



599 SERIES Infrared SMD LED

1208 Package Side View 940nm

MECHANICAL / SPECIFICATIONS

PART NUMBER:
[599-1QC0-147IRF](#)

DIMENSIONS:
3.0 x 2.0 x 1.0mm

LENS COLOR:
Clear

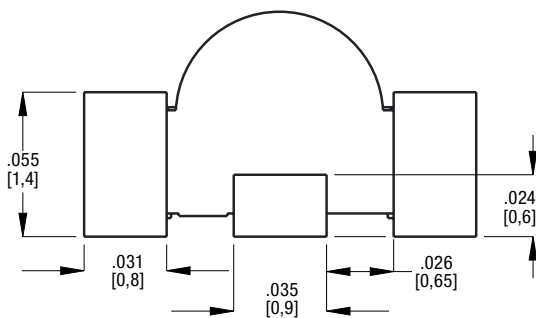
LENS MATERIAL:
Epoxy

STANDARD PACKAGING:
3000/reel

MOISTURE SENSITIVITY LEVEL:
2a

CERTIFICATIONS & RATINGS
RoHS Compliant

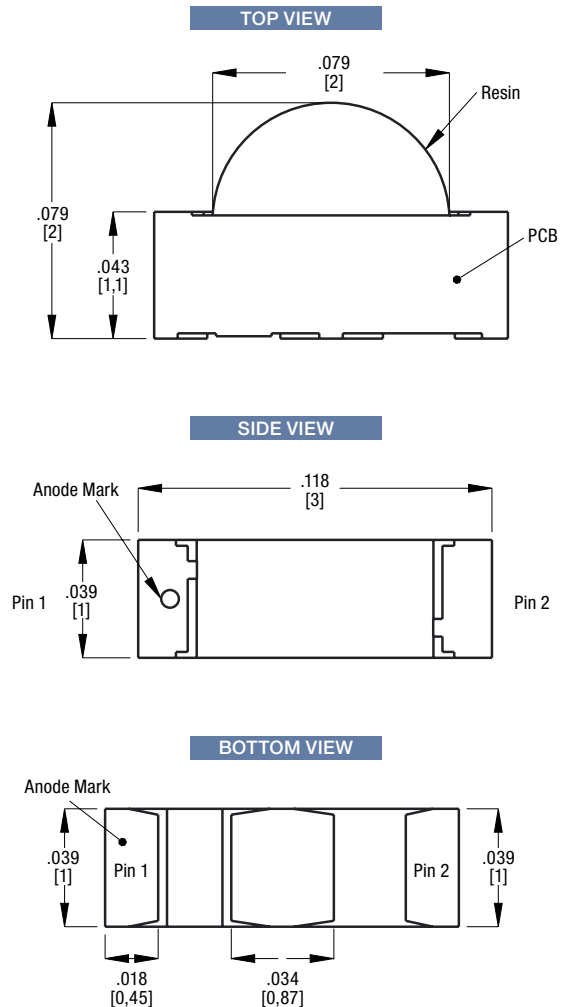
RECOMMENDED PAD LAYOUT



LED SCHEMATIC



DIMENSIONS inches [mm]



ABSOLUTE MAXIMUM RATINGS AT 25°C

Symbol	Parameter	Ratings	Units	Notes
I_F	Forward Current	150	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:

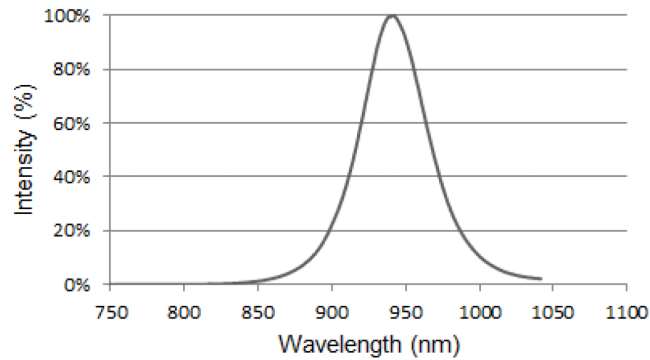
1. IFP Conditions — Pulse Width $\leq 100\mu s$ and Duty $\leq 1\%$.
2. Soldering time ≤ 5 seconds.

ELECTRICAL - OPTICAL CHARACTERISTICS

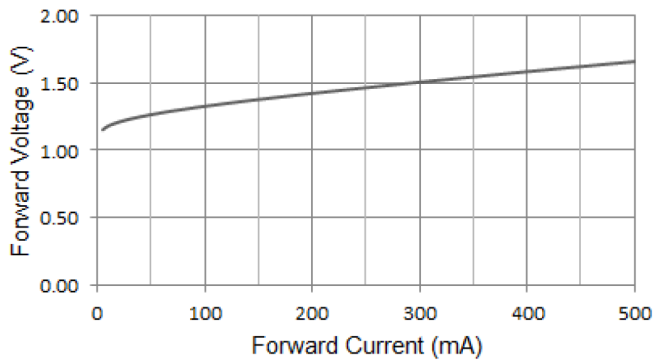
Symbol	Parameters	Test Conditions	Min	Typ	Max	Unit
I_e	Radiant Intensity	$I_F=100mA$	30	43	60	mW/sr
λ_p	Peak Wavelength	$I_F=100mA$	-	940	950	nm
$\Delta\lambda$	Spectral bandwidth at 50% of I_{max}	$I_F=100mA$		50	-	nm
V_F	Forward Voltage	$I_F=100mA$	1.2	1.4	1.6	V
I_R	Reverse Current	$V_R=5V$	-	-	10	μA
$2\theta_{1/2}$	Angle of Half Intensity (X)	$I_F=100mA$	-	140	-	deg
	Angle of Half Intensity (Y)		-	120	-	

TYPICAL ELECTRICAL-OPTICAL CHARACTERISTICS

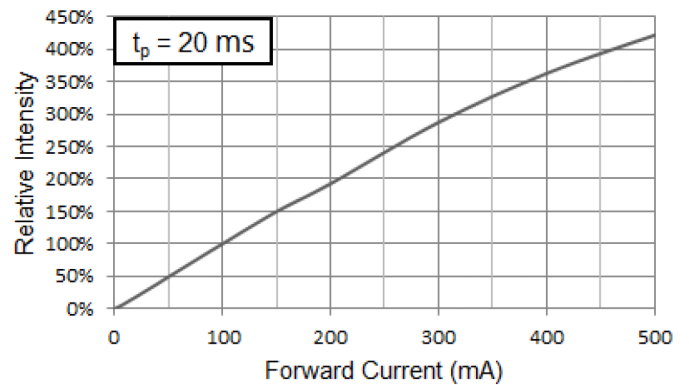
Relative Spectral Emission



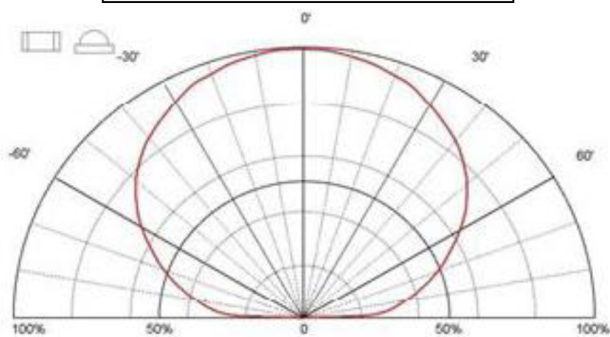
Forward Voltage VS. Forward Current



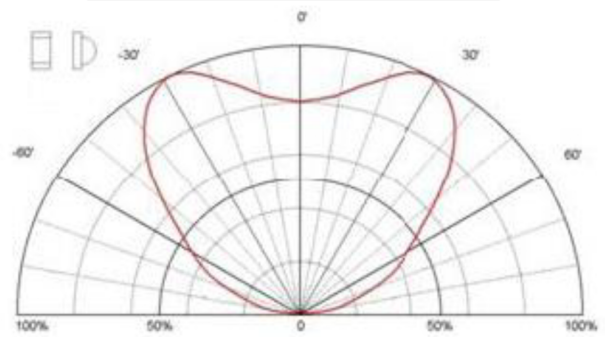
Relative Intensity VS. Forward Current



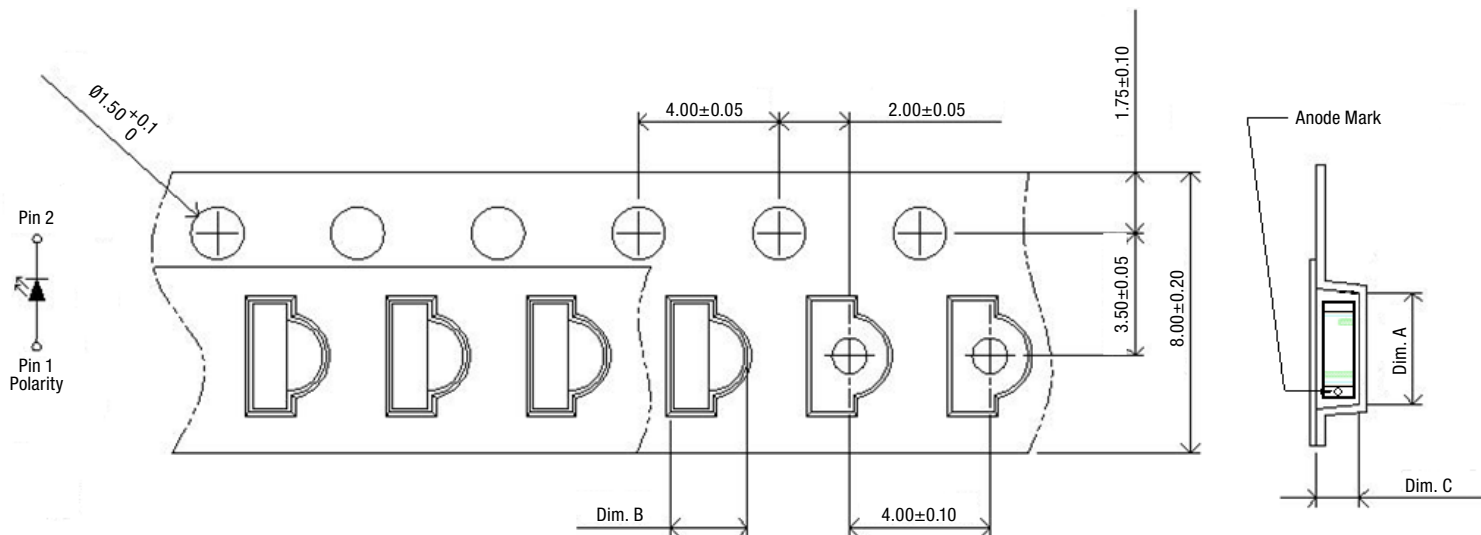
Directive Characteristics



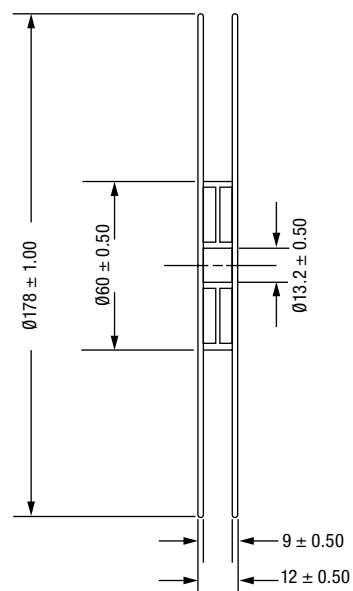
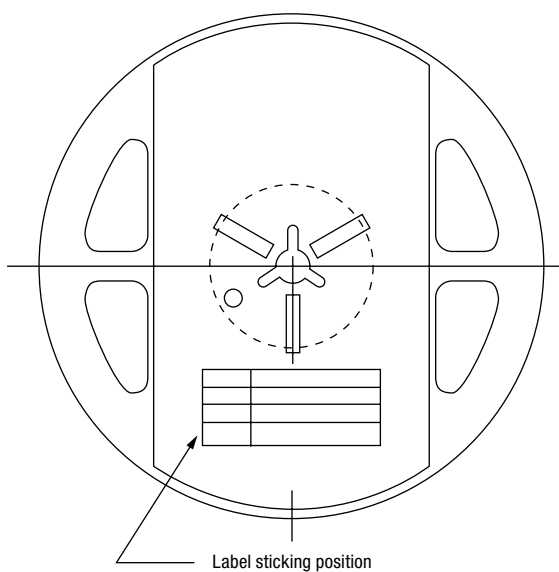
Directive Characteristics



TAPE AND REEL SPECIFICATION



Dim A	Dim B	Dim C	Quantity/Reel
3.2±0.10	2.20±0.10	1.20±0.10	3K



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

