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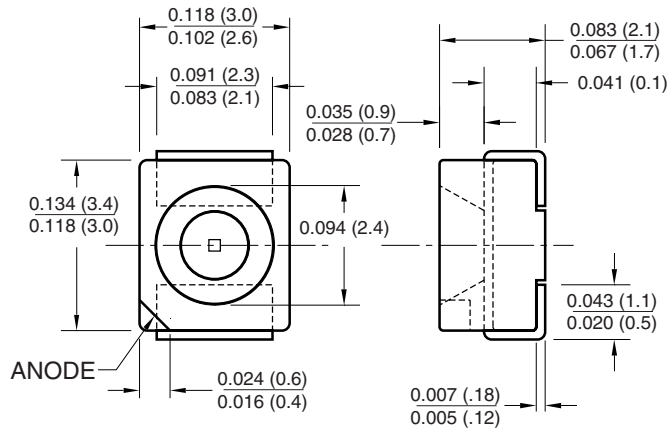
ON Semiconductor®

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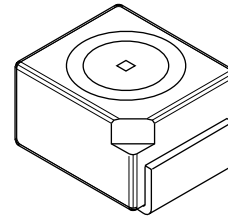
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PACKAGE DIMENSIONS



NOTES:

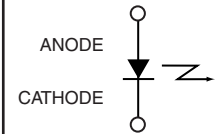
1. Dimensions are in inches (mm)
2. Tolerance of $\pm .010$ (.25) on all non nominal dimensions unless otherwise specified.



FEATURES

- Wavelength = 880 nm, AlGaAs
- Wide Emission Angle, 120°
- Surface Mount PLCC-2 Package
- High Power

SCHEMATIC



ABSOLUTE MAXIMUM RATINGS ($T_A = 25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Rating	Unit
Operating Temperature	T_{opr}	-55 to +100	$^\circ\text{C}$
Storage Temperature	T_{stg}	-55 to +100	$^\circ\text{C}$
Soldering Temperature (Flow) ^(2,3)	T_{sol}	260 for 10 sec	$^\circ\text{C}$
Continuous Forward Current	I_F	100	mA
Reverse Voltage	V_R	5	V
Peak Forward Current ⁽⁴⁾	I_{FM}	1.75	A
Power Dissipation ⁽¹⁾	P_D	180	mW

NOTES

1. Derate power dissipation linearly 2.4 mW/ $^\circ\text{C}$ above 25 $^\circ\text{C}$.
2. RMA flux is recommended.
3. Methanol or isopropyl alcohols are recommended as cleaning agents.
4. Pulse conditions; $t_p = 100 \mu\text{s}$, $T = 10 \text{ ms}$.

ELECTRICAL / OPTICAL CHARACTERISTICS ($T_A = 25^\circ\text{C}$)

PARAMETER	TEST CONDITIONS	SYMBOL	MIN.	TYP.	MAX.	UNITS
Peak Emission Wavelength	$I_F = 100 \text{ mA}$	λ_P	—	880	—	nm
Spectral Bandwidth	$I_F = 100 \text{ mA}$	$\Delta\lambda$	—	80	—	nm
Emission Angle	$I_F = 100 \text{ mA}$	θ	—	120	—	Deg.
Forward Voltage	$I_F = 100 \text{ mA}$, $t_p = 20 \text{ ms}$	V_F	—	1.5	1.8	V
	$I_F = 1 \text{ A}$, $t_p = 100 \mu\text{s}$		—	3.0	3.8	
Reverse Current	$V_R = 5 \text{ V}$	I_R	—	—	1	μA
Radiant Intensity	$I_F = 100 \text{ mA}$, $t_p = 20 \text{ ms}$	I_e	4	—	8	mW/sr
	$I_F = 1 \text{ A}$, $t_p = 100 \mu\text{s}$		—	48	—	
Radiant Flux	$I_F = 100 \text{ mA}$, $t_p = 20 \text{ ms}$	ϕ_e	—	10	—	mW
Temp. Coeff. of I_E	$I_F = 100 \text{ mA}$	T_{CI}	—	-0.5	—	%/K
Temp. Coeff. of V_F	$I_F = 100 \text{ mA}$	T_{CV}	—	-4	—	mV/K
Temp. Coeff. of λ	$I_F = 100 \text{ mA}$	$T_{C\lambda}$	—	0.25	—	nm/K
Rise Time	$I_F = 100 \text{ mA}$	t_r	—	—	1	μs
Fall Time	$I_F = 100 \text{ mA}$	t_f	—	—	1	μs

TYPICAL PERFORMANCE CURVES

Fig. 1 Normalized Radiant Intensity vs. Forward Current

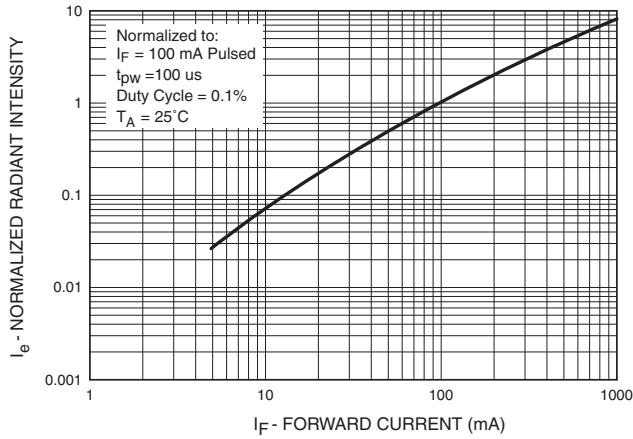


Fig. 2 Forward Current vs. Forward Voltage

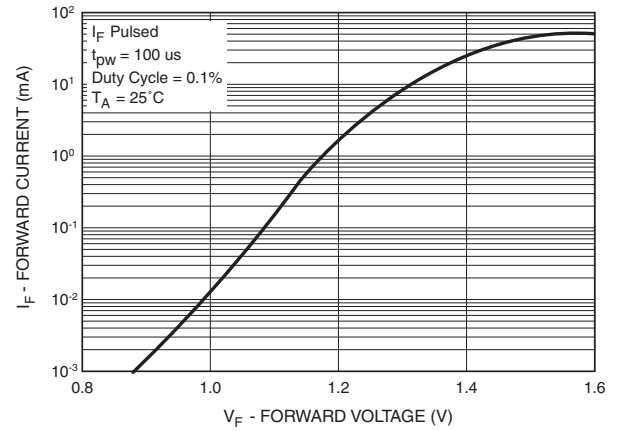


Fig. 4 Forward Voltage vs. Ambient Temperature

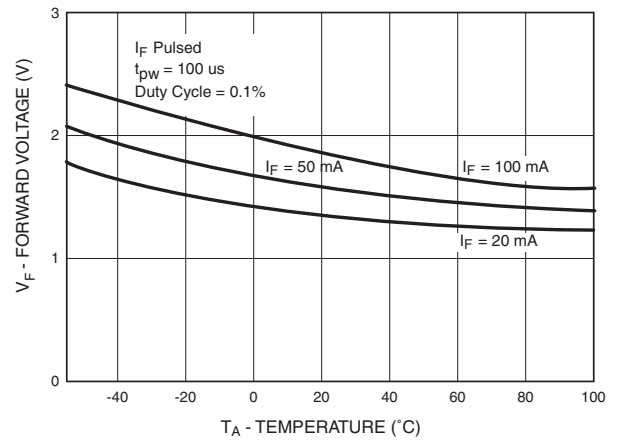


Fig.3 Radiation Diagram

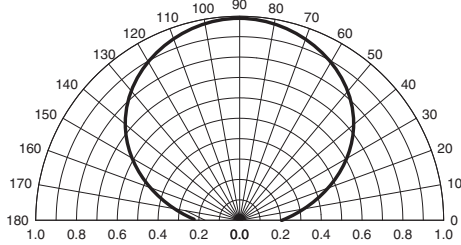


Fig. 5 Spectral Response (TBD)

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