



599 SERIES

Infrared SMD LED

0402 Package Top View 850nm

MECHANICAL / SPECIFICATIONS

PART NUMBER:
[599-1AA0-147IRF](#)

DIMENSIONS:
1.0 x 0.5 x 0.5mm

LENS COLOR:
Clear

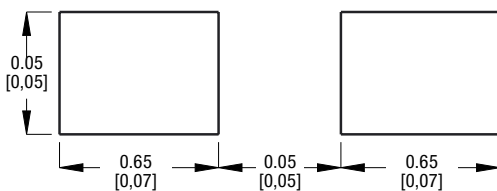
LENS MATERIAL:
Epoxy

STANDARD PACKAGING:
4000/reel

MOISTURE SENSITIVITY LEVEL:
4

CERTIFICATIONS & RATINGS
RoHS Compliant

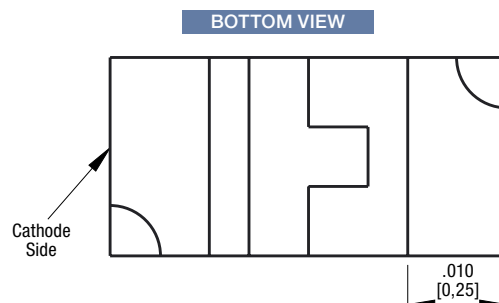
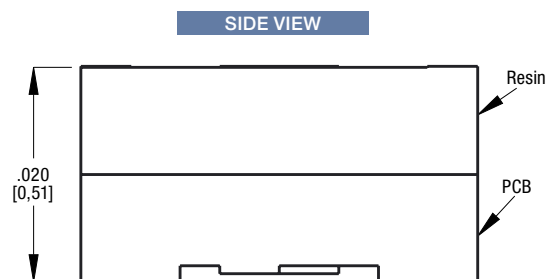
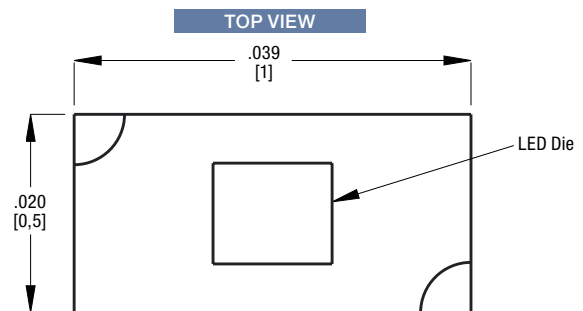
RECOMMENDED PAD LAYOUT



LED SCHEMATIC



DIMENSIONS inches [mm]



ABSOLUTE MAXIMUM RATINGS AT 25°C

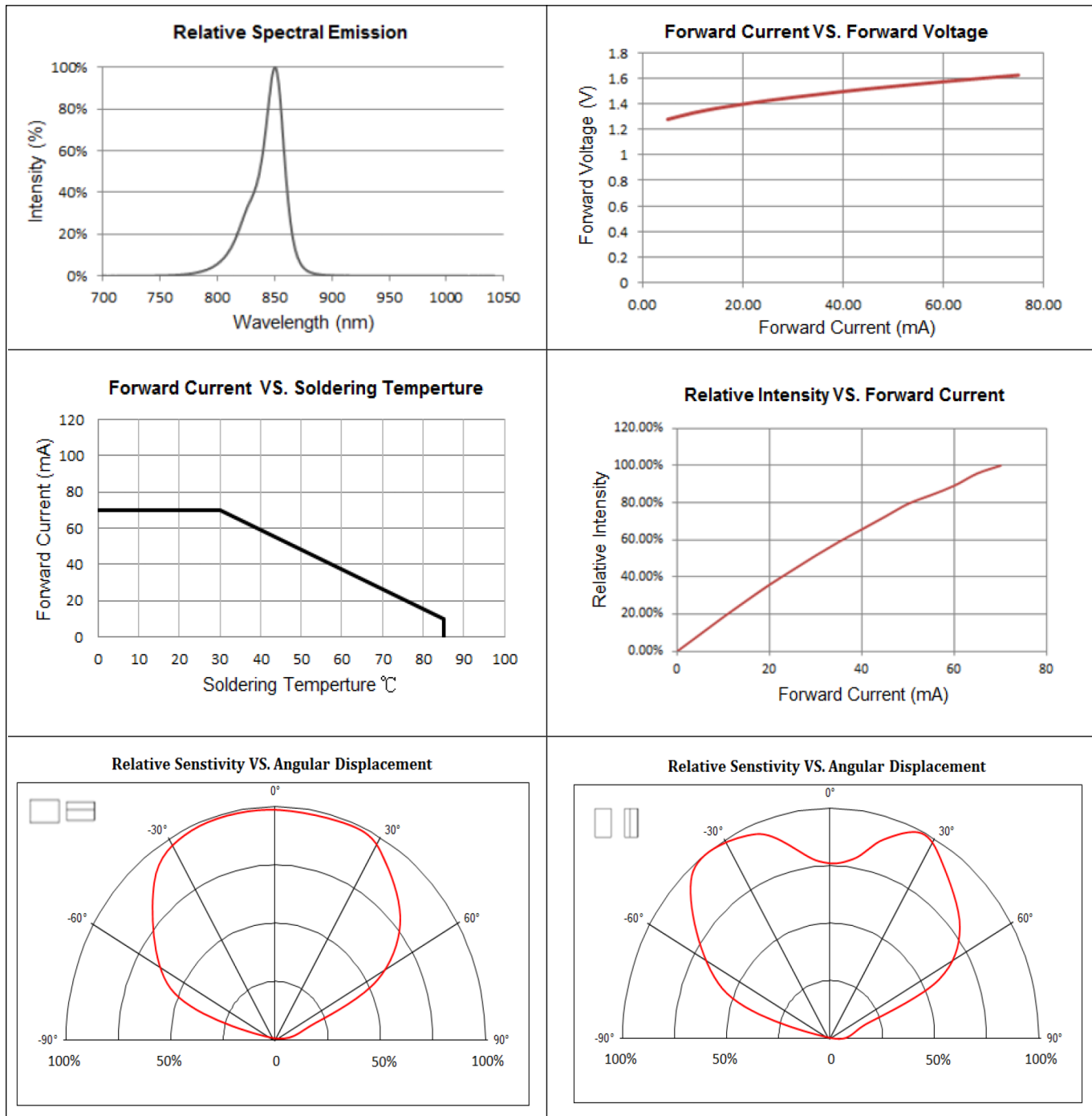
Symbol	Parameter	Range	Units	Notes
I_F	Forward Current	70	mA	
I_{FP}	Peak Current	500	mA	1
V_R	Reverse Voltage	5	V	
T_{opr}	Operating Temperature	-40~+85	°C	
T_{stg}	Storage Temperature	-40~+100	°C	
T_{sol}	Soldering Temperature	260	°C	2

- Notes:**
- IFP Conditions — Pulse Width ≤ 100μs and Duty ≤ 1%.
 - Soldering time ≤ 5 seconds.

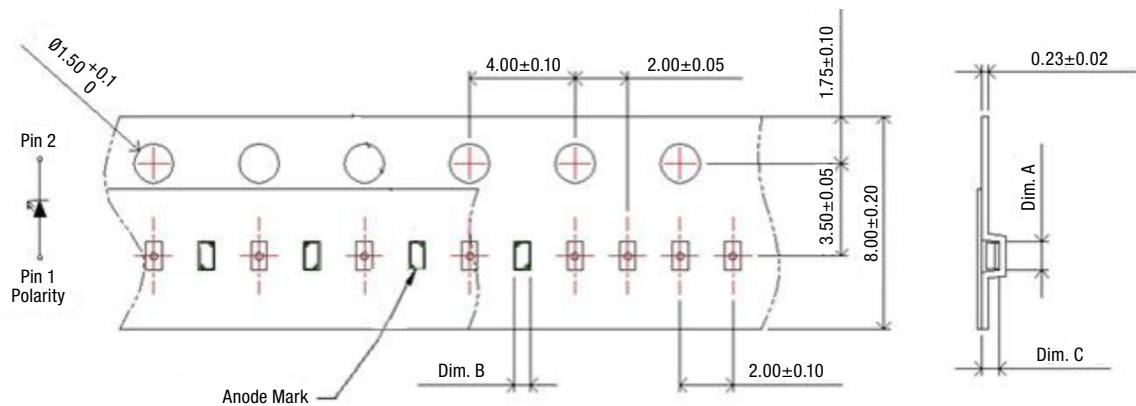
ELECTRICAL - OPTICAL CHARACTERISTICS

Symbol	Parameters	Test Conditions	Min	Typ	Max	Unit
I_e	Radiant Intensity	$I_F=70mA$	3.0	5.5	7.5	mW/sr
λ_p	Peak Wavelength	$I_F=70mA$	-	850	-	nm
$\Delta\lambda$	Spectral bandwidth at 50% of I_{max}	$I_F=70mA$		42	-	nm
V_F	Forward Voltage	$I_F=70mA$	-	1.55	2.0	V
I_R	Reverse Current	$V_R=5V$	-	-	10	μA
$2\theta_{\frac{1}{2}}$	Angle of Half Intensity (X)	$I_F=70mA$	-	140	-	deg
	Angle of Half Intensity (Y)		-	140	-	

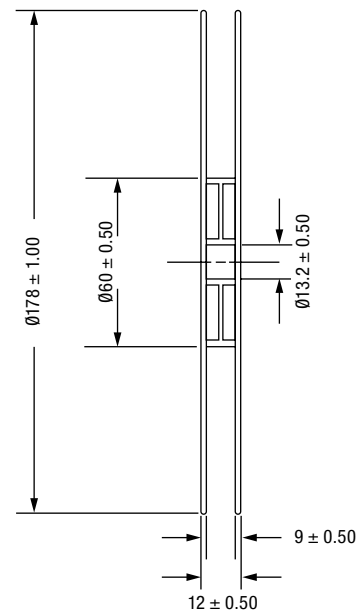
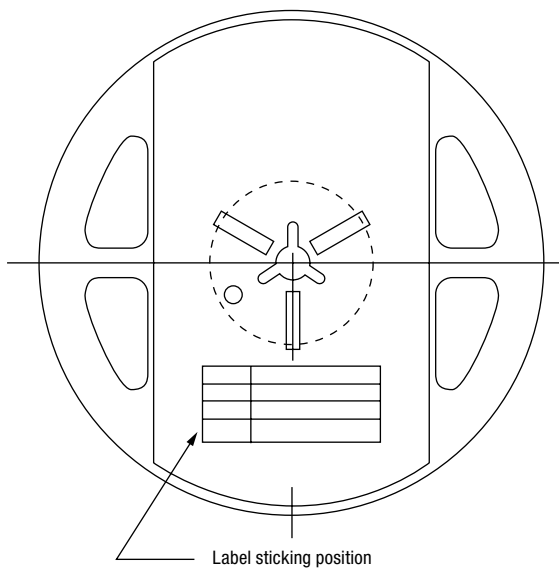
TYPICAL ELECTRICAL-OPTICAL CHARACTERISTICS



TAPE AND REEL SPECIFICATION



Dim A	Dim B	Dim C	Quantity/Reel
1.10±0.05	0.60±0.05	0.66±0.05	4K



Unit: mm

REFLOW SOLDERING

Recommended soldering paste specifications:

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

LEAD-FREE SOLDER PROFILE

