



599 SERIES

Phototransistor SMD LED

0603 Package Top View 940nm

MECHANICAL / SPECIFICATIONS

PART NUMBER:
[599-30C0-147PTE](#)

DIMENSIONS:
1.6 x 0.8 x 0.66mm

LENS COLOR:
Black

LENS MATERIAL:
Epoxy

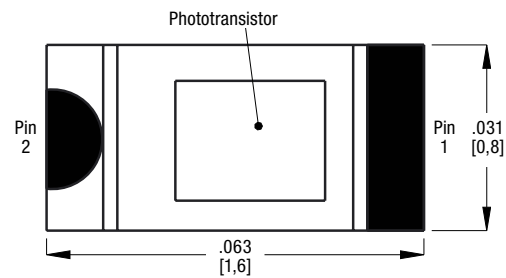
STANDARD PACKAGING:
4000/reel

MOISTURE SENSITIVITY LEVEL:
2a

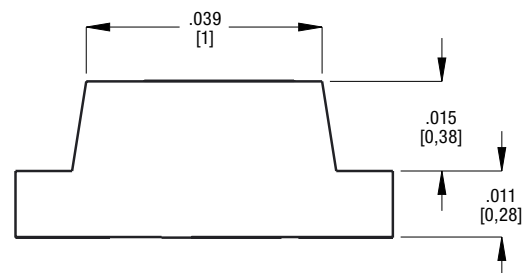
CERTIFICATIONS & RATINGS
RoHS Compliant

DIMENSIONS inches [mm]

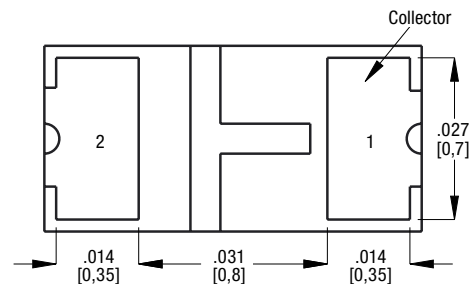
TOP VIEW



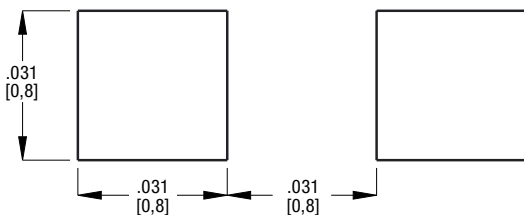
SIDE VIEW



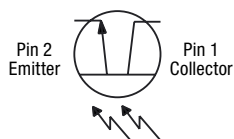
BOTTOM VIEW



RECOMMENDED PAD LAYOUT



LED SCHEMATIC



ABSOLUTE MAXIMUM RATINGS AT 25°C

Symbol	Parameter	Ratings	Units	Notes
V_{CE0}	Collector-Emitter Voltage	30	V	
V_{ECO}	Emitter-Collector Voltage	5	V	
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	1

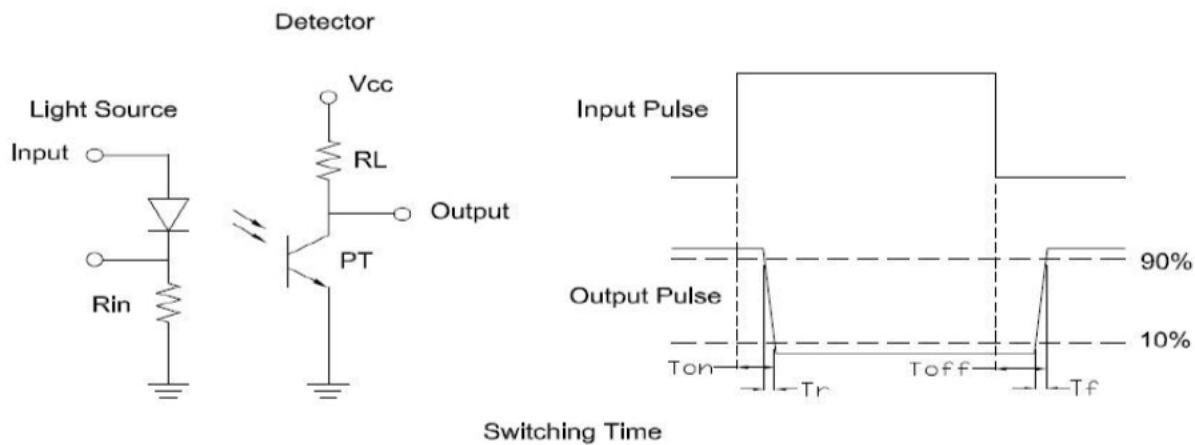
Notes:

1. Soldering time $\leq$ 5 seconds.

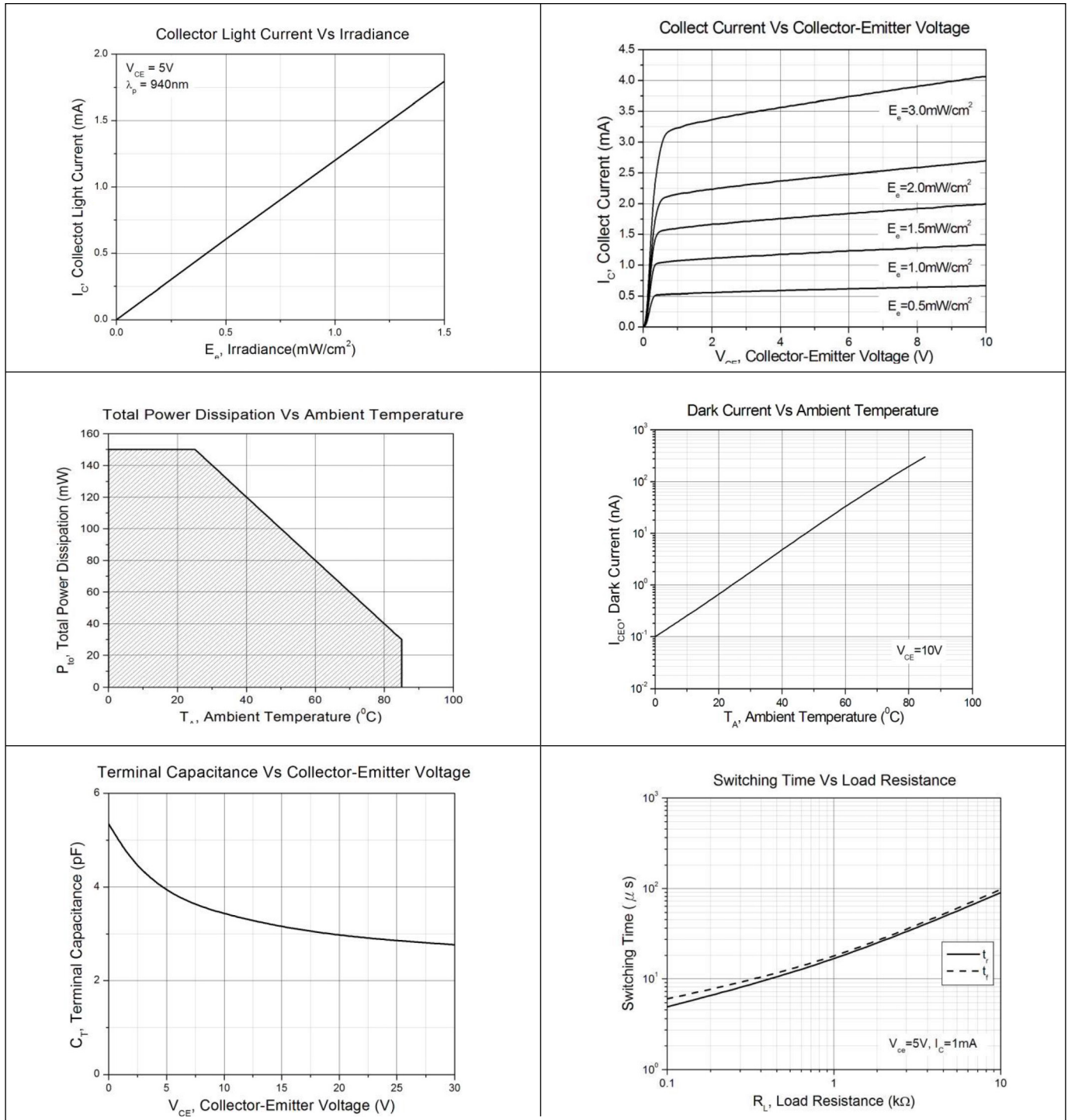
ELECTRICAL - OPTICAL CHARACTERISTICS

Symbol	Parameters	Test Conditions	Min	Typ	Max	Unit
$\lambda_{0.5}$	Range Of Spectral Bandwidth	-	750	-	1100	nm
λ_p	Wavelength Of Peak Sensitivity	-	-	940	-	nm
BV_{CE0}	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_{CE0}	Collector Dark Current	$V_{CE}=20V$ $E_e=0mW/cm^2$	-	-	100	nA
$I_{C(ON)}$	On State Collector Current	$E_e=1mW/cm^2$ $\lambda_p=940nm, V_{CE}=5V$	0.54	-	1.0	mA
t_r	Rise Time	$V_{CE}=5V, I_C=1mA$ $R_L=1000\Omega$	-	15	-	μS
t_f	Fall Time		-	15	-	μS

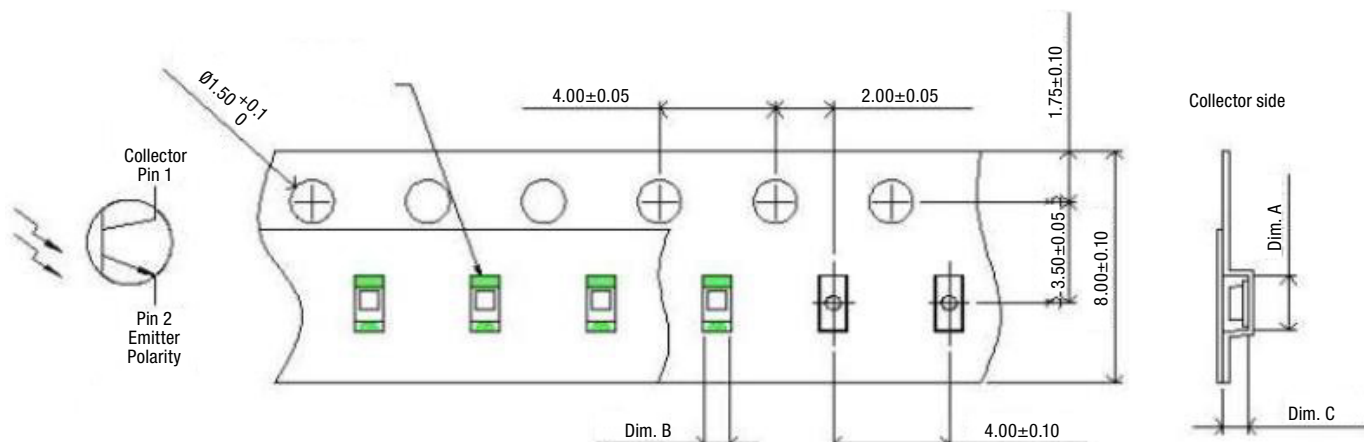
TEST CIRCUIT



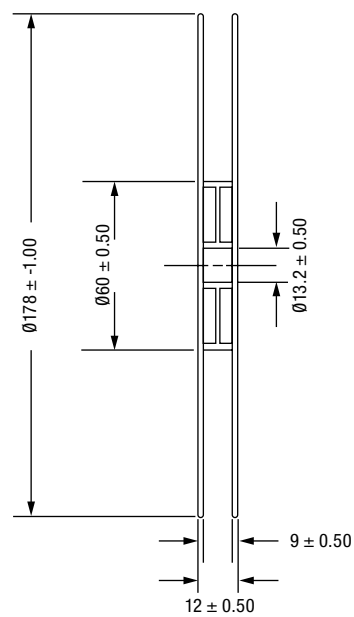
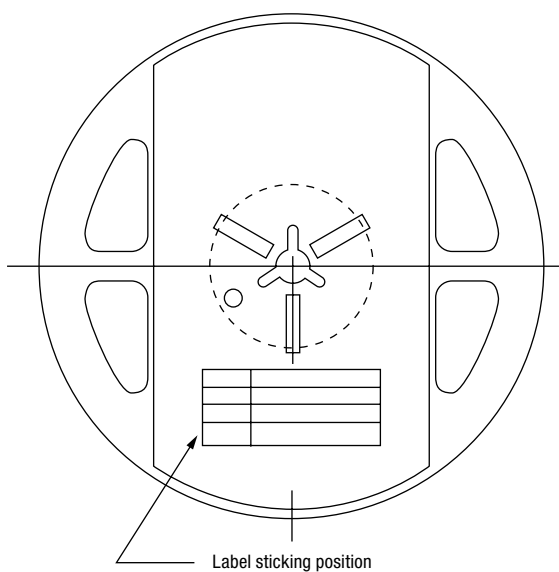
TYPICAL ELECTRICAL-OPTICAL CHARACTERISTICS



TAPE AND REEL SPECIFICATION



Dim A	Dim B	Dim C	Quantity/Reel
1.85±0.05	0.88±0.05	0.85±0.05	4K



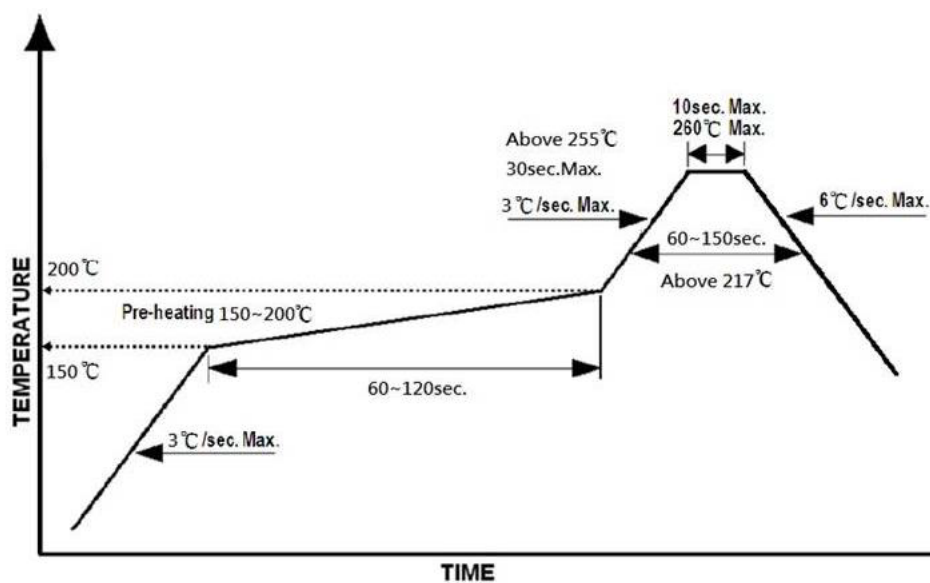
Unit: mm

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



Dialight reserves the right to make changes at any time in order to supply the best product possible. The most current version of this document will always be available at: www.dialightsignalsandcomponents.com

Warranty Statement: Except for the warranty expressly provided for at: www.dialight.com/resources/warranties/, Dialight disclaims any and all other warranties, express or implied, including, without limitation, any warranties of merchantability, fitness for a particular purpose, title, and noninfringement.