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599 SERIES

Infrared SMD LED

1206 Package Top View 940nm

MECHANICAL / SPECIFICATIONS

PART NUMBER:
599-12C0-147IRF

DIMENSIONS:
3.2 x 1.6 x 1.1mm

LENS COLOR:
Clear

LENS MATERIAL:
Epoxy

STANDARD PACKAGING:
3000/reel

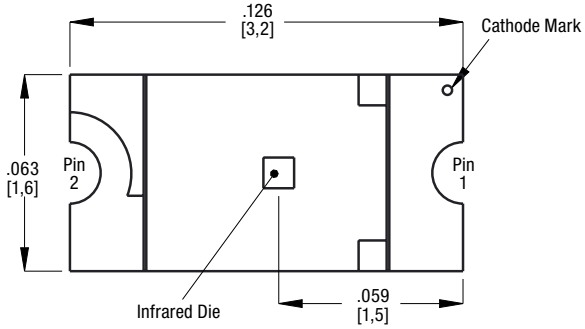
MOISTURE SENSITIVITY LEVEL:
2a

CERTIFICATIONS & RATINGS

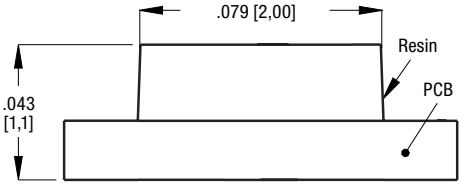
RoHS Compliant

DIMENSIONS inches [mm]

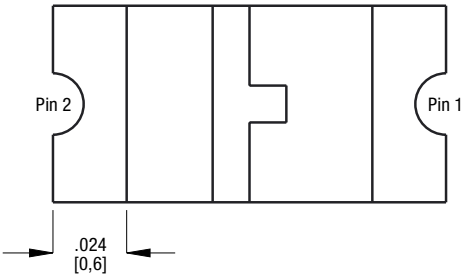
TOP VIEW



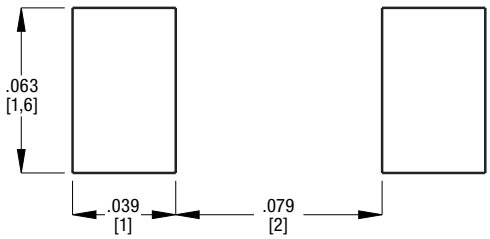
SIDE VIEW



BOTTOM VIEW



RECOMMENDED PAD LAYOUT



LED SCHEMATIC



ABSOLUTE MAXIMUM RATINGS AT 25°C

Symbol	Parameter	Ratings	Units	Notes
I_F	Forward Current	65	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
P_d	Total Power Dissipation	110	mW	

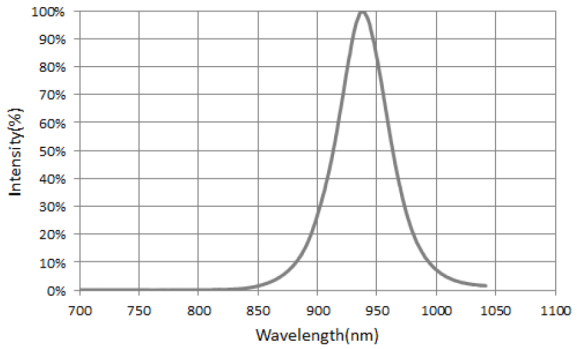
Notes:
1. IFP Conditions — Pulse Width ≤ 100µs and Duty ≤ 1%.
2. Soldering time ≤ 5 seconds.

ELECTRICAL - OPTICAL CHARACTERISTICS

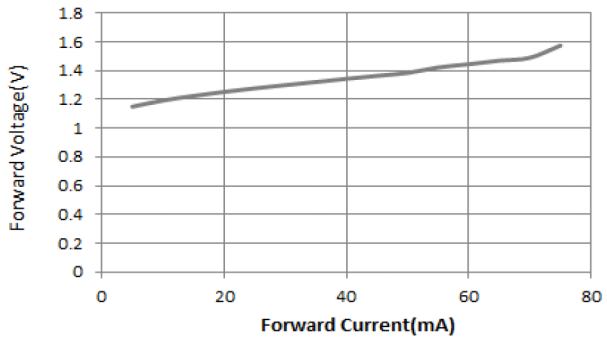
Symbol	Parameters	Test Conditions	Min	Typ	Max	Unit
I_e	Radiant Intensity	I_F=20mA	0.5	0.85	2.0	mW/sr
λ_P	Peak Wavelength	I_F=20mA	-	940	-	nm
$\Delta\lambda$	Spectral bandwidth	I_F=20mA	-	50	-	nm
V_F	Forward Voltage	I_F=20mA	1.2	-	1.8	V
I_R	Reverse Current	V_R=5V	-	-	10	µA
$2\theta_{½}$	Angle of Half Intensity	I_F=20mA	-	140	-	deg

TYPICAL ELECTRICAL-OPTICAL CHARACTERISTICS

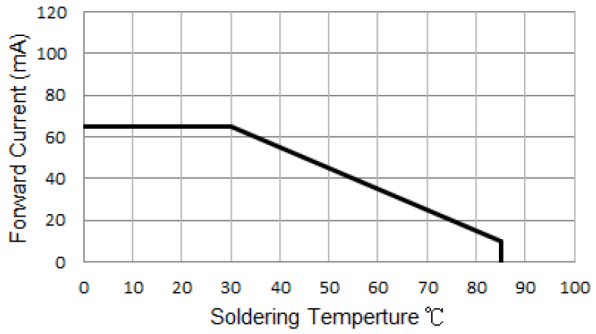
Relative Spectral Emission



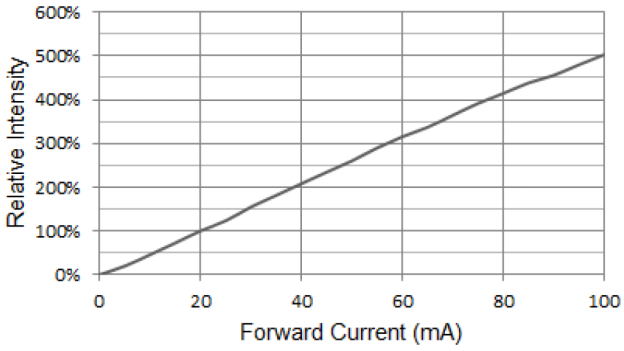
Forward Current VS. Forward Voltage



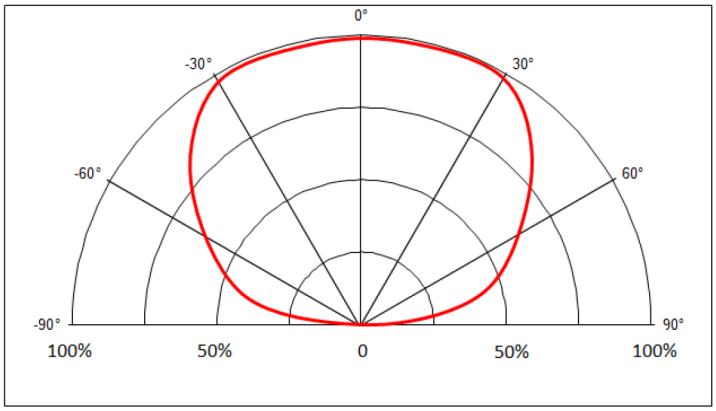
Forward Current VS. Soldering Temperture



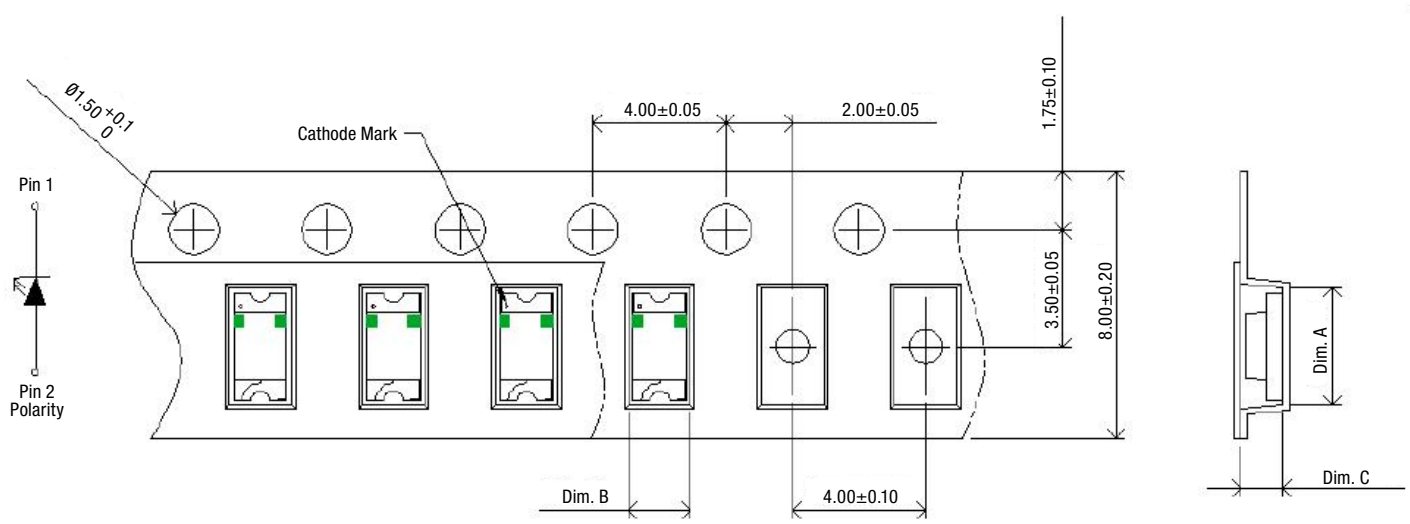
Relative Intensity VS. Forward Current



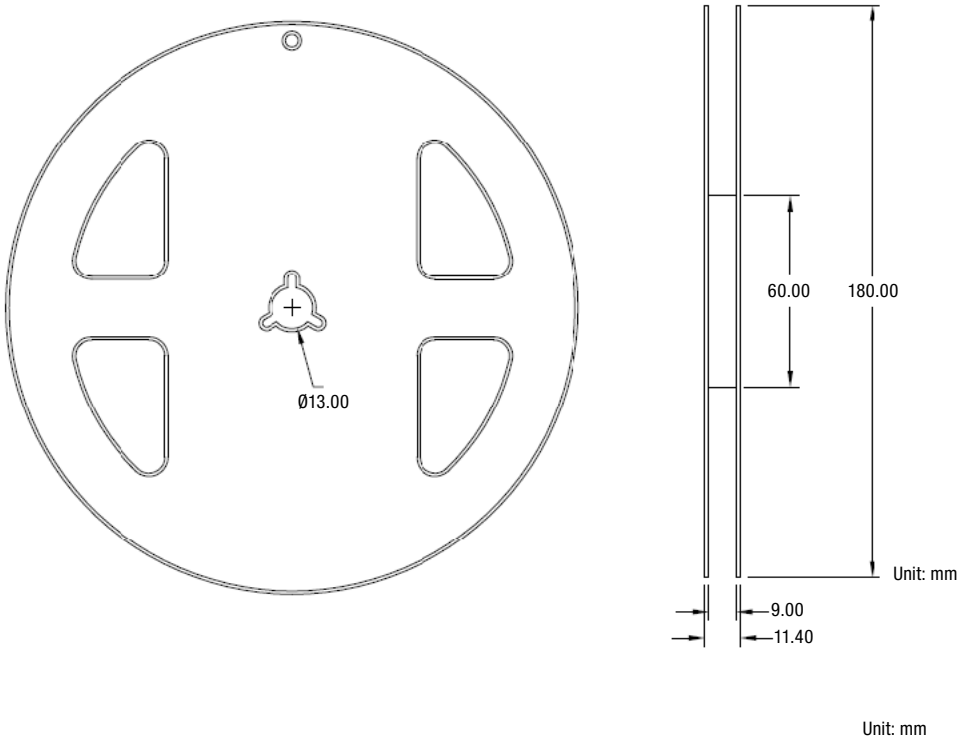
Relative Senstivity VS. Angular Displacement



TAPE AND REEL SPECIFICATION



Dim A	Dim B	Dim C	Quantity/Reel
3.50±0.10	1.88±0.10	1.27±0.10	3K



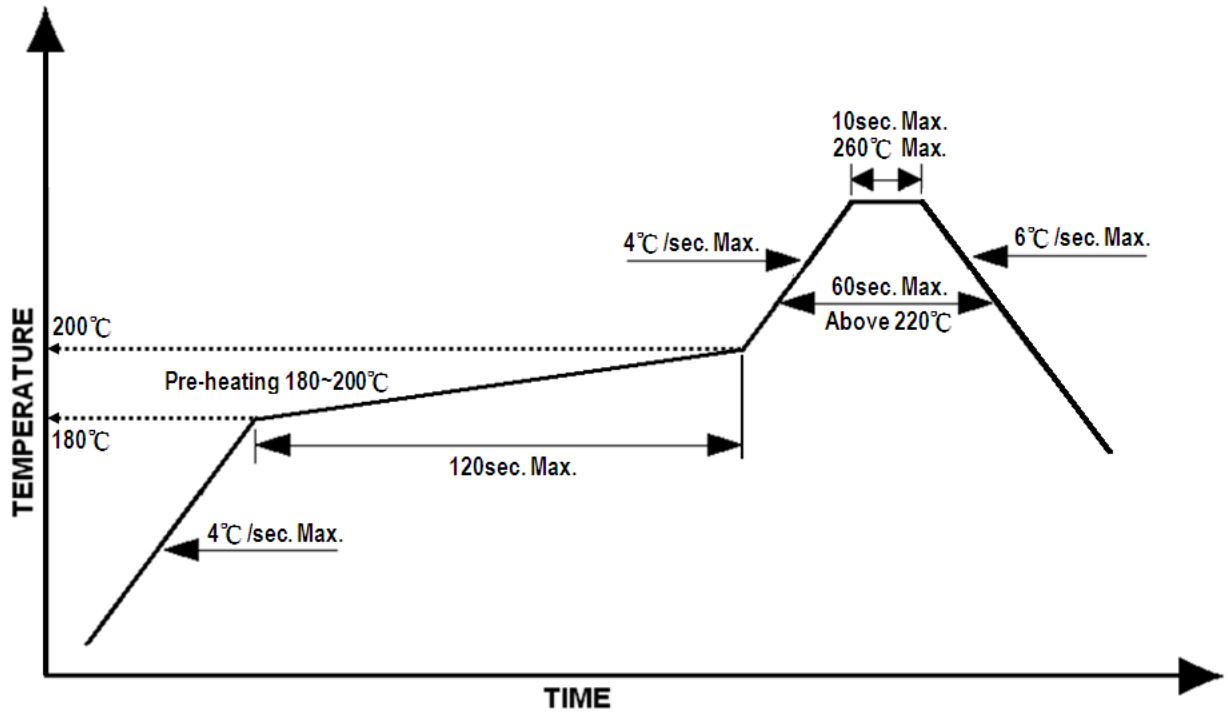
Unit: mm

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



RoHS compliant

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