



599 SERIES

Infrared SMD LED

0402 Package Side View 940nm

MECHANICAL / SPECIFICATIONS

PART NUMBER:
[599-1GC0-147IRF](#)

DIMENSIONS:
1.0 x 0.55 x 0.3mm

LENS COLOR:
Clear

LENS MATERIAL:
Epoxy

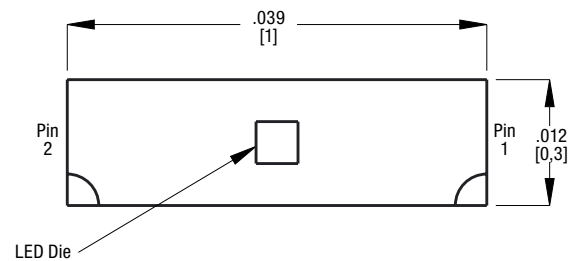
STANDARD PACKAGING:
4000/reel

MOISTURE SENSITIVITY LEVEL:
2a

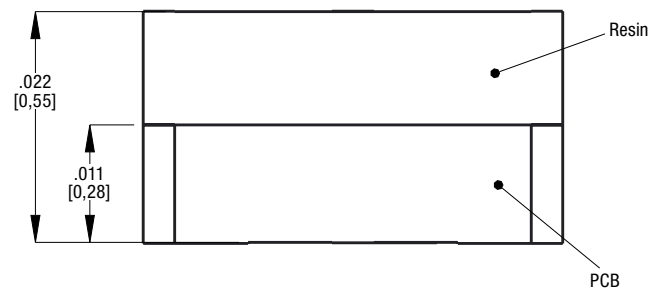
CERTIFICATIONS & RATINGS
RoHS Compliant

DIMENSIONS inches [mm]

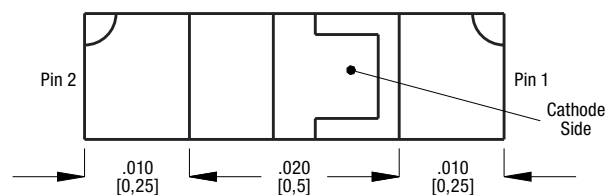
TOP VIEW



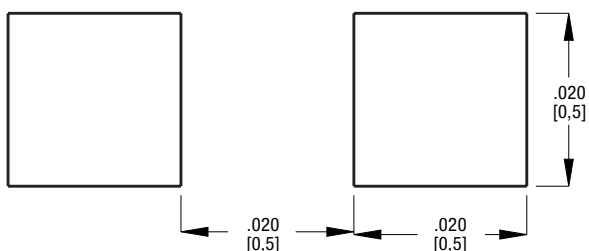
SIDE VIEW



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

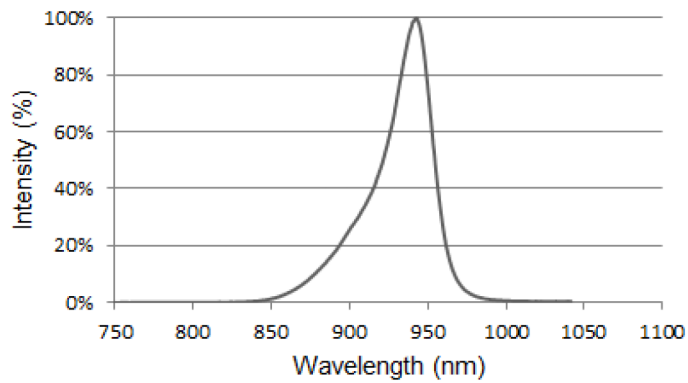
- Notes:**
1. IFP Conditions — Pulse Width ≤ 100μs and Duty ≤ 1%.
 2. Soldering time ≤ 5 seconds.

ELECTRICAL - OPTICAL CHARACTERISTICS

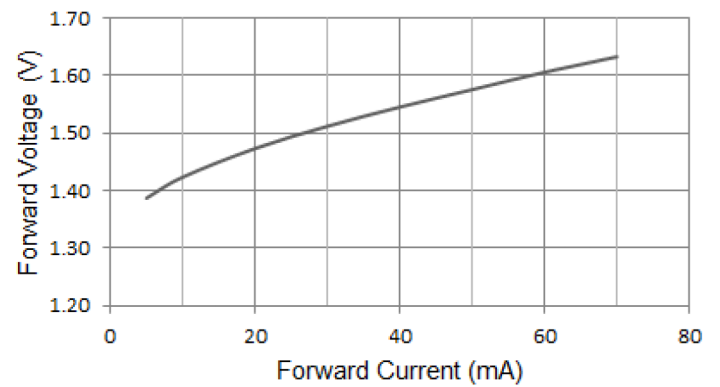
Symbol	Parameters	Test Conditions	Min	Typ	Max	Unit
I_e	Radiant Intensity	$I_F=50mA$	3	-	7.5	mW/sr
λ_p	Peak Wavelength	$I_F=50mA$	920	940	960	nm
$\Delta\lambda$	Spectral bandwidth	$I_F=50mA$		30	-	nm
V_F	Forward Voltage	$I_F=50mA$	1.2	-	1.8	V
I_R	Reverse Current	$V_R=5V$	-	-	10	μA
$2\theta_{\frac{1}{2}}$	Angle of Half Intensity (X)	$I_F=50mA$	-	140	-	deg
	Angle of Half Intensity (Y)		-	140	-	

TYPICAL ELECTRICAL-OPTICAL CHARACTERISTICS

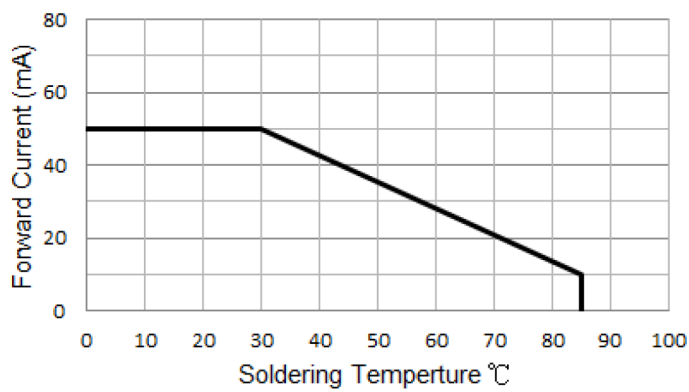
Relative Spectral Emission



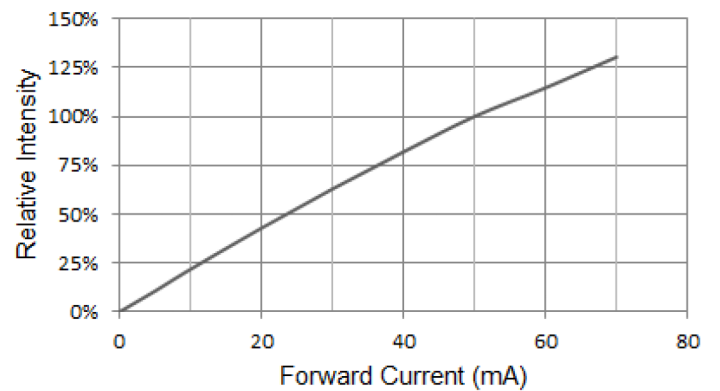
Forward Current VS. Forward Voltage



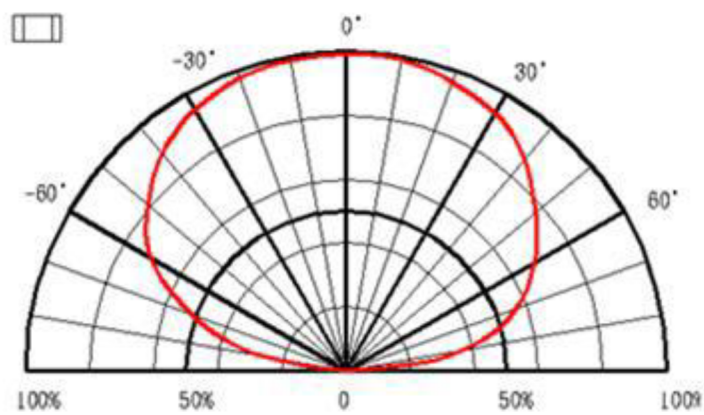
Forward Current VS. Soldering Temperature



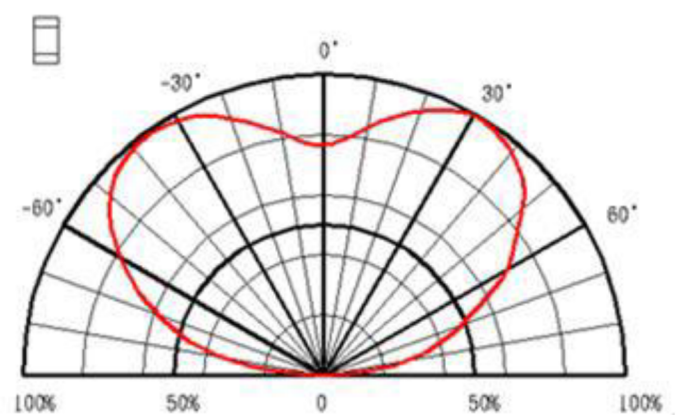
Relative Intensity VS. Forward Current



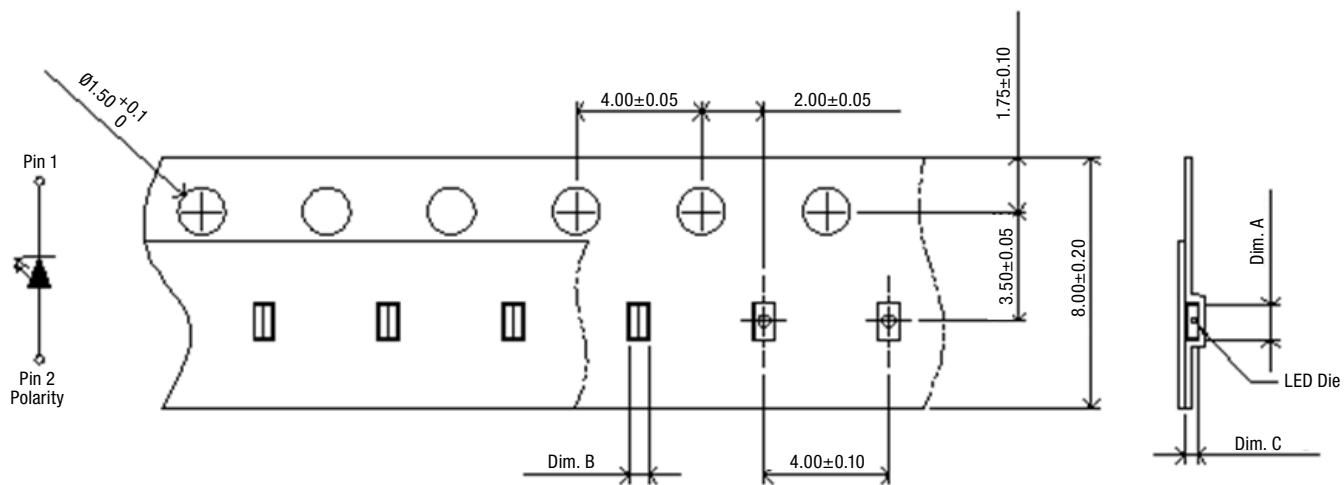
Relative Radiant Intensity vs Angular Displacement



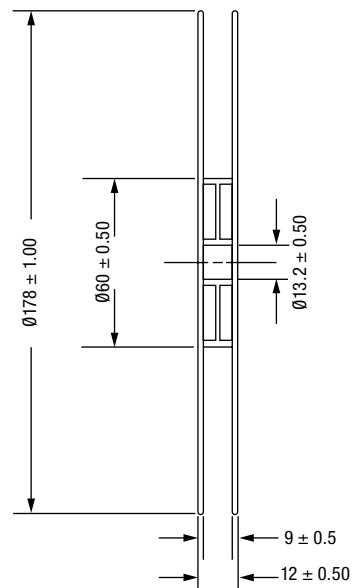
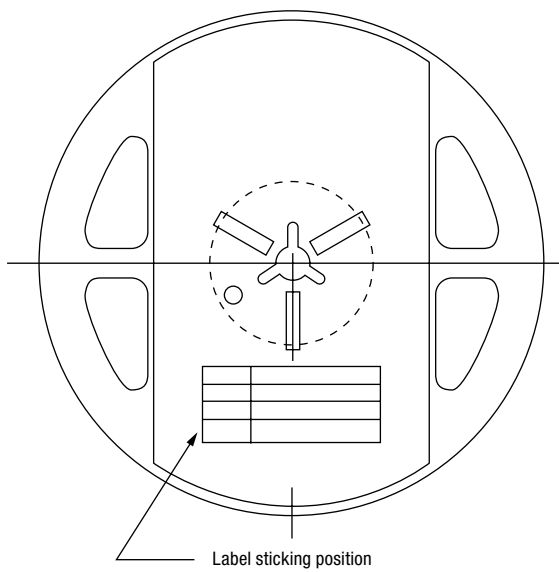
Relative Radiant Intensity vs Angular Displacement



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

