



599 SERIES

Phototransistor SMD LED

3528 PLCC-2 Package Top View 940nm

MECHANICAL / SPECIFICATIONS

PART NUMBER:

599-4FC0-137PTE

DIMENSIONS:

3.50 x 2.80 x 1.85mm

LENS COLOR:

Clear

LENS MATERIAL:

Silicon

STANDARD PACKAGING:

2000/reel

MOISTURE SENSITIVITY LEVEL:

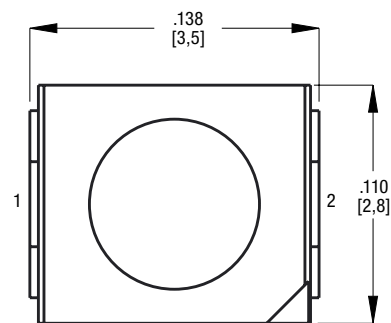
3

CERTIFICATIONS & RATINGS

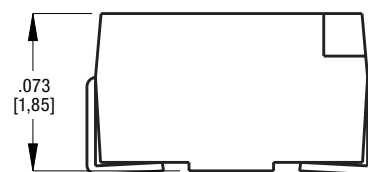
RoHS Compliant

DIMENSIONS inches [mm]

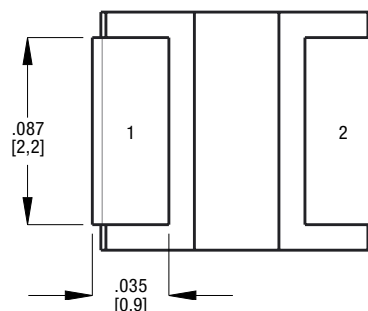
TOP VIEW



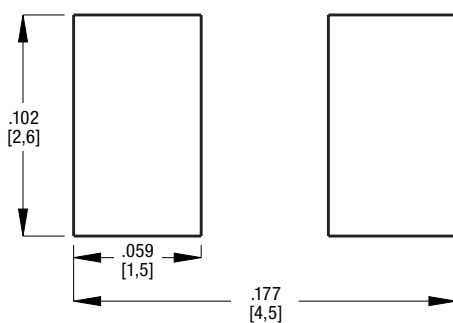
SIDE VIEW



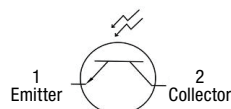
BOTTOM VIEW



RECOMMENDED PAD LAYOUT



LED SCHEMATIC



ABSOLUTE MAXIMUM RATINGS AT Ta=25°C

Symbol	Parameter	Ratings	Units
V_{CE0}	Collector-Emitter Voltage	30	V
V_{ECO}	Emitter-Collector Voltage	5	V
I_C	Collector Current	20	mA
ESD	Electrostatic Discharge	2000	V
T_{opr}	Operating Temperature	-25~+85	°C
T_{stg}	Storage Temperature	-40~+85	°C
Pc	Power Dissipation at (or below) 25°C Free Air Temperature	75	mW

ELECTRICAL - OPTICAL CHARACTERISTICS (Ta=25°C)

Symbol	Parameters	Test Conditions	Min	Typ	Max	Unit
$V_{(BR)CE0}$	Collector-Emitter Breakdown Voltage	$I_E=100\ \mu A$ $E_e=0\text{mw/cm}^2$	30	-	-	V
$V_{(BR)ECO}$	Emitter-Collector Breakdown Voltage	$I_E=100\ \mu A$ $E_e=0\text{mw/cm}^2$	5.0	-	-	V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C=2\text{mA}$ $E_e=1\text{mw/cm}^2$	-	-	0.4	V
Tr	Rise Time	$V_{CE}=5V$ $I_C=1\text{mA}$ $R_L=1K\Omega$	-	15	-	μs
Tf	Fall Time		-	15	-	μs
I_{CE0}	Collector Dark Current	$V_{CE}=20V$ $E_e=0\text{mw/cm}^2$	-	-	100	nA
$I_{p(on)}$	On State Collector Current	$V_{CE}=5V$ $E_e=1\text{mw/cm}^2$ $\lambda P=940\text{nm}$	2.0	8.0	16.0	mA

TYPICAL ELECTRICAL-OPTICAL CHARACTERISTICS

Fig 1. BVceo vs. Ambient Temperature

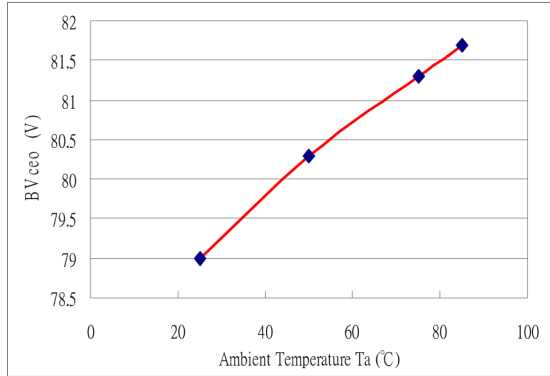


Fig 2. Light Current vs. Ee

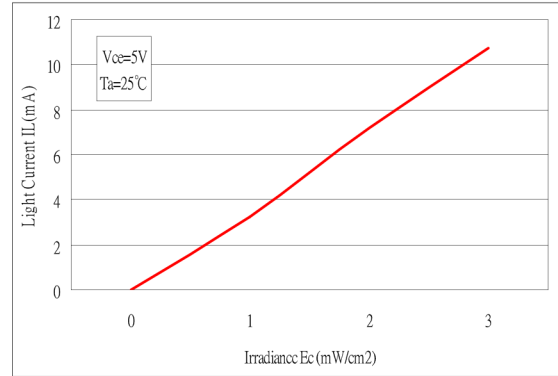


Fig 3. Iceo vs. Ambient Temperature

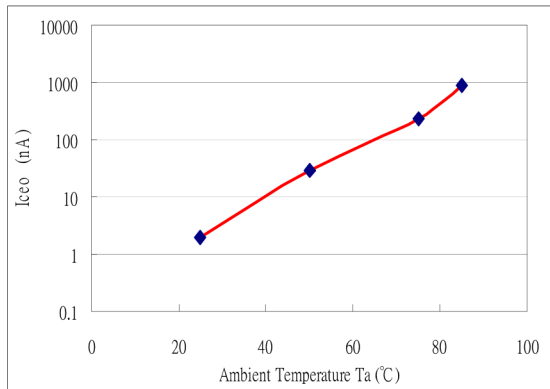


Fig 4. Response Time vs. Load Resistance

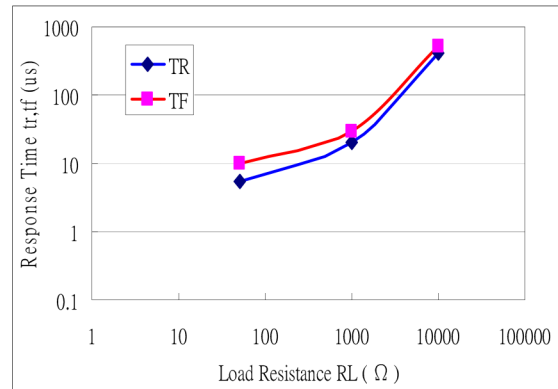


Fig 5. Terminal Capacitance vs. Reverse Voltage

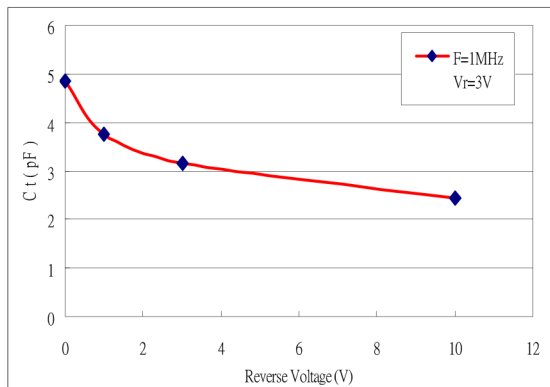
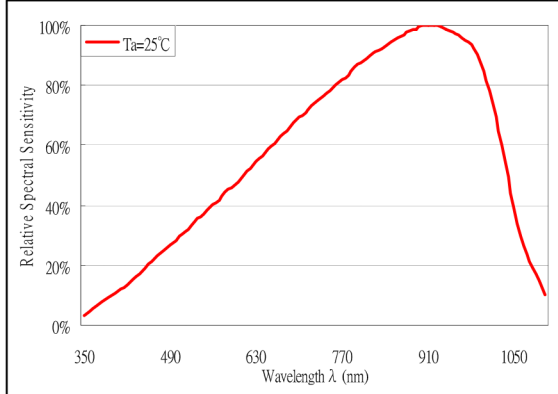
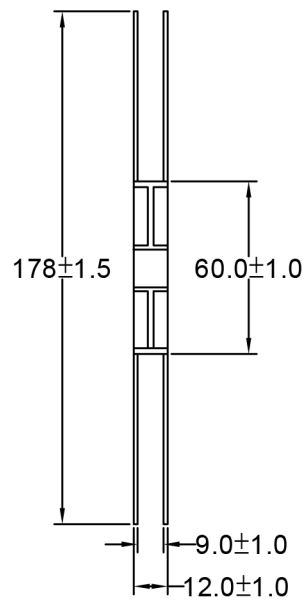
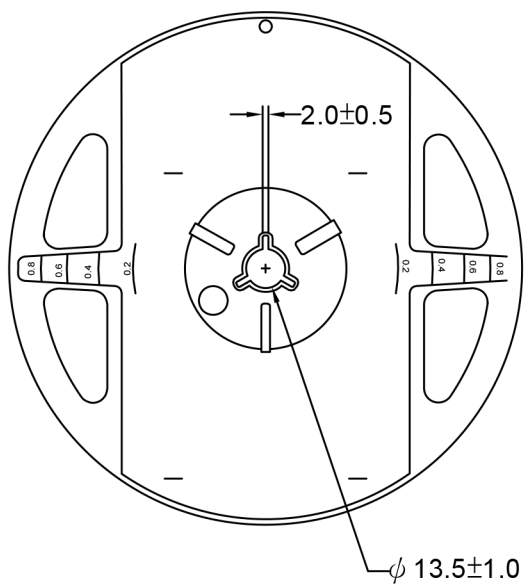
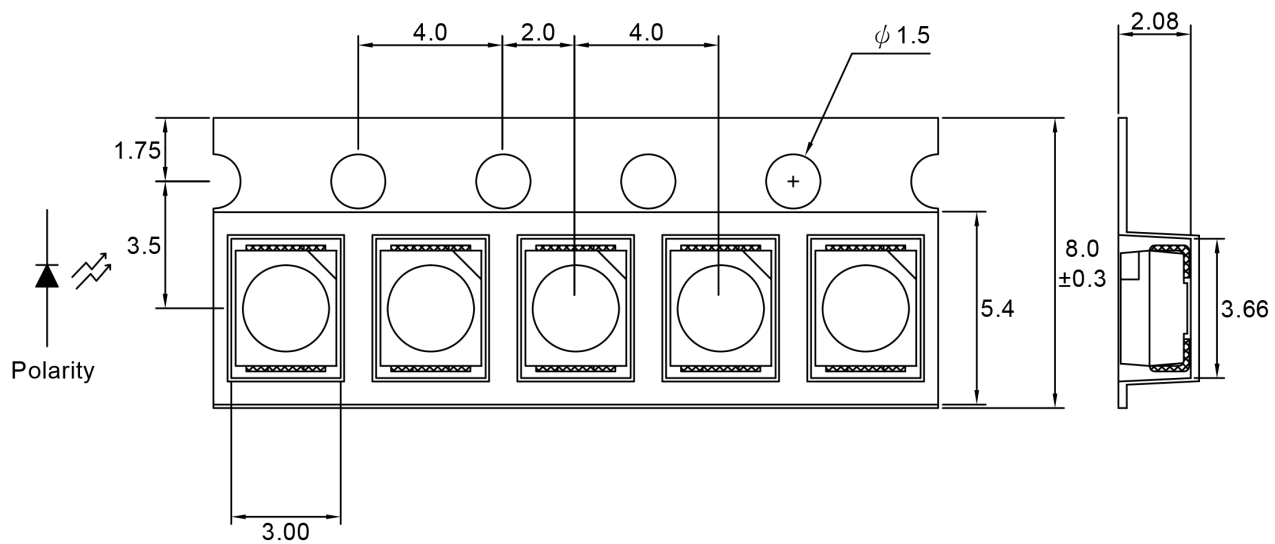


Fig 6. Light Current vs. Ee



TAPE AND REEL SPECIFICATION

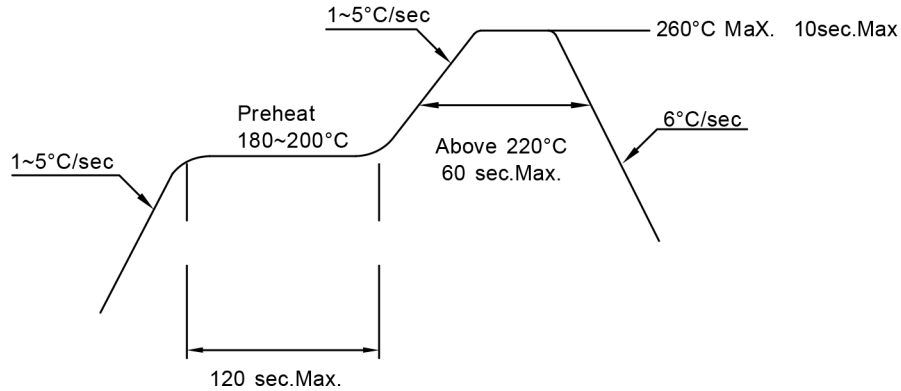


REFLOW SOLDERING

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



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