



599 SERIES

Phototransistor SMD LED

1206 Package Top View 940nm

MECHANICAL / SPECIFICATIONS

PART NUMBER:
599-32C0-147PTE

DIMENSIONS:
3.2 x 1.6 x 1.1mm

LENS COLOR:
Black

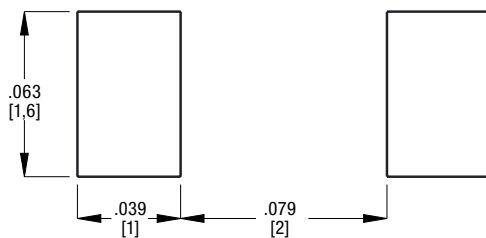
LENS MATERIAL:
Epoxy

STANDARD PACKAGING:
3000/reel

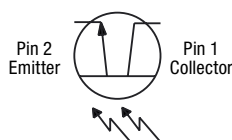
MOISTURE SENSITIVITY LEVEL:
2a

CERTIFICATIONS & RATINGS
RoHS Compliant

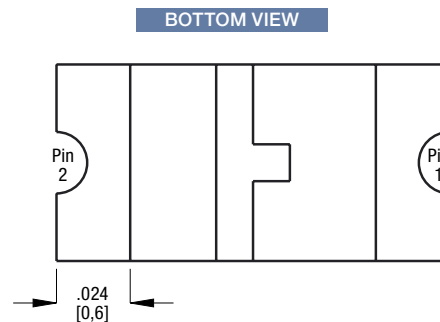
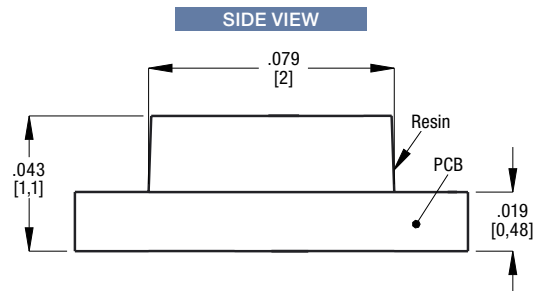
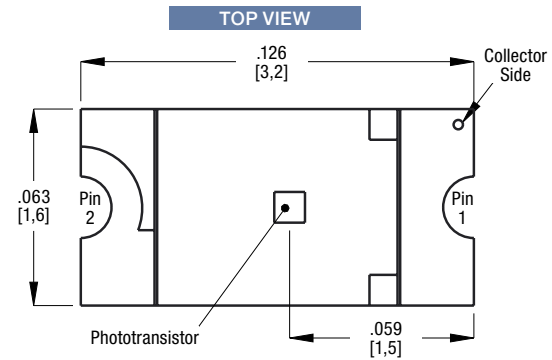
RECOMMENDED PAD LAYOUT



LED SCHEMATIC



DIMENSIONS inches [mm]



ABSOLUTE MAXIMUM RATINGS AT 25°C

Symbol	Parameter	Ratings	Units	Notes
BV_{CEO}	Collector-Emitter Breakdown Voltage	30	V	1
BV_{ECO}	Emitter-Collector Breakdown Voltage	5	V	2
I_C	Collector Current	20	mA	
T_{opr}	Operating Temperature	-40~+85	°C	
T_{stg}	Storage Temperature	-40~+100	°C	
T_{sol}	Soldering Temperature	260	°C	3

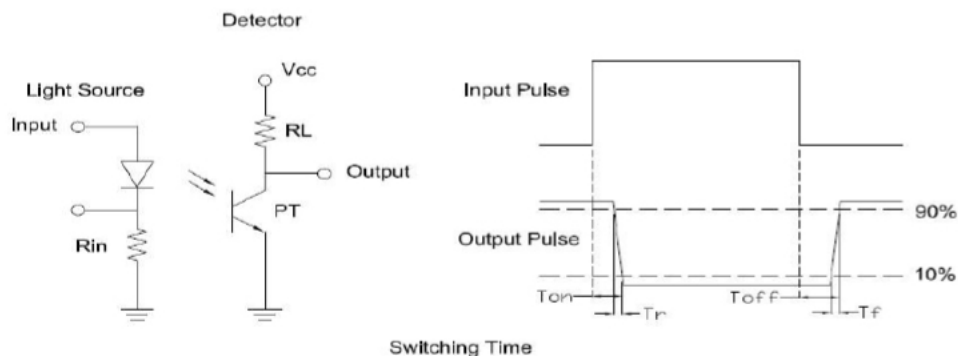
Notes:

1. Test conditions: $I_C = 100\mu A$, $E_e = 0mW/cm^2$
2. Test conditions: $I_E = 100\mu A$, $E_e = 0mW/cm^2$
3. Soldering time ≤ 5 seconds.

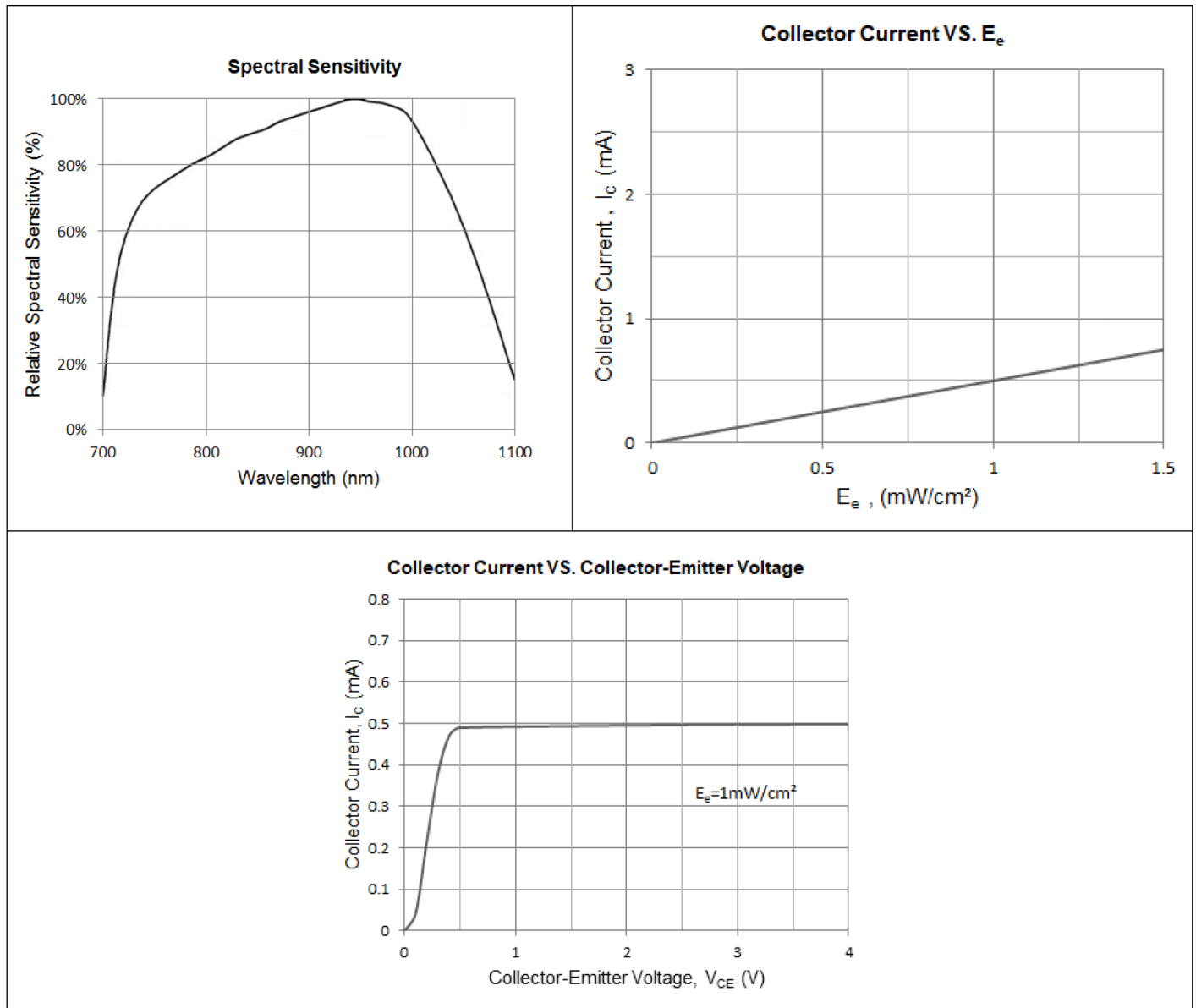
ELECTRICAL - OPTICAL CHARACTERISTICS

Symbol	Parameters	Test Conditions	Min	Typ	Max	Unit
$\lambda_{0.5}$	Range Of Spectral Bandwidth	-	700	-	1100	nm
λ_p	Wavelength Of Peak Sensitivity	-	-	940	-	nm
BV_{CEO}	Collector-Emitter Breakdown Voltage	$I_C = 100\mu A$ $E_e = 0mW/cm^2$	30	-	-	V
BV_{ECO}	Emitter-Collector Breakdown Voltage	$I_E = 100\mu A$ $E_e = 0mW/cm^2$	5	-	-	V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C = 2mA$ $E_e = 1mW/cm^2$	-	-	0.4	V
I_{CEO}	Collector Dark Current	$V_{CE} = 20V$ $E_e = 0mW/cm^2$	-	-	100	nA
$I_{C(ON)}$	On State Collector Current	$E_e = 1mW/cm^2$ $\lambda_p = 940nm$, $V_{CE} = 5V$	0.1	0.5	0.8	mA
t_r	Rise Time	$V_{CE} = 5V$, $I_C = 1mA$ $R_L = 1000\Omega$	-	15	-	μS
t_f	Fall Time		-	15	-	μS

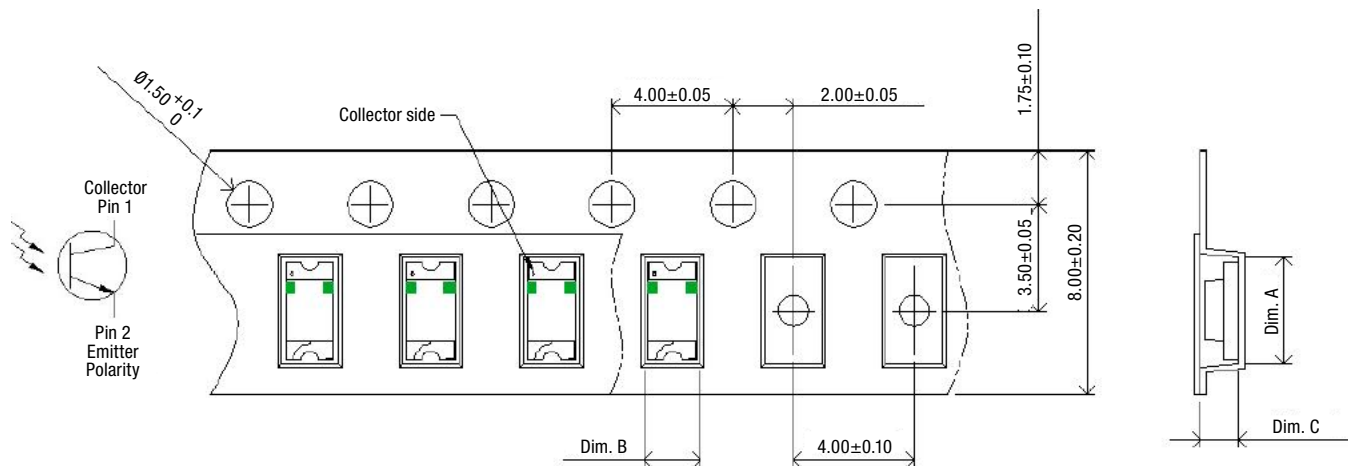
TEST CIRCUIT



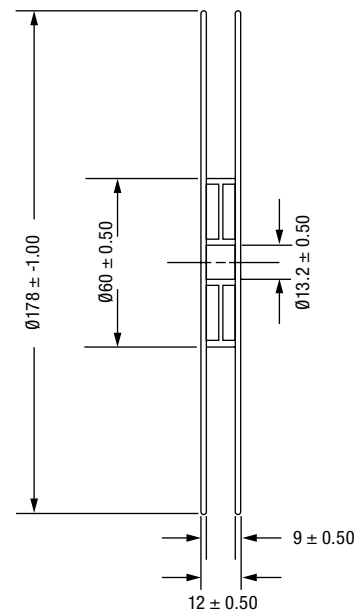
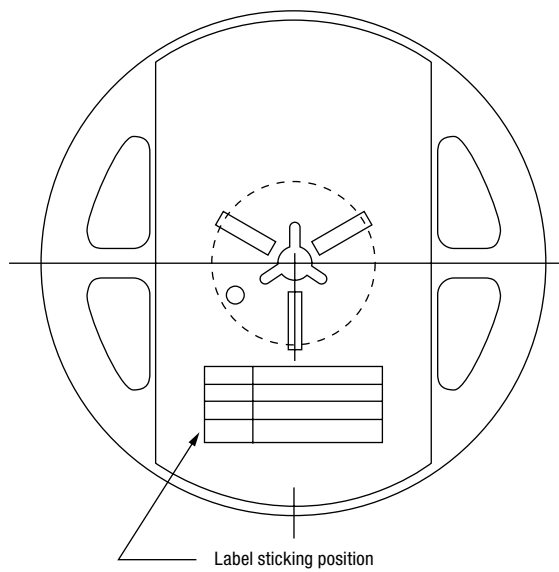
TYPICAL ELECTRICAL-OPTICAL CHARACTERISTICS



TAPE AND REEL SPECIFICATION



Dim A	Dim B	Dim C	Quantity/Reel
3.50 ± 0.05	1.88 ± 0.05	1.27 ± 0.05	3K



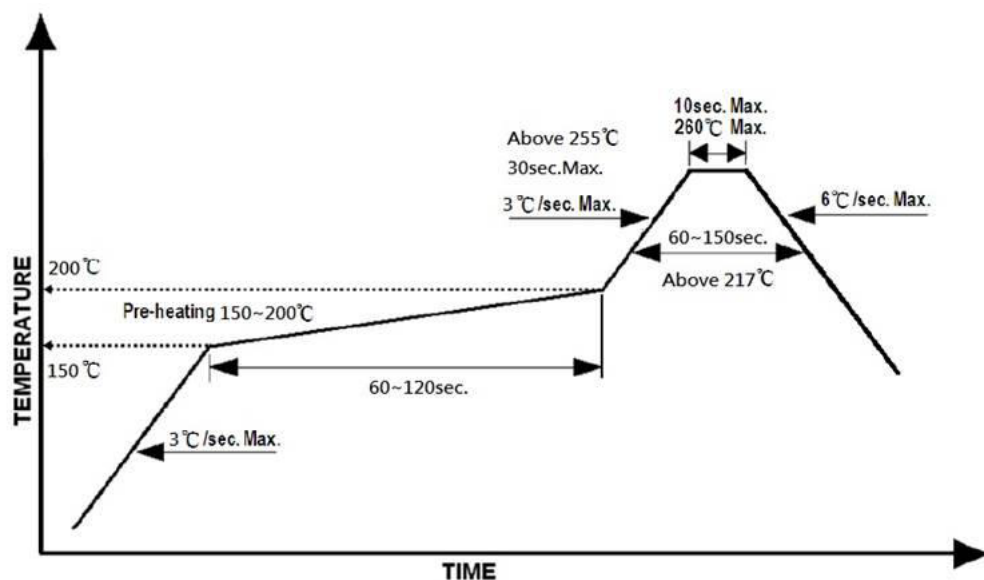
Unit: mm

REFLOW SOLDERING

Recommended soldering paste specifications:

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

LEAD-FREE SOLDER PROFILE



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