature at 25°C

MAXIMUM RATINGS



TYPICAL CHARACTERISTICS



**FEATURES**

- Very high power output
- Wide angle of emission
- High reliability liquid-phase epitaxially grown GaAlAs
- TO-46 Header

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

ELECTRO-OPTICAL CHARACTERISTICS AT 25°C

PARAMETERS	TEST CONDITIONS	MIN	TYP	MAX	UNITS
Total Power Output, P_o	$I_F = 100\text{mA}$	25	30		mW
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			80		Deg
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

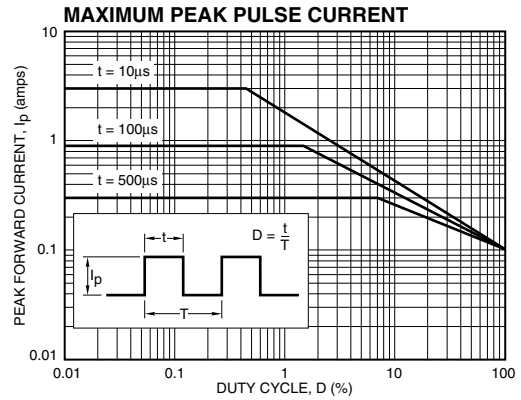
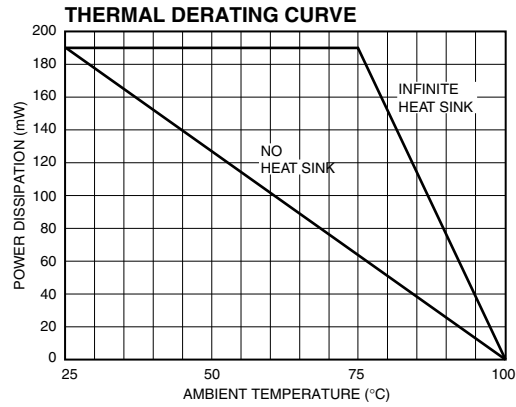
THERMAL PARAMETERS

Storage and Operating Temperature Range	-55°C TO 100°C
Maximum Junction Temperature	100°C
Thermal Resistance, R_{THJA} ¹	400°C/W Typical
Thermal Resistance, R_{THJA} ²	135°C/W Typical

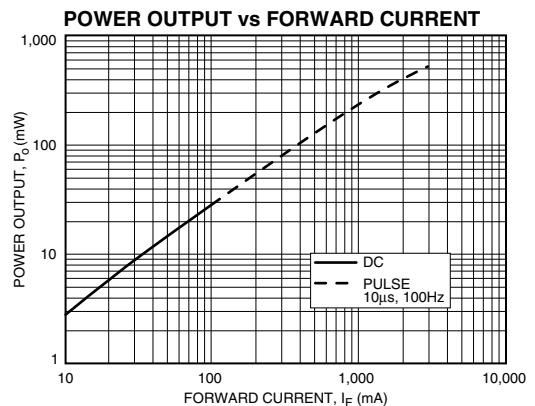
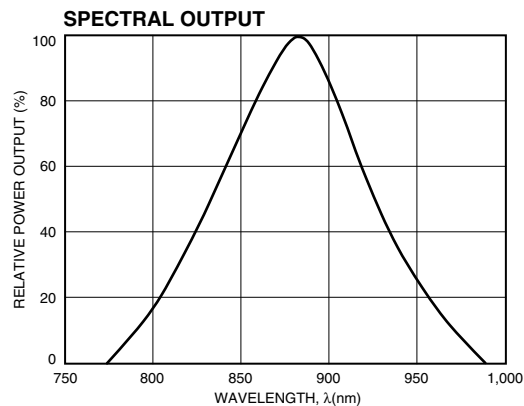
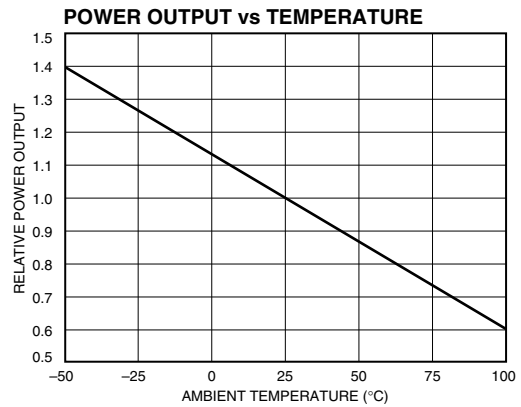
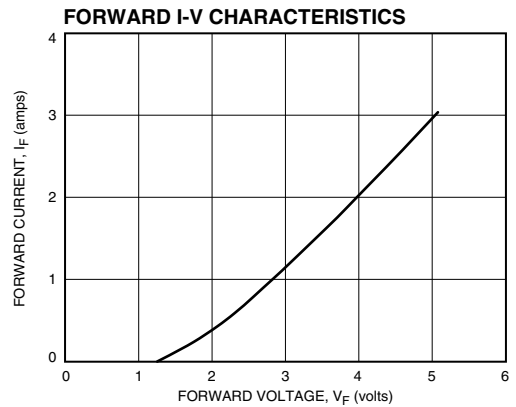
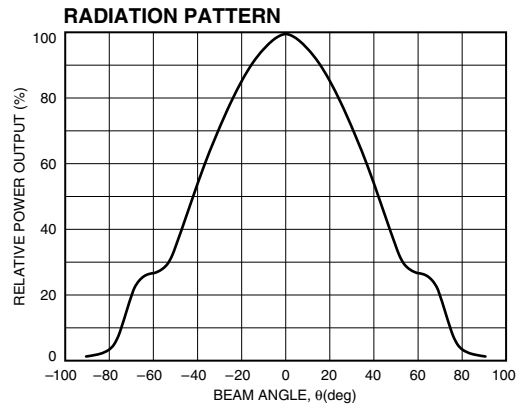
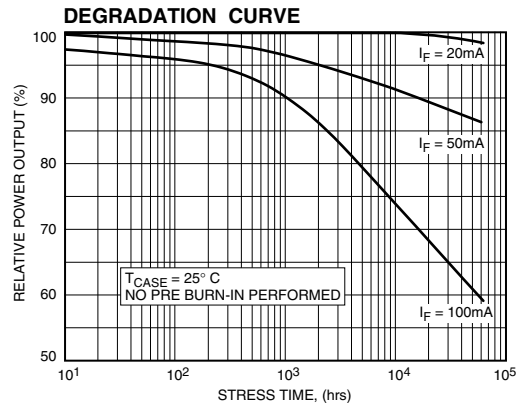
¹Heat transfer minimized by measuring in still air with minimum heat conducting through leads

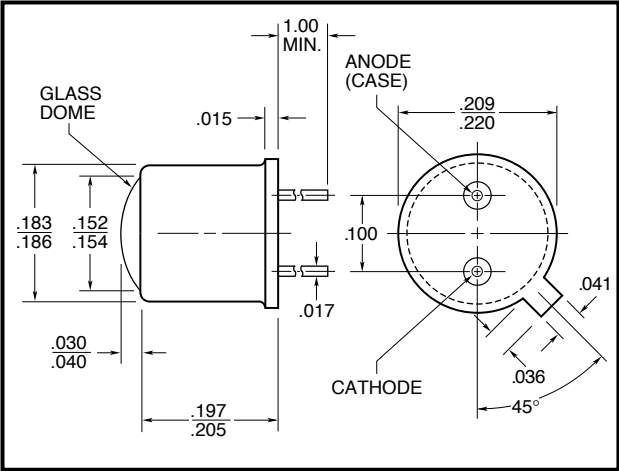
²Air circulating at a rapid rate to keep case temperature at 25°C

MAXIMUM RATINGS



TYPICAL CHARACTERISTICS





- FEATURES
- High current capability
 - 880nm peak emission for optimum matching with ODD-45W photodiode
 - Hermetically sealed TO-46 package
 - Narrow angle of emission
- 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	I _F = 200mA	25	30		mW
Radiant Intensity, I _e			220		mW/sr
Peak Emission Wavelength, λ _p	I _F = 50mA		880		nm
Spectral Bandwidth at 50%, Δλ			80		nm
Half Intensity Beam Angle, θ			8		Deg
Forward Voltage, V _F	I _F = 100mA		1.5	1.8	Volts
Reverse Breakdown Voltage, V _R	I _R = 10μA	5	30		Volts
Capacitance, C	V _R = 0V		60		pF
Rise Time			0.7		μsec
Fall Time			0.7		μsec

ABSOLUTE MAXIMUM RATINGS AT 25°C CASE

Power Dissipation ¹	360mW
Continuous Forward Current	200mA
Peak Forward Current (10μs, 230Hz) ²	7A
Reverse Voltage	5V
Lead Soldering Temperature (1/16" from case for 10sec)	240°C

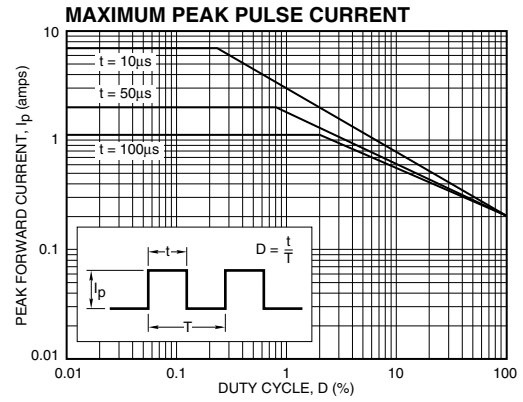
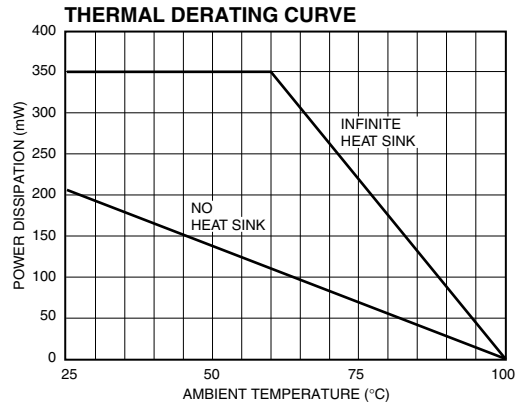
¹Derate per Thermal Derating Curve above 25°C
²Derate linearly above 25°C

THERMAL PARAMETERS

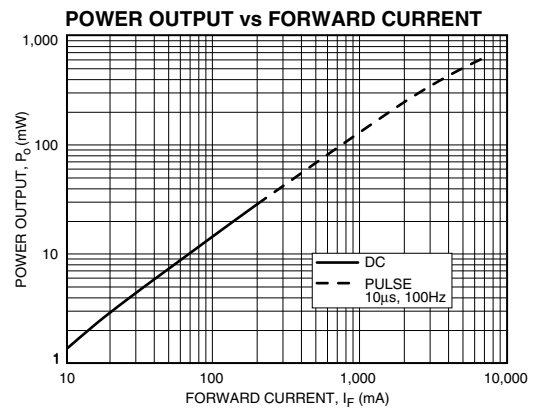
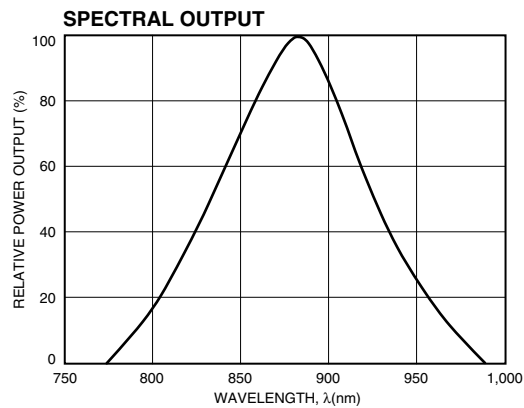
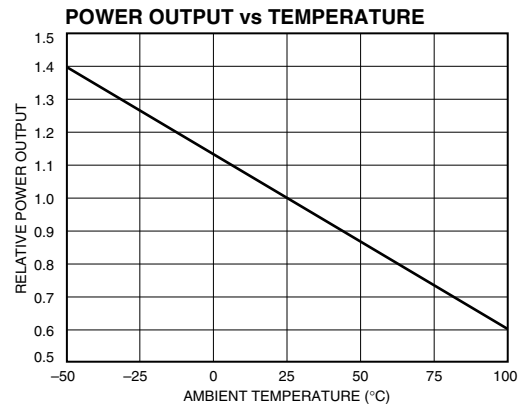
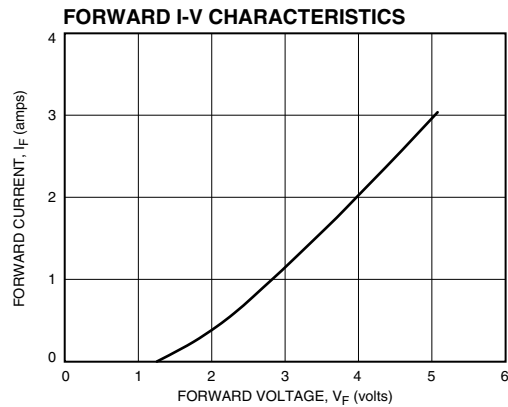
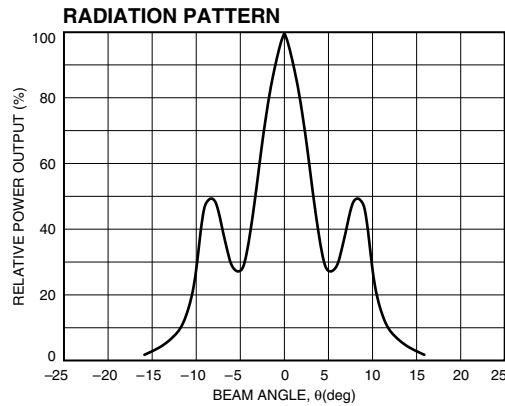
Storage and Operating Temperature Range	-55°C TO 100°C
Maximum Junction Temperature	100°C
Thermal Resistance, R _{THJA} ¹	350°C/W Typical
Thermal Resistance, R _{THJA} ²	115°C/W Typical

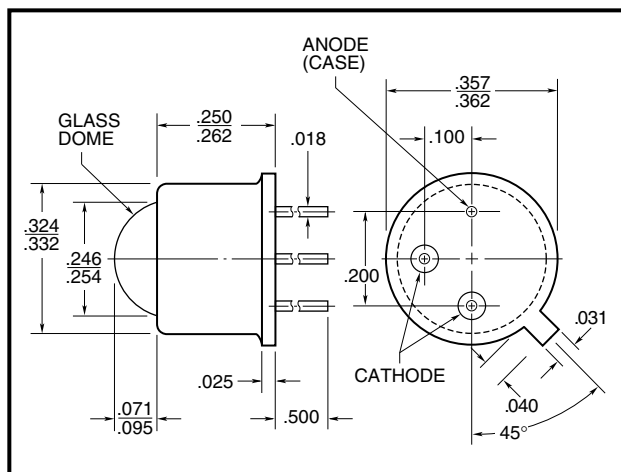
¹Heat transfer minimized by measuring in still air with minimum heat conducting through leads
²Air circulating at a rapid rate to keep case temperature at 25°C

MAXIMUM RATINGS



TYPICAL CHARACTERISTICS





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	$I_F = 500\text{mA}$ $I_F = 10\text{A}$	40	50 600		mW
Radiant Intensity, I_e	$I_F = 500\text{mA}$		500		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			7		Deg
Forward Voltage, V_F	$I_F = 500\text{mA}$		1.65	2	Volts
Reverse Breakdown Voltage, V_R	$I_R = 10\mu\text{A}$	5	30		Volts
Capacitance, C	$V_R = 0\text{V}$		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 (10 μs , 400Hz) ²	10A
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

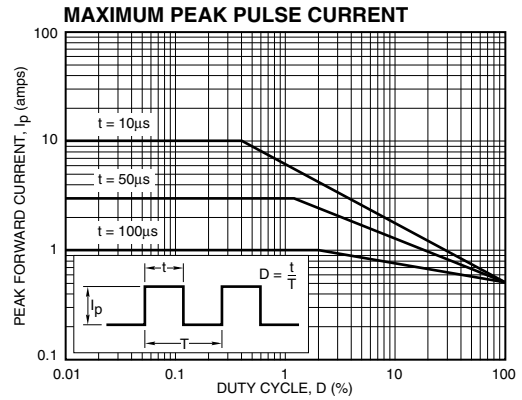
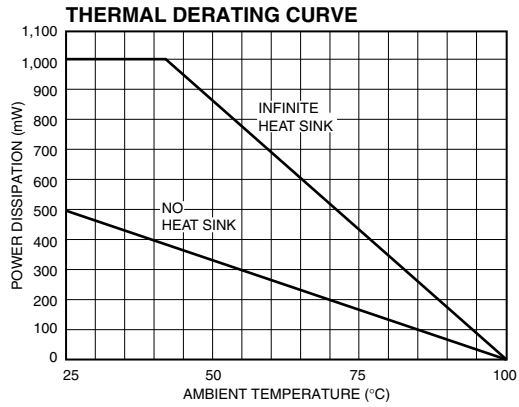
THERMAL PARAMETERS

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

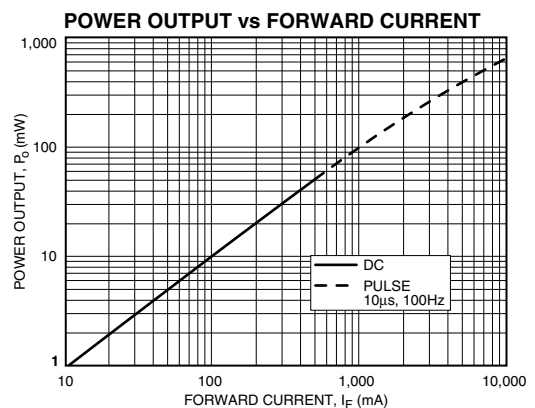
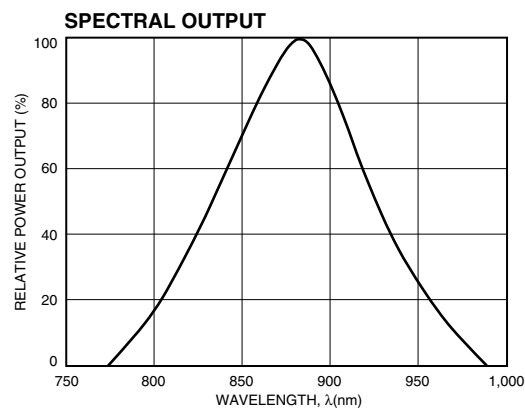
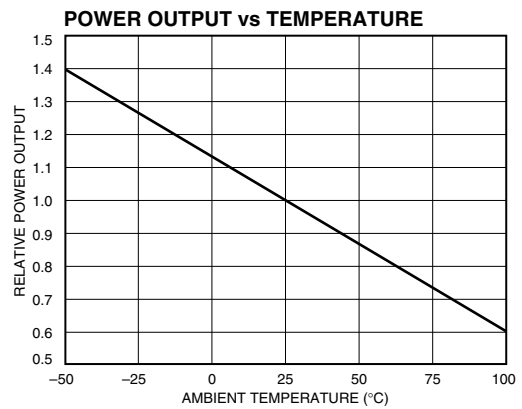
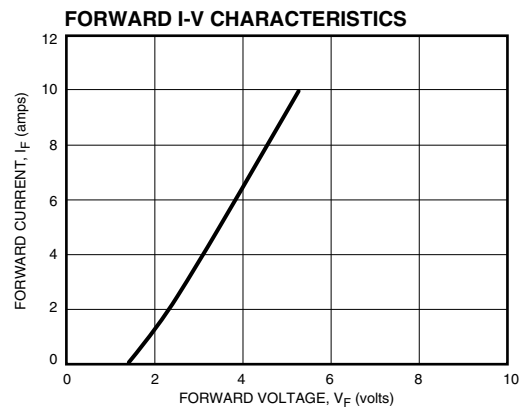
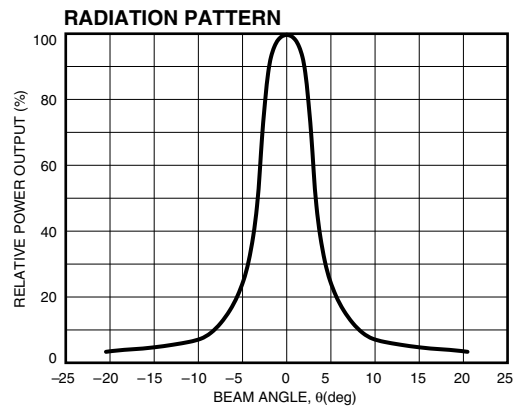
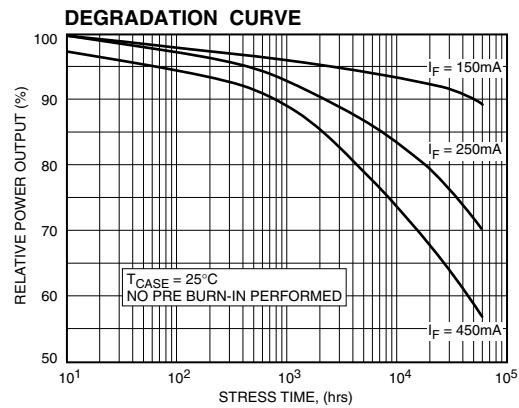
¹Heat transfer minimized by measuring in still air with minimum heat conducting through leads

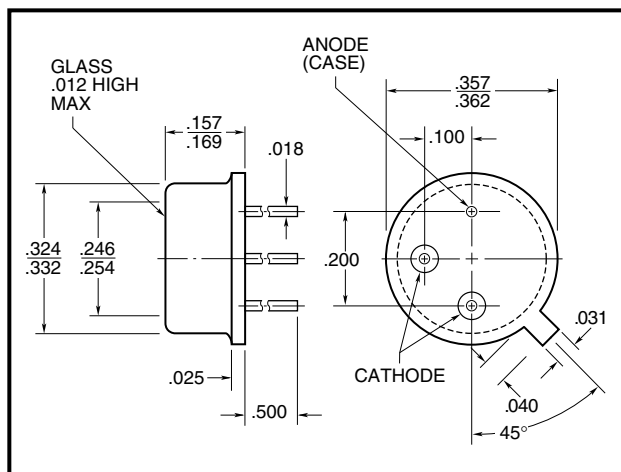
²Air circulating at a rapid rate to keep case temperature at 25°C

MAXIMUM RATINGS



TYPICAL CHARACTERISTICS





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.

ELECTRO-OPTICAL CHARACTERISTICS AT 25°C

PARAMETERS	TEST CONDITIONS	MIN	TYP	MAX	UNITS
Total Power Output, P_o	$I_F = 500\text{mA}$ $I_F = 10\text{A}$	60	75 1000		mW
Radiant Intensity, I_e	$I_F = 500\text{mA}$		60		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			110		Deg
Forward Voltage, V_F	$I_F = 500\text{mA}$		1.65	2	Volts
Reverse Breakdown Voltage, V_R	$I_R = 10\mu\text{A}$	5	30		Volts
Capacitance, C	$V_R = 0\text{V}$		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 (10 μs , 400Hz) ²	10A
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

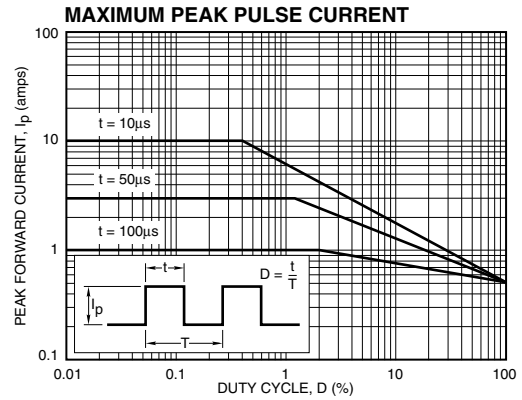
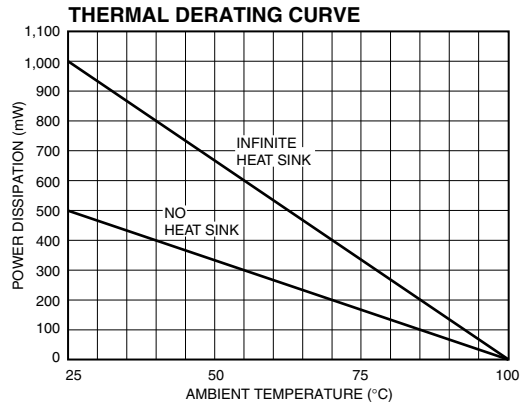
THERMAL PARAMETERS

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

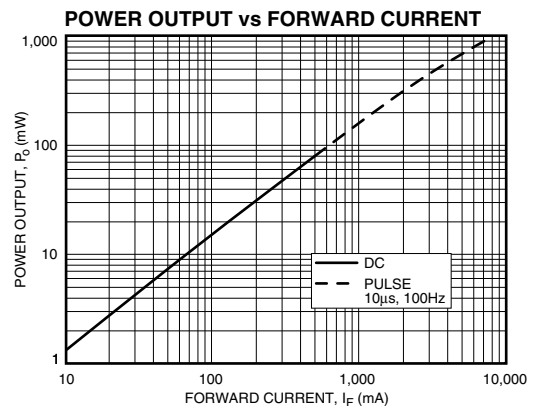
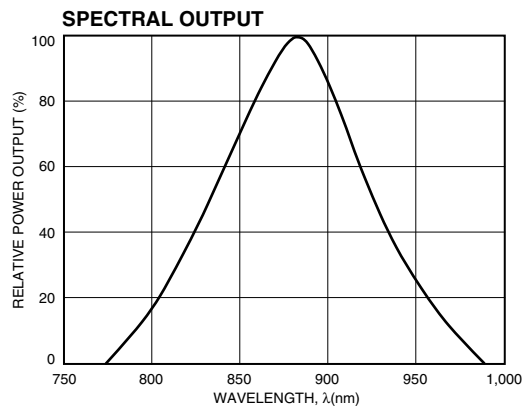
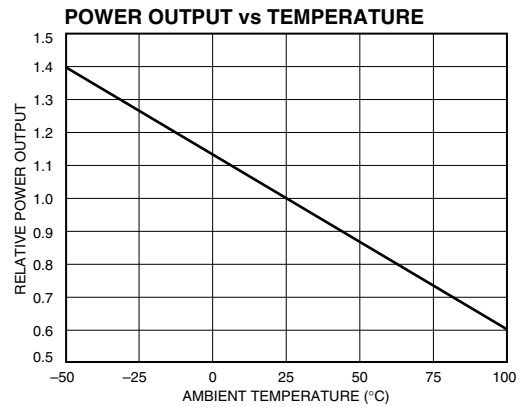
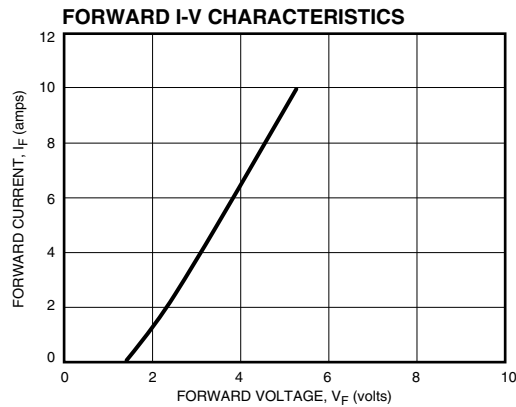
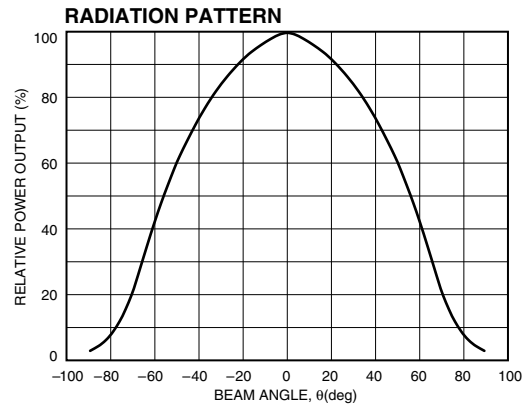
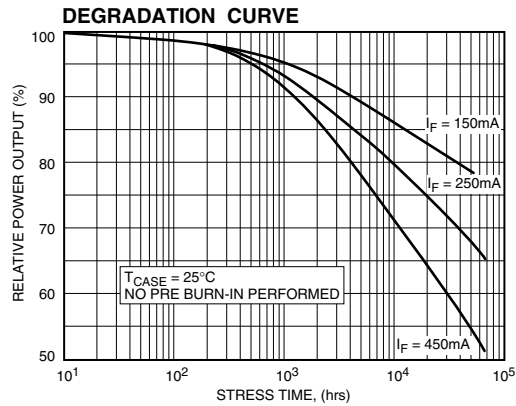
¹Heat transfer minimized by measuring in still air with minimum heat conducting through leads

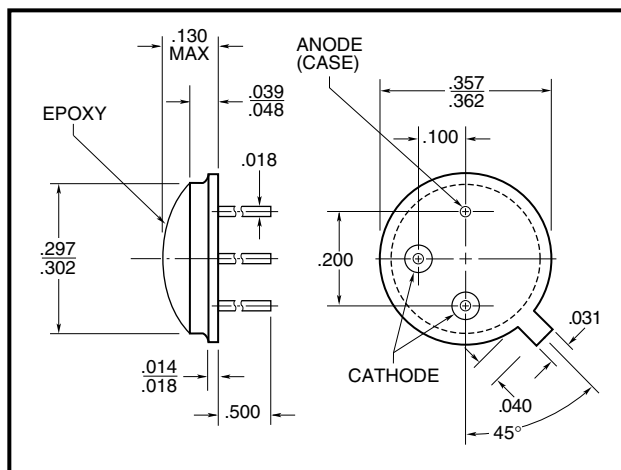
²Air circulating at a rapid rate to keep case temperature at 25°C

MAXIMUM RATINGS



TYPICAL CHARACTERISTICS





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.

ELECTRO-OPTICAL CHARACTERISTICS AT 25°C

PARAMETERS	TEST CONDITIONS	MIN	TYP	MAX	UNITS
Total Power Output, P_o	$I_F = 500\text{mA}$ $I_F = 10\text{A}$	80	100 1300		mW
Radiant Intensity, I_e	$I_F = 500\text{mA}$		60		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			110		Deg
Forward Voltage, V_F	$I_F = 500\text{mA}$		1.65	2	Volts
Reverse Breakdown Voltage, V_R	$I_R = 10\mu\text{A}$	5	30		Volts
Capacitance, C	$V_R = 0\text{V}$		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 (10 μs , 400Hz) ²	10A
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

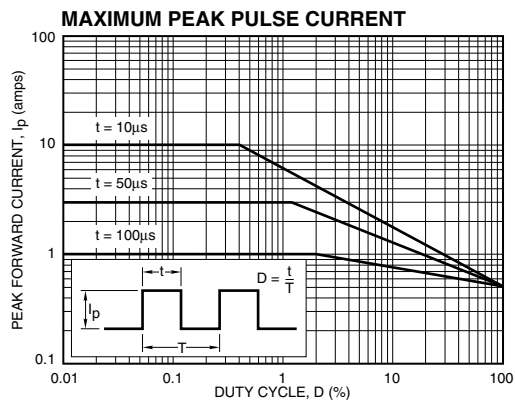
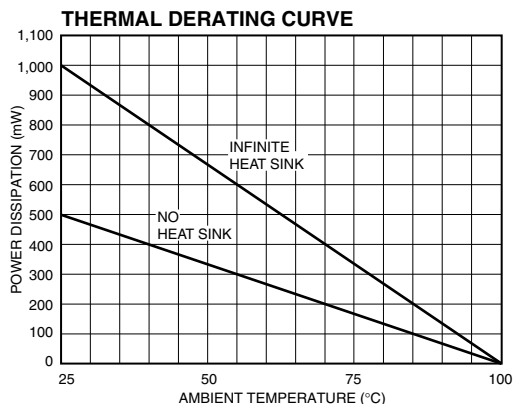
THERMAL PARAMETERS

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

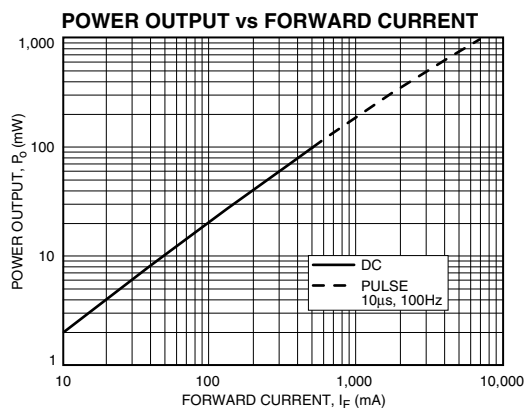
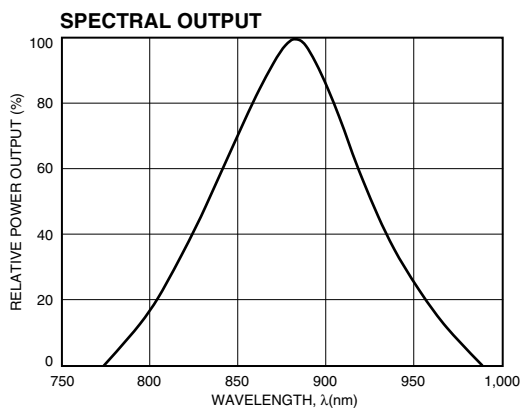
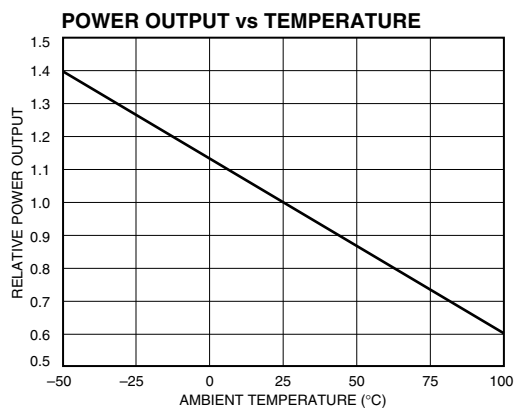
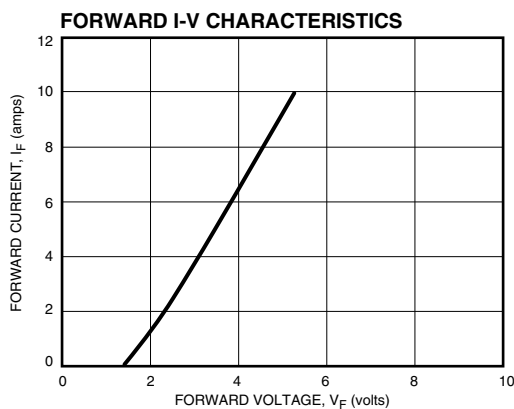
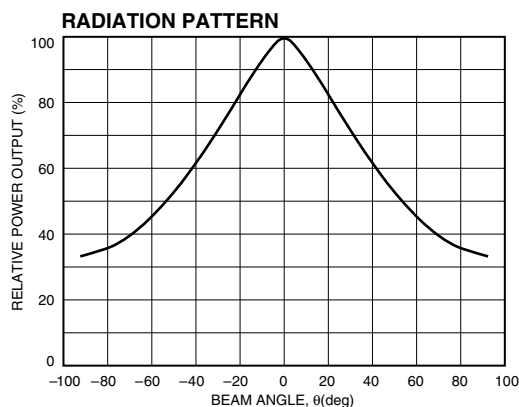
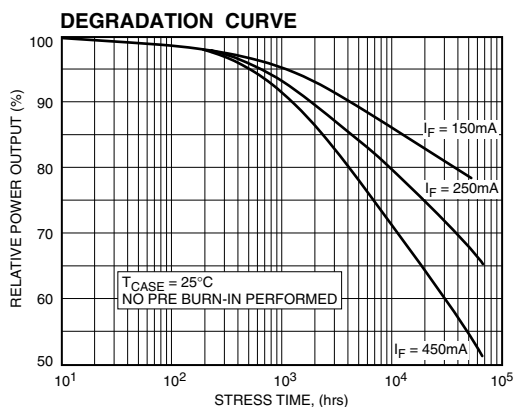
¹Heat transfer minimized by measuring in still air with minimum heat conducting through leads

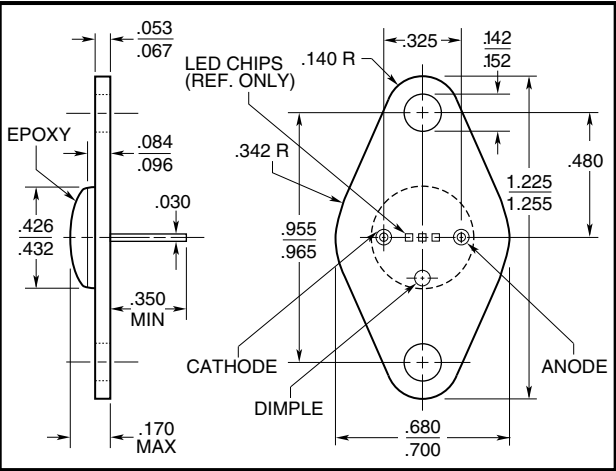
²Air circulating at a rapid rate to keep case temperature at 25°C

MAXIMUM RATINGS



TYPICAL CHARACTERISTICS





- FEATURES
- Super high power output
 - 880nm peak emission
 - Three chips connected in series
 - TO-66 header for good heat dissipation
 - 100% tested for power output
 - Electrically isolated case
- All surfaces are gold plated. Dimensions are nominal values in inches unless otherwise specified.

ELECTRO-OPTICAL CHARACTERISTICS AT 25°C

PARAMETERS	TEST CONDITIONS	MIN	TYP	MAX	UNITS
Total Power Output, P _O	I _F = 300mA I _F = 8A	150	170 3500		mW
Peak Emission Wavelength, λ _p	I _F = 50mA		880		nm
Spectral Bandwidth at 50%, Δλ			80		nm
Half Intensity Beam Angle, θ			120		Deg
Forward Voltage, V _F	I _F = 300mA		4.5	5	Volts
Reverse Breakdown Voltage, V _R	I _R = 10μA	5	30		Volts
Capacitance, C	V _R = 0V		30		pF
Rise Time			1		μsec
Fall Time			1		μsec

ABSOLUTE MAXIMUM RATINGS AT 25°C CASE

Power Dissipation ¹	2W
Continuous Forward Current	400mA
Peak Forward Current (10μs, 400Hz) ²	8A
Reverse Voltage	5V
Lead Soldering Temperature (1/16" from case for 10sec)	240°C

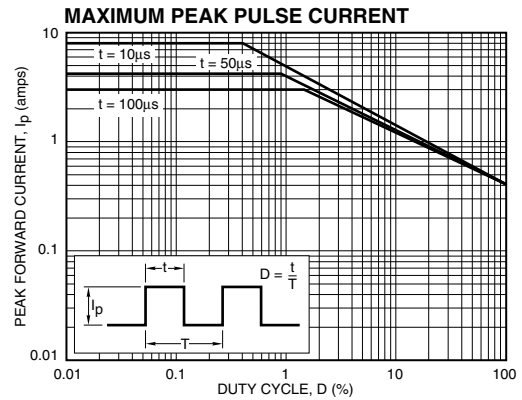
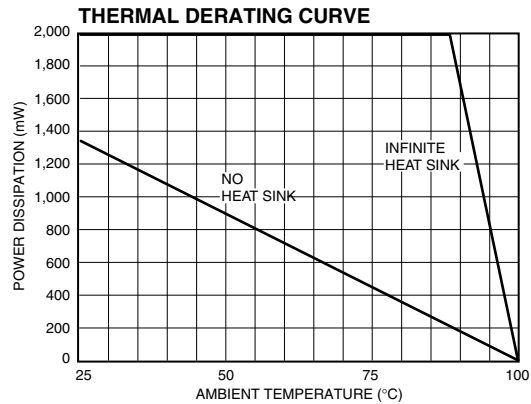
¹Derate per Thermal Derating Curve above 25°C
²Derate linearly above 25°C

THERMAL PARAMETERS

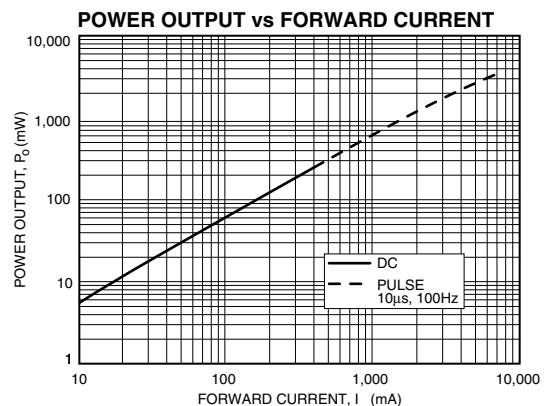
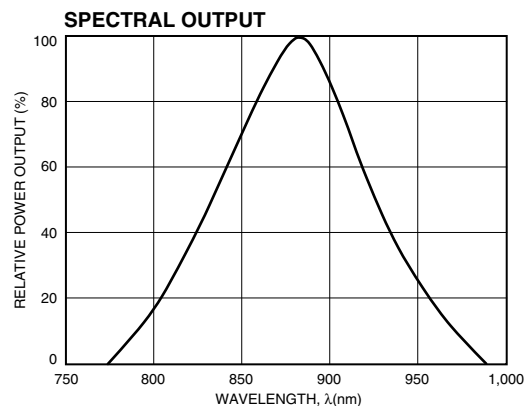
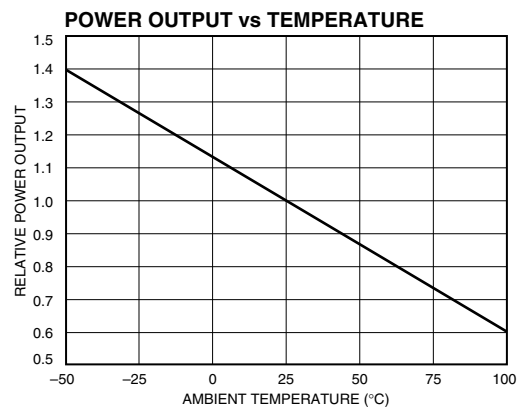
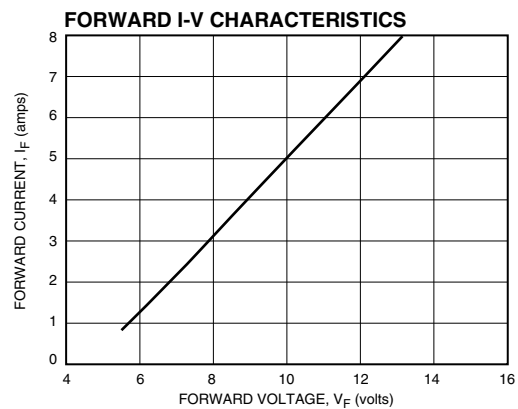
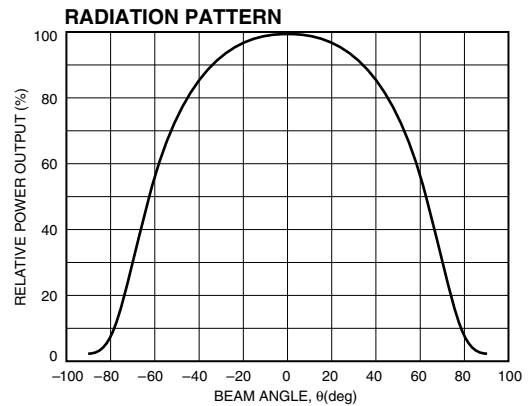
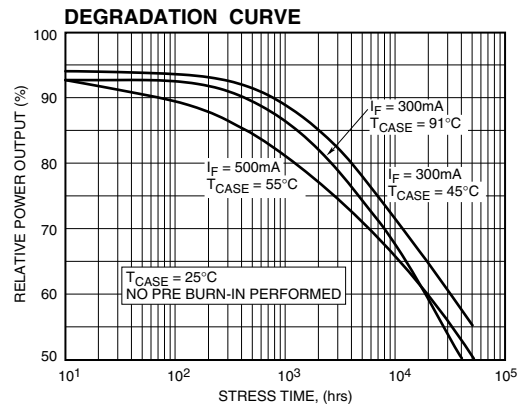
Storage and Operating Temperature Range	-55°C to 100°C
Maximum Junction Temperature	100°C
Thermal Resistance, R _{THJA} ¹	60°C/W Typical
Thermal Resistance, R _{THJA} ²	16°C/W Typical

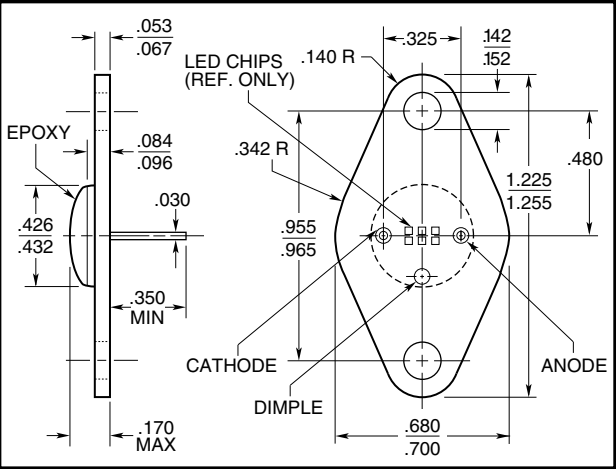
¹Heat transfer minimized by measuring in still air with minimum heat conducting through leads
²Air circulating at a rapid rate to keep case temperature at 25°C

MAXIMUM RATINGS



TYPICAL CHARACTERISTICS





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.

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%, Δλ			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)	240°C

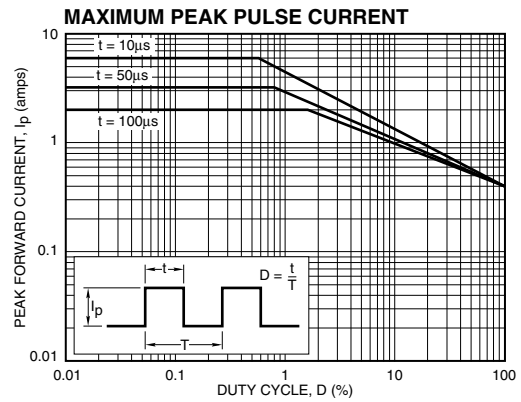
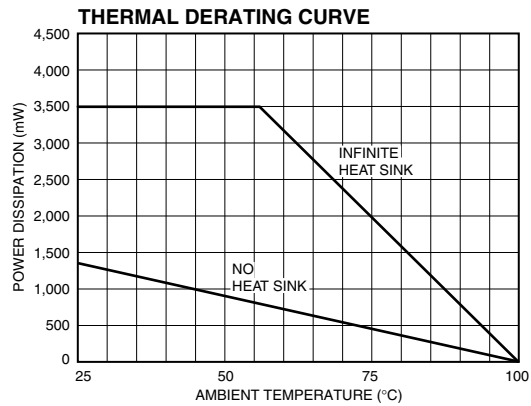
¹Derate per Thermal Derating Curve above 25°C
²Derate linearly above 25°C

THERMAL PARAMETERS

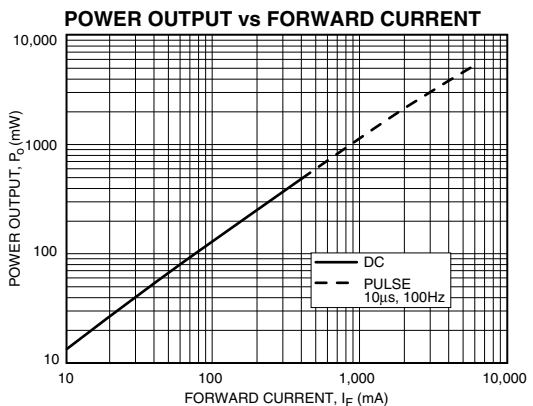
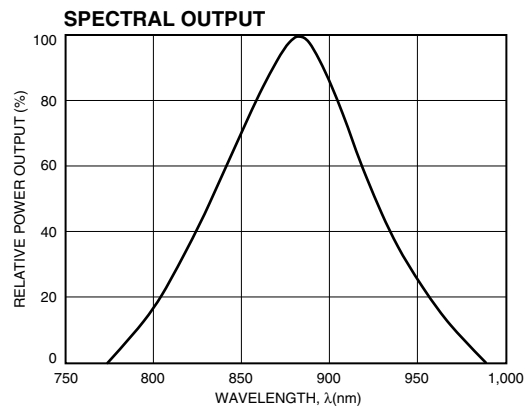
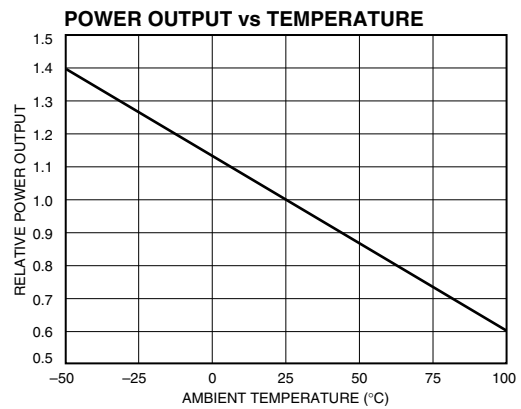
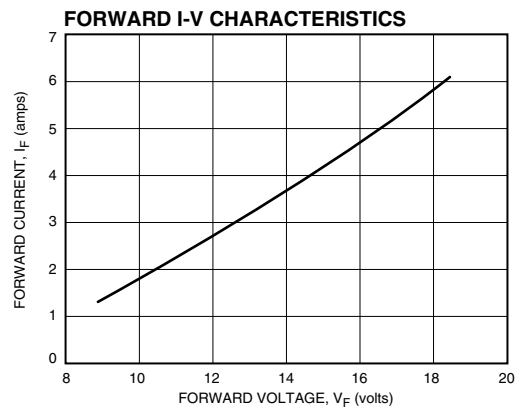
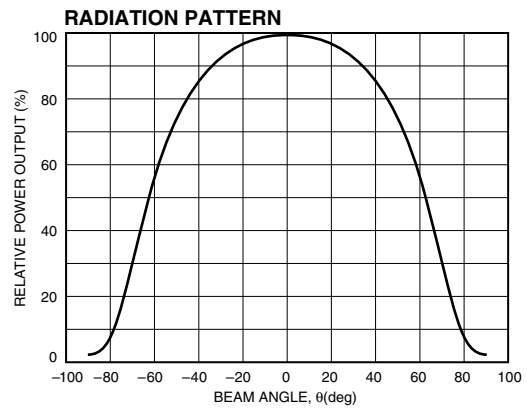
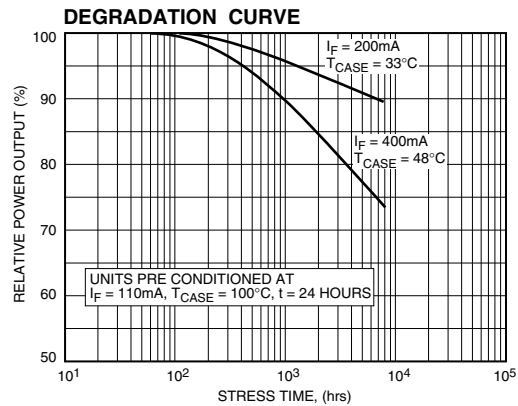
Storage and Operating Temperature Range	-55°C to 100°C
Maximum Junction Temperature	100°C
Thermal Resistance, R _{THJA} ¹	60°C/W Typical
Thermal Resistance, R _{THJA} ²	16°C/W Typical

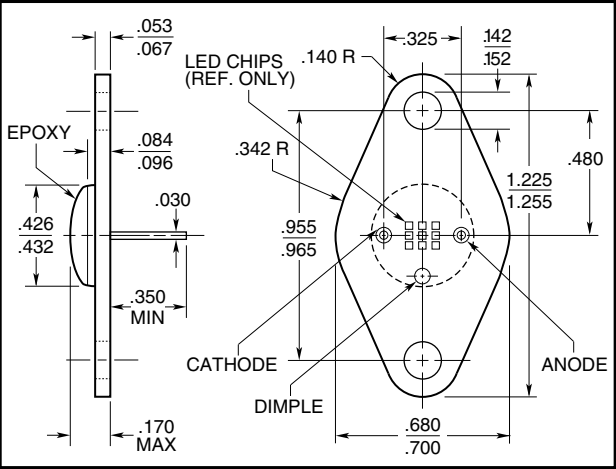
¹Heat transfer minimized by measuring in still air with minimum heat conducting through leads
²Air circulating at a rapid rate to keep case temperature at 25°C

MAXIMUM RATINGS



TYPICAL CHARACTERISTICS





- FEATURES
- Highest power output available
 - 880nm peak emission
 - Nine 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.

ELECTRO-OPTICAL CHARACTERISTICS AT 25°C

PARAMETERS	TEST CONDITIONS	MIN	TYP	MAX	UNITS
Total Power Output, P _O	I _F = 300mA I _F = 5A	390	500 6500		mW
Peak Emission Wavelength, λ _p	I _F = 50mA		880		nm
Spectral Bandwidth at 50%, Δλ			80		nm
Half Intensity Beam Angle, θ			120		Deg
Forward Voltage, V _F	I _F = 300mA		13.5	15	Volts
Reverse Breakdown Voltage, V _R	I _R = 10μA	5	30		Volts
Capacitance, C	V _R = 0V		11		pF
Rise Time			3		μsec
Fall Time			3		μsec

ABSOLUTE MAXIMUM RATINGS AT 25°C CASE

Power Dissipation ¹	6W
Continuous Forward Current	400mA
Peak Forward Current (10μs, 400Hz) ²	5A
Reverse Voltage	5V
Lead Soldering Temperature (1/16" from case for 10sec)	240°C

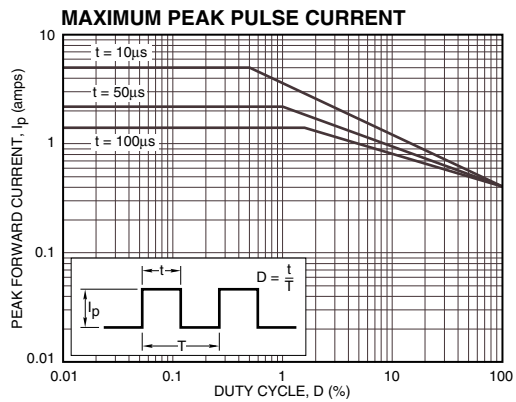
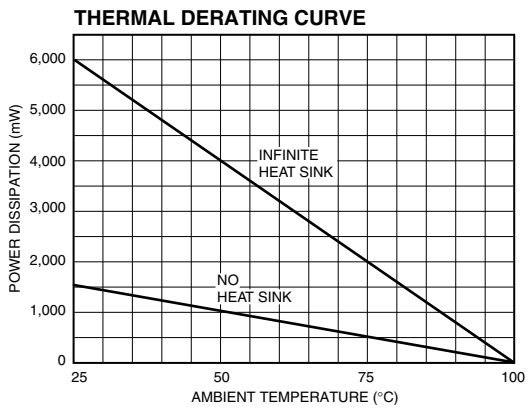
¹Derate per Thermal Derating Curve above 25°C
²Derate linearly above 25°C

THERMAL PARAMETERS

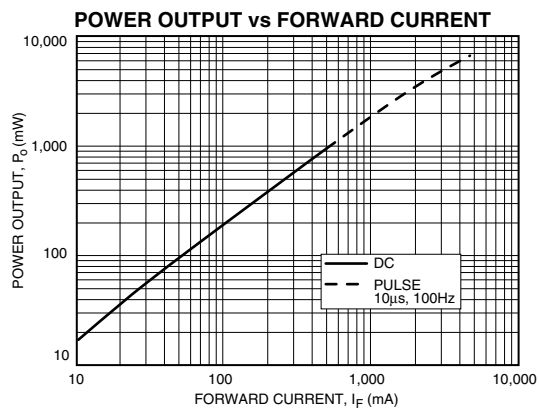
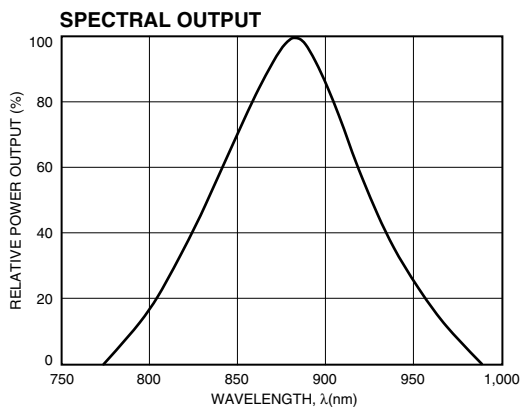
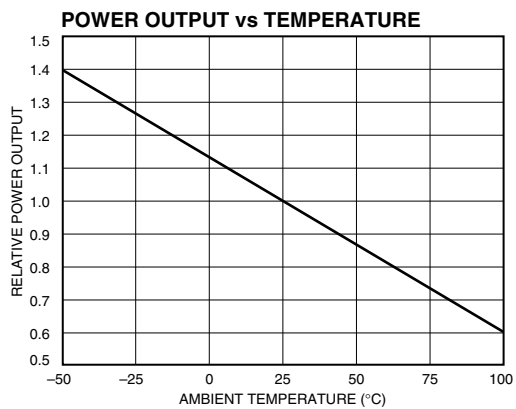
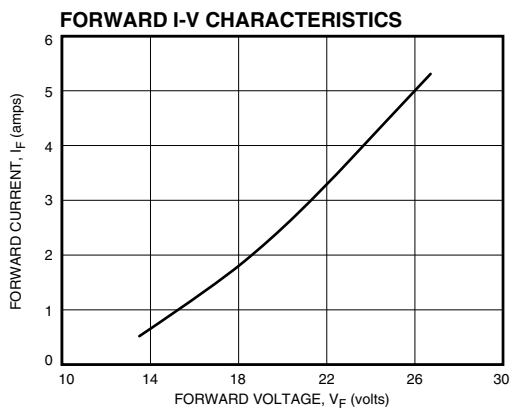
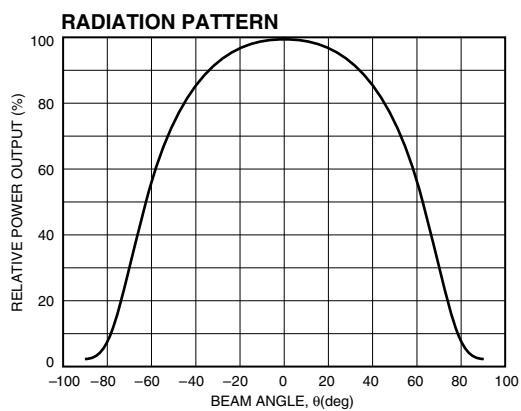
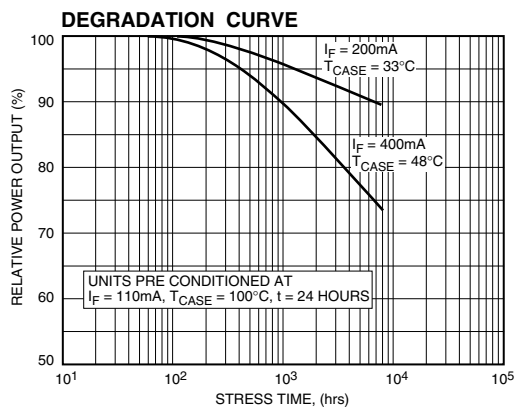
Storage and Operating Temperature Range	-55°C to 100°C
Maximum Junction Temperature	100°C
Thermal Resistance, R _{THJA} ¹	60°C/W Typical
Thermal Resistance, R _{THJA} ²	16°C/W Typical

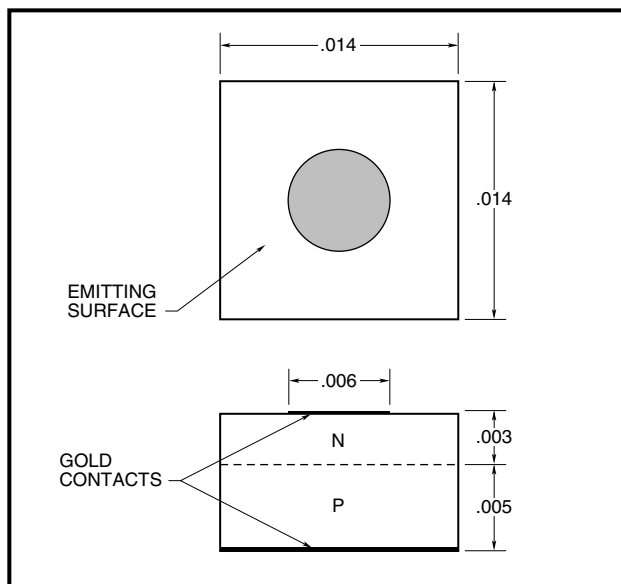
¹Heat transfer minimized by measuring in still air with minimum heat conducting through leads
²Air circulating at a rapid rate to keep case temperature at 25°C

MAXIMUM RATINGS



TYPICAL CHARACTERISTICS



**FEATURES**

- High reliability LPE GaAlAs IRLED chips
- Graded-bandgap LED structure for high radiant power output
- 880nm peak emission
- Good ohmic contacts (gold alloys)
- Good bondability

All dimensions are nominal values in inches unless otherwise specified.

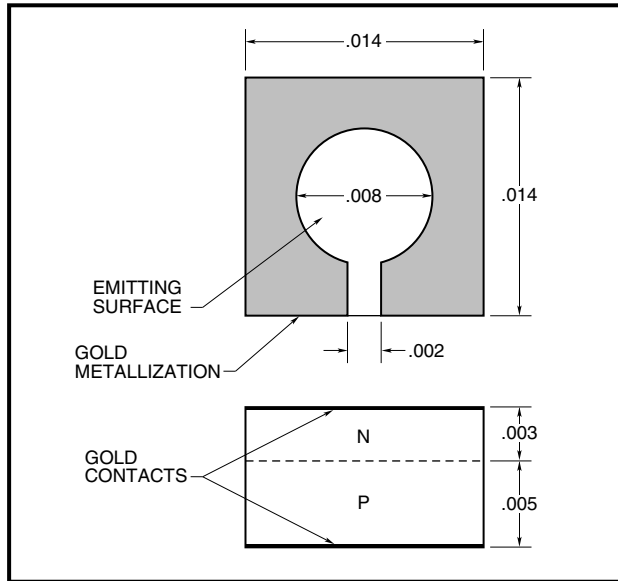
ELECTRO-OPTICAL CHARACTERISTICS AT 25°C

PARAMETERS	TEST CONDITIONS	MIN	TYP	MAX	UNITS
Total Power Output, P_o	$I_F = 100\text{mA}$ $I_F = 20\text{mA}$	8	14 2		mW
Peak Emission Wavelength, λ_p	$I_F = 50\text{mA}$		880		nm
Spectral Bandwidth at 50%, $\Delta\lambda$			80		nm
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

Power Dissipation	190mW
Continuous Forward Current	100mA
Peak Forward Current (10 μs , 300 Hz)	3A
Reverse Voltage	5V
Storage and Operating Temperature Range	-65°C to 150°C
Maximum Junction Temperature	150°C

The exact performance data depends on your package configuration and technique. Data listed in this specification is for the chip mounted on a TO-46 header using silver epoxy as the die attach material. All sales are final after 60 days from the shipment date. Opto Diode must be notified of any discrepancies within this period.

**FEATURES**

- High reliability LPE GaAlAs IRLED chips
- Open center emission for imaging applications
- High output uniformity from emitting surfaces
- Gold contacts for high reliability bonding

All dimensions are nominal values in inches unless otherwise specified.

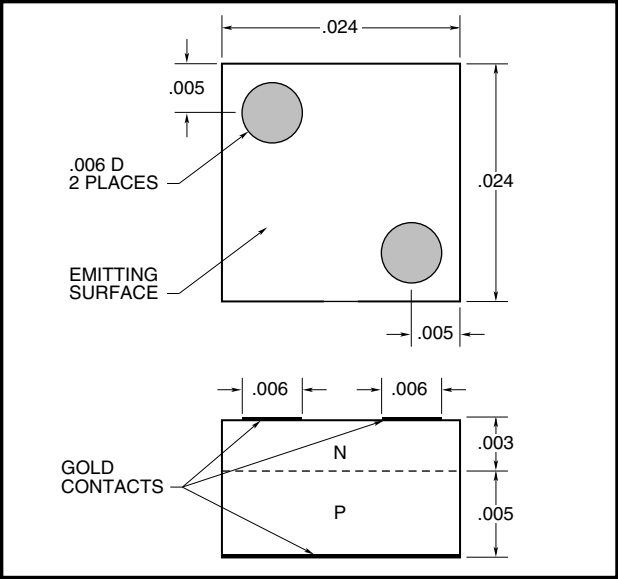
ELECTRO-OPTICAL CHARACTERISTICS AT 25°C

PARAMETERS	TEST CONDITIONS	MIN	TYP	MAX	UNITS
Total Power Output, P_o	$I_F = 100\text{mA}$	6	8		mW
Peak Emission Wavelength, λ_p	$I_F = 50\text{mA}$		880		nm
Spectral Bandwidth at 50%, $\Delta\lambda$			80		nm
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

Power Dissipation	190mW
Continuous Forward Current	100mA
Peak Forward Current (10 μs , 300 Hz)	3A
Reverse Voltage	5V
Storage and Operating Temperature Range	-65°C to 150°C
Maximum Junction Temperature	150°C

The exact performance data depends on your package configuration and technique. Data listed in this specification is for the chip mounted on a TO-46 header using silver epoxy as the die attach material. All sales are final after 60 days from the shipment date. Opto Diode must be notified of any discrepancies within this period.



- FEATURES
- High current capability
 - 2 bond pads for uniform output
 - Gold contacts for high reliability bonding
 - High reliability LPE GaAlAs IRLED chips
- All dimensions are nominal values in inches unless otherwise specified.

ELECTRO-OPTICAL CHARACTERISTICS AT 25°C

PARAMETERS	TEST CONDITIONS	MIN	TYP	MAX	UNITS
Total Power Output, P_o	$I_F = 100\text{mA}$	7	10		mW
Peak Emission Wavelength, λ_p	$I_F = 50\text{mA}$		880		nm
Spectral Bandwidth at 50%, $\Delta\lambda$			80		nm
Forward Voltage, V_F	$I_F = 200\text{mA}$		1.6	2	Volts
Reverse Breakdown Voltage, V_R	$I_R = 10\mu\text{A}$	5	30		Volts
Capacitance, C	$V_R = 0\text{V}$		60		pF
Rise Time			0.7		μsec
Fall Time			0.7		μsec

ABSOLUTE MAXIMUM RATINGS AT 25°C

Power Dissipation	400mW
Continuous Forward Current	200mA
Peak Forward Current (10 μs , 300 Hz)	7A
Reverse Voltage	5V
Storage and Operating Temperature Range	-65°C to 150°C
Maximum Junction Temperature	150°C

The exact performance data depends on your package configuration and technique. Data listed in this specification is for the chip mounted on a TO-46 header using silver epoxy as the die attach material. All sales are final after 60 days from the shipment date. Opto Diode must be notified of any discrepancies within this period.