



**599 SERIES**  
**Infrared SMD LED**  
3528 PLCC-2 Package Top View 850nm

**MECHANICAL / SPECIFICATIONS**

PART NUMBER:  
[599-4FA0-147IRF](#)

DIMENSIONS:  
3.5 x 2.8 x 1.9mm

LENS COLOR:  
Clear

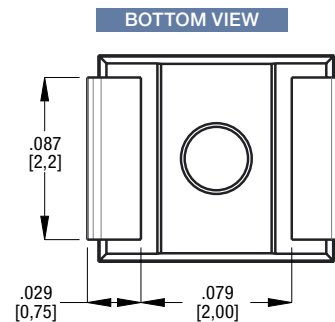
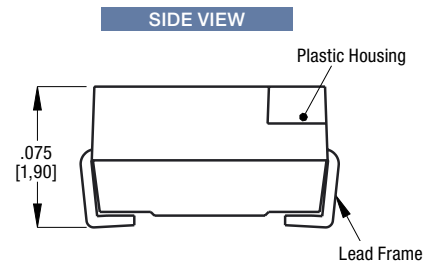
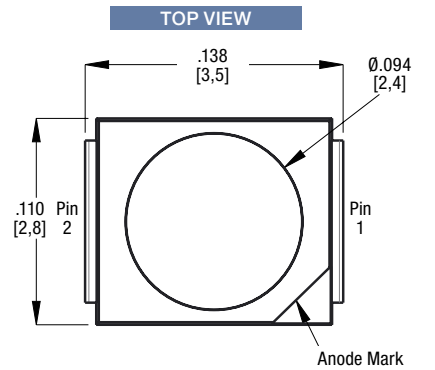
LENS MATERIAL:  
Silicon

STANDARD PACKAGING:  
2000/reel

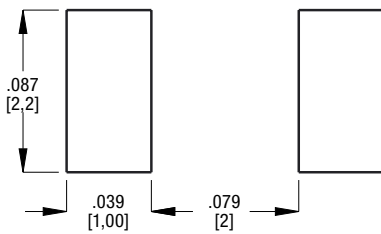
MOISTURE SENSITIVITY LEVEL:  
4

**CERTIFICATIONS & RATINGS**  
RoHS Compliant

**DIMENSIONS** inches [mm]



**RECOMMENDED PAD LAYOUT**



**LED SCHEMATIC**



ABSOLUTE MAXIMUM RATINGS AT 25°C

Symbol	Parameter	Ratings	Units	Notes
$I_F$	Forward Current	100	mA	
$I_{FP}$	Peak Current	1000	mA	1
$V_R$	Reverse Voltage	5	V	
$T_{opr}$	Operating Temperature	-40~+85	°C	
$T_{stg}$	Storage Temperature	-40~+100	°C	
$T_{sol}$	Soldering Temperature	260	°C	2

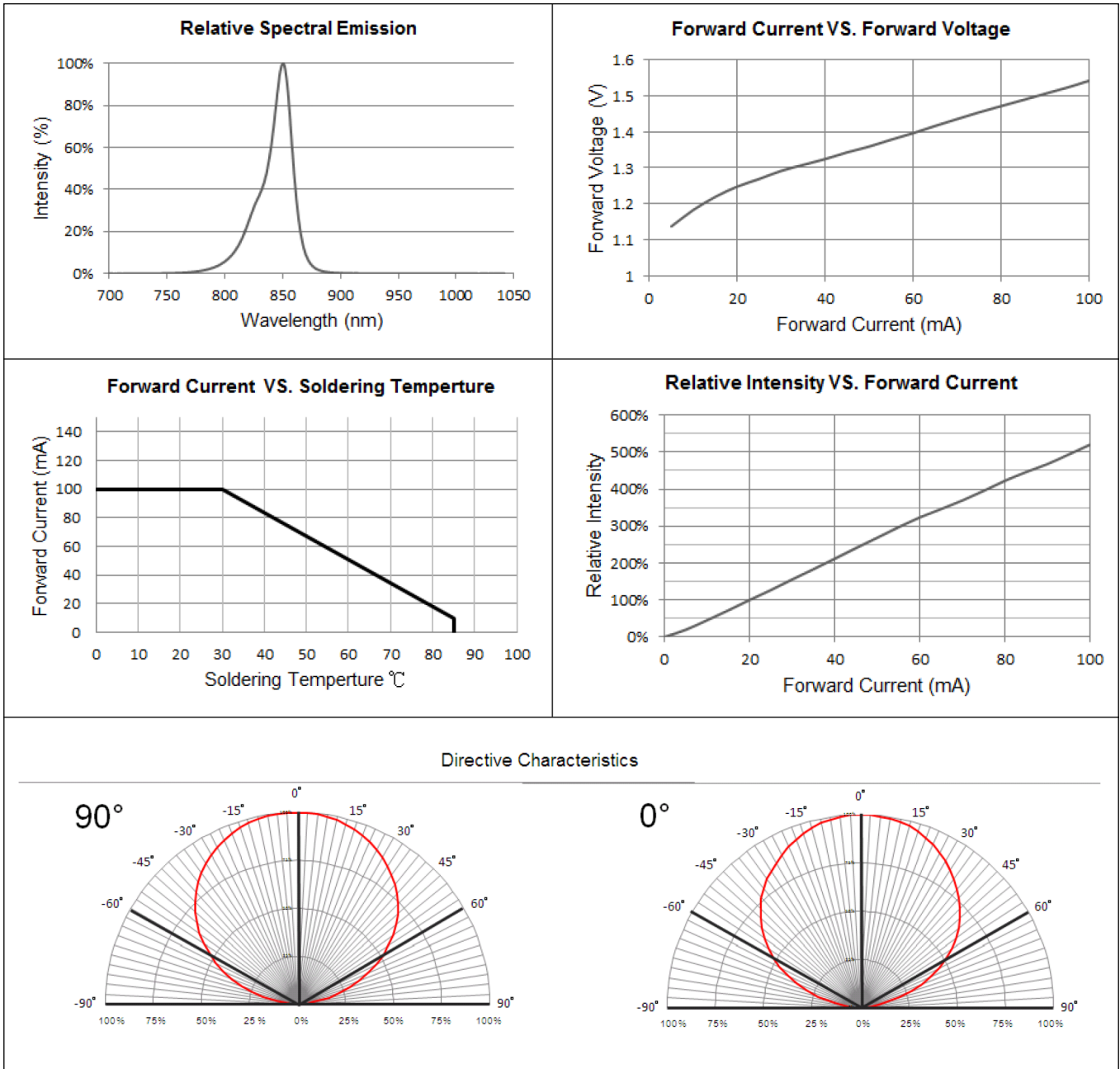
Notes:

1. IFP Conditions — Pulse Width  $\leq 100\mu s$  and Duty  $\leq 1\%$ .
2. Soldering time  $\leq 5$  seconds.

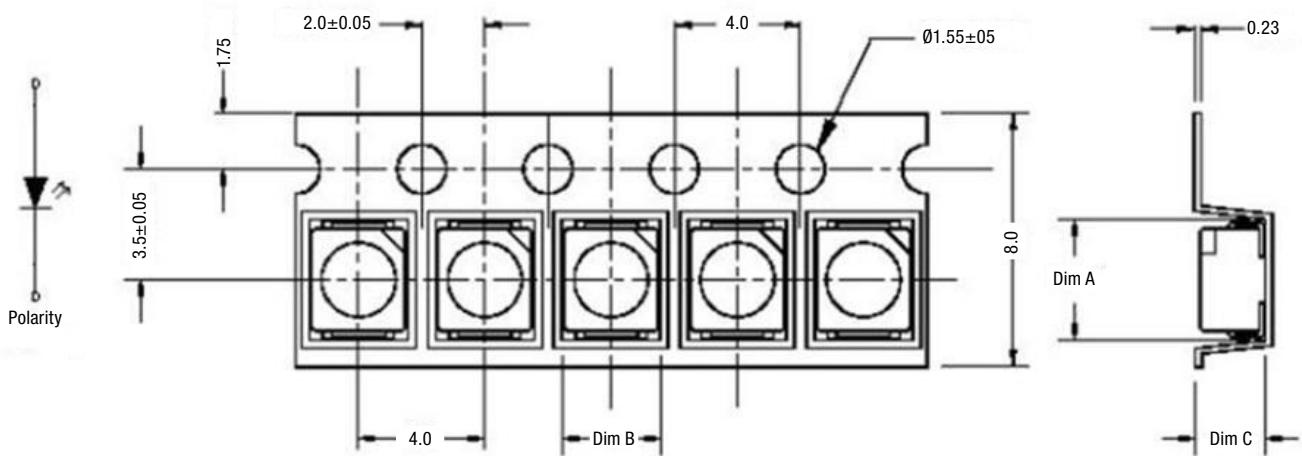
ELECTRICAL - OPTICAL CHARACTERISTICS

Symbol	Parameters	Test Conditions	Min	Typ	Max	Unit
$I_e$	Radiant Intensity	$I_F=20mA$	1.75	-	7.25	mW/sr
$\lambda_p$	Peak Wavelength	$I_F=20mA$	-	850	-	nm
$\Delta\lambda$	Spectral bandwidth at 50% of $I_{max}$	$I_F=20mA$		30	-	nm
$V_F$	Forward Voltage	$I_F=20mA$	1.35	1.5	1.65	V
$I_R$	Reverse Current	$V_R=5V$	-	-	100	$\mu A$
$2\theta_{1/2}$	Angle of Half Intensity (X)	$I_F=20mA$	-	120	-	deg
	Angle of Half Intensity (Y)		-	120	-	

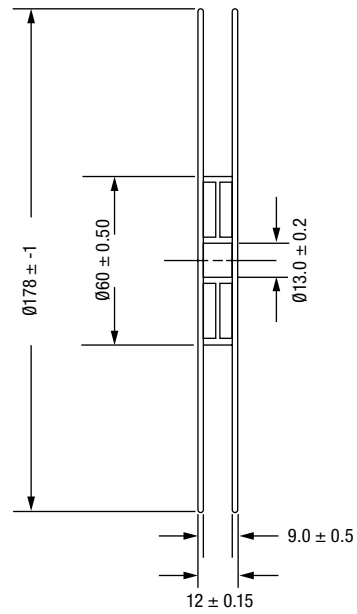
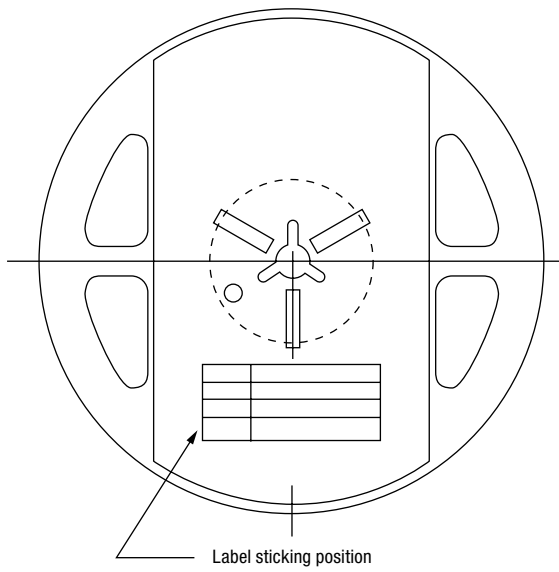
TYPICAL ELECTRICAL-OPTICAL CHARACTERISTICS



TAPE AND REEL SPECIFICATION



Dim A	Dim B	Dim C	Quantity/Reel
3.73 ± 0.10	2.95 ± 0.10	2.12 ± 0.10	2K



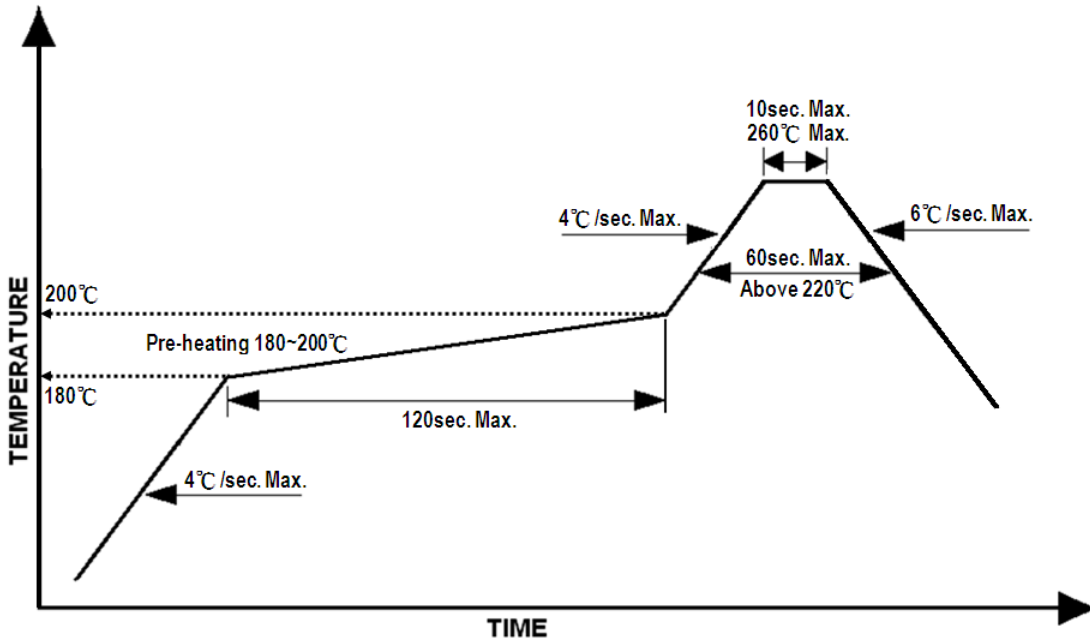
Unit: mm

REFLOW SOLDERING

Recommended soldering paste specifications:

- 1. Operating temp.: Above 220°C, 60sec.
- 2. Peak temp.: 260°C Max., 10sec Max.
- 3. Reflow soldering should not be done more than two times.

LEAD-FREE SOLDER PROFILE



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