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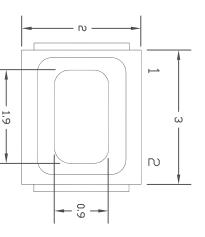
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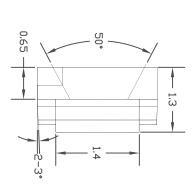
Effective: 7/8/02 \*

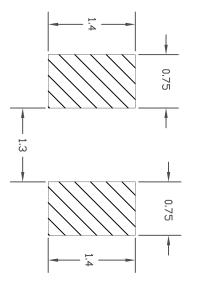
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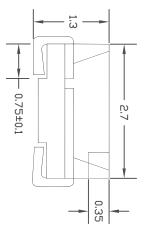
### Package Outlines

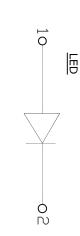
Recommended Pad Layout











Emitted color	Dice All	Printed circit board BT	Lens color Wat	Bonding Wire Ø25	Resin (mold) E	ITEM MATE
RED	Alln Gap	BT (white)	Water clear	ø25µm Au	Epoxy	MATERIALS

#### NOTES:

- All dimensions are in millimeters (inches);
   Tolerance are±0.1mm(0.004inch) unless otherwise noted.



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SCALE: NTS			A MC:	SIZE DWG, NO.		DRAWING TITLE:
U.D.M.: INCHES [mm]			MC24158		Multi Colo	
SHEET: 1 OF			02P5953	ELECTRONIC FILE	r LED	
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# **Absolute Maximum Ratings**

(TA=25°C)

Forward current  If 30 mA  Reverse voltage  Vr 5 V  Power dissipation  Deprating temperature range  Storage temperature range  Peak pulsing current (1/8 duty f=1kHz)  Forward current If 30 mA  If 30 mA  To 100 mW  To -20~+80 °C  To 125 mA	Parameter	Symbol	Value	Unit
Pd 100  Pd -20~+80  Isty -20~+80  Ifp 125	Forward current	If	30	۳A
Pd 100  Je Top -20-+80  Tstg -20-+80  Inty f=1KHz) Ifp 125	Reverse voltage	٧r	5	<
Je Top −20~+80  Tstg −20~+80  uty f=1kHz) Ifp 125	Power dissipation	Pd	100	٣W
Tst9 -20~+80 lty f=1KHz) Ifp 125	Operating temperature range	Тор	-20~+80	°C
Ifp 125	Storage temperature range	Tstg	-20~+80	ť
-	Peak pulsing current (1/8 duty f=1kHz)	Ifp	125	3 2

# **Electro-optical Characteristics**

(TA=25°C)

μĀ	10	1	1	ī	Vr=5V	Reverse current
Deg	1	120	}	201/2	If=10mA	Viewing angle at 50% Iv
3	1	624	1	λd	If=20mA	Wavelength at domain emission If=20mA
mcd	1	170	90	Ιν	*1 If=20mA	Luminous intensity *1
<	2,4	2,0	1	٧f	If=20mA	Forward voltage
73	635	630	620	λpeak	If=20mA	Wavelength at peak emission
Unit	Max	Тур Мах	Min	Зупрог	Condition	Parameter
:		Value		S S S S S S S S S S S S S S S S S S S	Test	

\* 1 Note: Luminous intensity tolerances are ±10%



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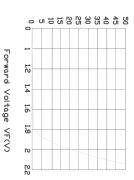
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## PRVD XX 23-09-08 DCP No: 1398 DATE

# **OPTICAL CHARACTERISTIC CURVES**

Fig.1 IF-VF(TA=25°C)



Forward Current IF(mA)

Relative Luminous Intensity

U

10

15

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30 35

40 45

50

Wave length \ (nm)

Forward Current IF(mA)

2.4 2.2 1.8 1.6 1.4 1.2 1.2 0.8 0.6 0.4 Fig. 2 Relative Luminous Intensity-IF (Ta=25°C)



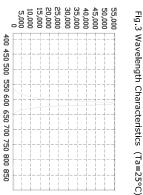


Fig.4 Relative Luminous Intensity-Ta

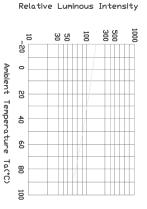
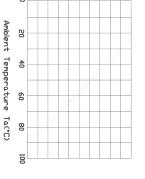


Fig.5 IF-Ta

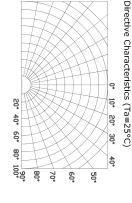


Forward Current IF(mA)

20 30 40 5

10

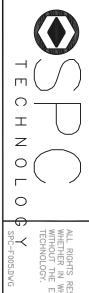
Relative Luminous Intensity



RoHS Compliant

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NTS			MC:	VG. NO.		TITLE:
U.O.M.: INCHES [mm]			MC24158		Multi Color LED	
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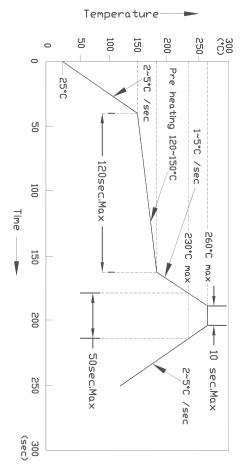
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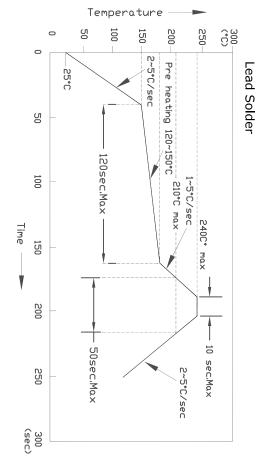
#### Reflow Profile

## Reflow Temp/Time

#### Lead Free Solder IR Reflow Soldering Profile



# IR Reflow Soldering Profile

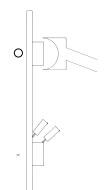


## Soldering iron

Basic Spec is <5sec when 260°C. If temperature is higher, time should be shorter (+10°C  $\rightarrow$  -1sec). Power dissipation of iron should be smaller than 15V and Termperatures should be controllable. Suraface temperature of the device should be under 230°C.

#### Rework

- Customer must finish rework withing 5 sec under 260°C.
   The head of iron can not touch copper foil
   Twin-head type is preferred.





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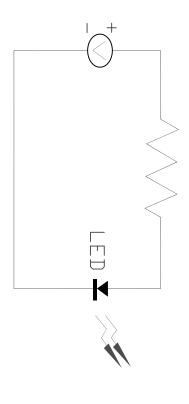
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U.D.M.: INCHES [mm]			24158		Multi Color LED	
SHEET: 1 OF			02P5953	ELECTRONIC FILE	LED	



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#### Test Circuit



# Handling Precautions

# Over-current-proof

Customer must apply resistor for protection; otherwise slight voltage shift will cause big current change (Burn out will happen).

#### Storage

2.1 It is recommended to store the products in the following conditions: Humidity: 60% R.H. Max.

Temperature: 5°C~30°C (41°F~86°F)

2.2 Shelf life in sealed bag: 12 month at  $<5\,^\circ\text{C}-30\,^\circ\text{C}$  and <30% R.H. after the package is Opened, the products should be used within a week or they should be keeping to stored at  $\leq$ 20 R.H. with zip-lock sealed.

#### Baking

It is recommended to baking before soldering when the pack is unsealed after 72hrs, The Conditions are as followings:

3.1  $60\pm3$  °C x(12~24hrs) and <5%RH, taped reel type 3.2  $100\pm3$  °C x(45min~1hr), bulk type 3.3  $130\pm3$  °C x(15~30min), bulk type

When you discover that the desiccant in the package has a pink color (normal=blue), you Should treat them in the same conditions as (3.1 -- 3.3)

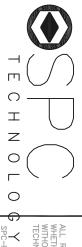


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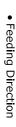


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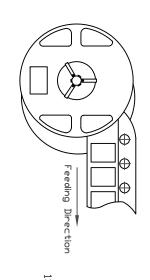
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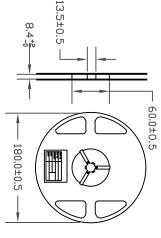
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# **SMD Chip LED Lamps Packaging Specifications**



Dimensions of Reel (Unit: mm)





# Arrangement of Tape

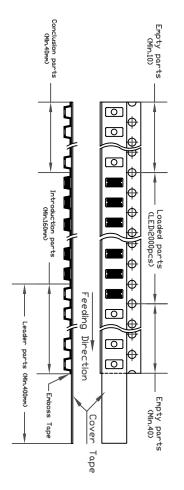
Dimensions of Tape (Unit: mm)

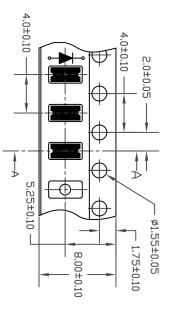
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#### NOTES

- Empty component pockets are sealed with top cover tape
   The maximum number of missing lamps is two
   The cathode is oriented towards the tape sprocket hole in accordance with ANSI/EIA RS-481 specifications
   The cathode is oriented towards the tape sprocket hole in accordance with ANSI/EIA RS-481 specifications
   2,000 pcs/Reel

PURPOSE	LIABILITY WHATSOEVER IN CONNECTION THEREWITH.
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