



599 SERIES

Infrared SMD LED

0402 Package Side View 850nm

MECHANICAL / SPECIFICATIONS

PART NUMBER:
[599-3GA0-147IRF](#)

DIMENSIONS:
1.0 x 0.55 x 0.3mm

LENS COLOR:
Black

LENS MATERIAL:
Epoxy

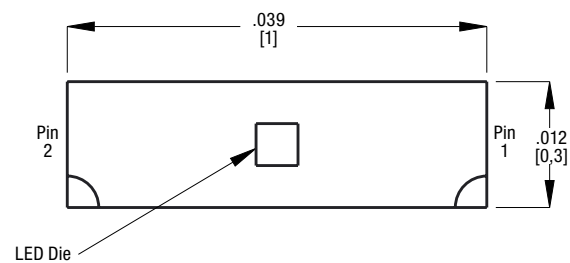
STANDARD PACKAGING:
4000/reel

MOISTURE SENSITIVITY LEVEL:
2a

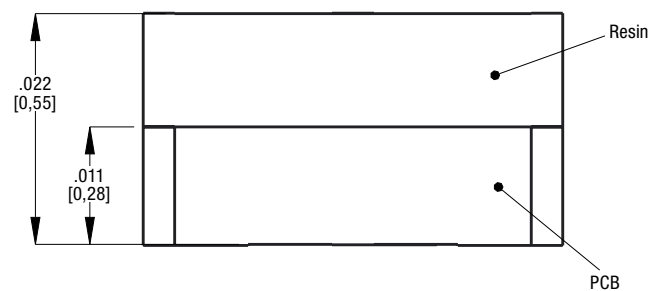
CERTIFICATIONS & RATINGS
RoHS Compliant

DIMENSIONS inches [mm]

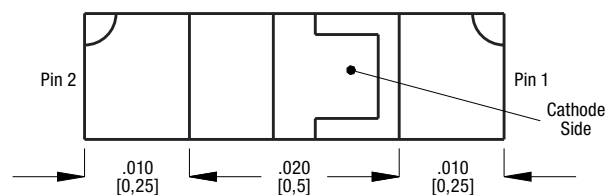
TOP VIEW



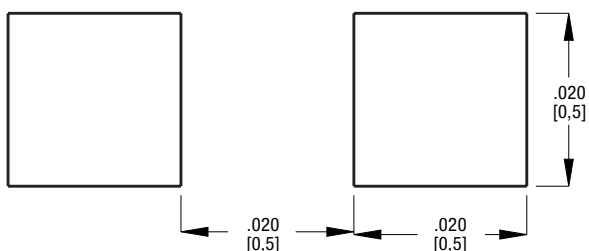
SIDE VIEW



BOTTOM VIEW



RECOMMENDED PAD LAYOUT



LED SCHEMATIC



ABSOLUTE MAXIMUM RATINGS AT 25°C

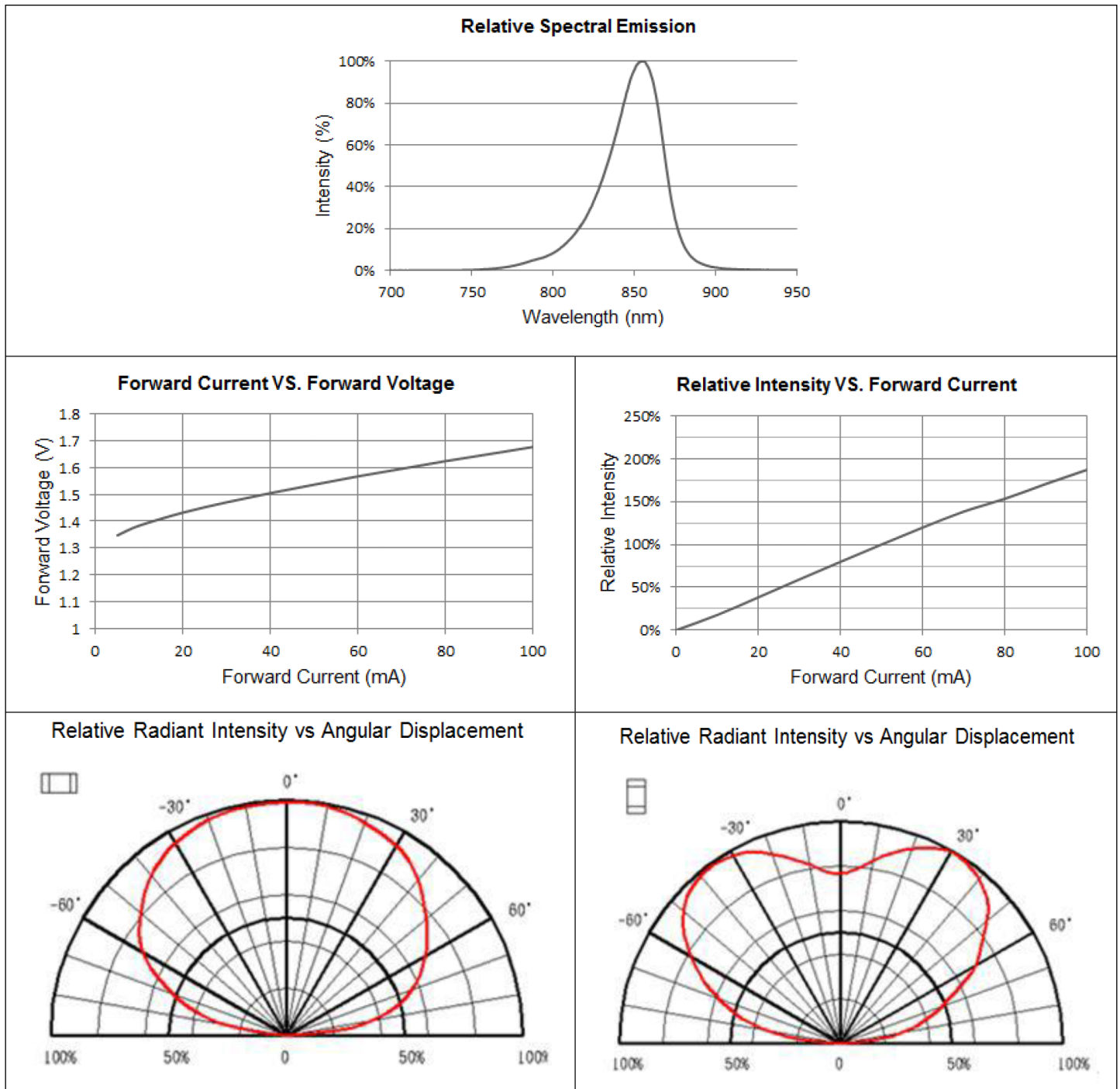
Symbol	Parameter	Ratings	Units	Notes
I_F	Forward Current	50	mA	
I_{FP}	Peak Current	250	mA	1
V_R	Reverse Voltage	5	V	
T_{opr}	Operating Temperature	-40~+85	°C	
T_{stg}	Storage Temperature	-40~+100	°C	
T_{sol}	Soldering Temperature	260	°C	2

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

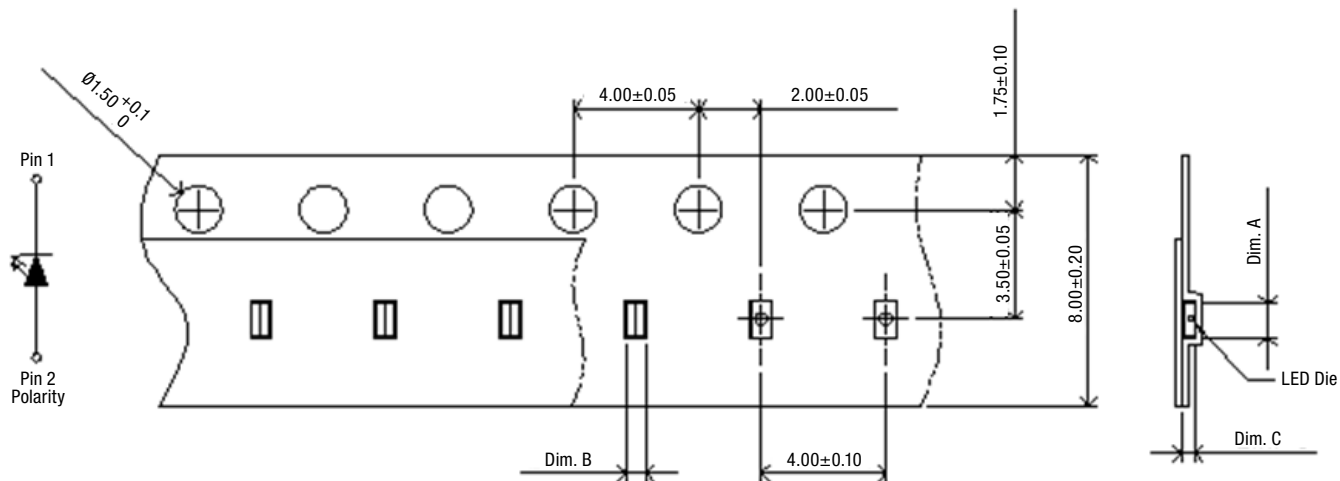
ELECTRICAL - OPTICAL CHARACTERISTICS

Symbol	Parameters	Test Conditions	Min	Typ	Max	Unit
I_e	Radiant Intensity	$I_F=50mA$	4	-	7.5	mW/sr
λ_p	Peak Wavelength	$I_F=50mA$	830	850	870	nm
$\Delta\lambda$	Spectral bandwidth	$I_F=50mA$		40	-	nm
V_F	Forward Voltage	$I_F=50mA$	1.2	-	1.8	V
I_R	Reverse Current	$V_R=5V$	-	-	10	μA
$2\theta_{\frac{1}{2}}$	Angle of Half Intensity (X)	$I_F=50mA$	-	140	-	deg
	Angle of Half Intensity (Y)		-	140	-	

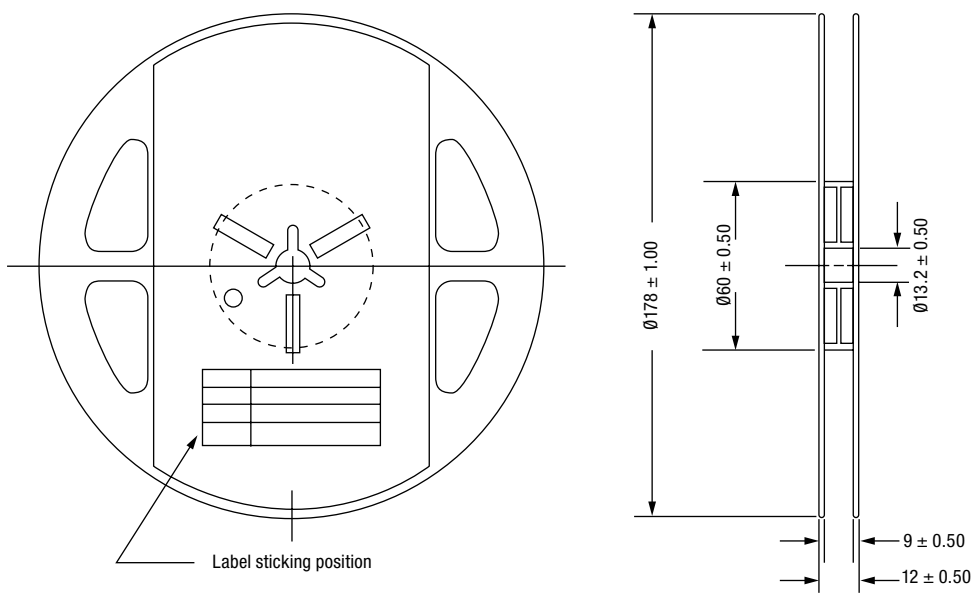
TYPICAL ELECTRICAL-OPTICAL CHARACTERISTICS



TAPE AND REEL SPECIFICATION



Dim A	Dim B	Dim C	Quantity/Reel
1.20±0.05	0.65±0.05	0.42±0.05	4K



Unit: mm

REFLOW SOLDERING

Recommended soldering paste specifications:

1. Operating temp.: Above 217°C, 60~150 sec.
2. Peak temp.: 260°C Max., 10sec Max.
3. Reflow soldering should not be done more than two times.

LEAD-FREE SOLDER PROFILE

