



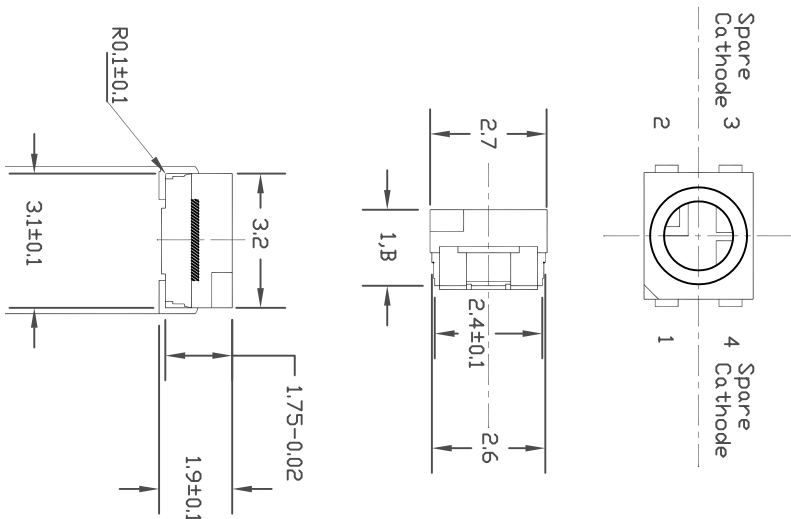
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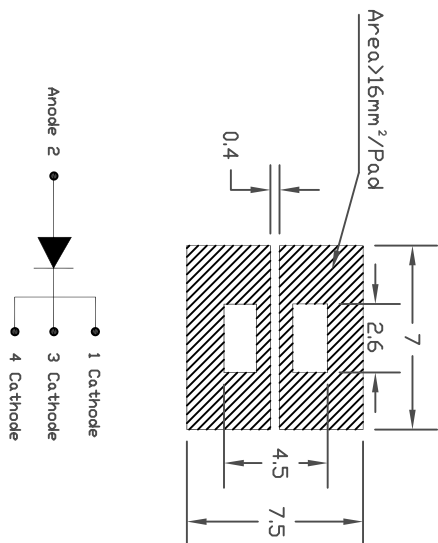
SPC-F005.DWG

REVISONS		DCI. NO.	SPC-F005	*	Effective	7/8/02	*	DCP No	1398
DCP #	REV	DESCRIPTION	DRAWN	DATE	CHECKD	DATE	APPRVI	DATE	
XX	XX	XXXX	XXXX	15-09-08	XXXX	15-09-08	XXXX	15-09-08	
XXXX	XXXX		XXXX	15-09-08	XXXX	15-09-08	XXXX	15-09-08	

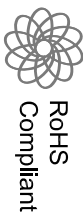
Package Outlines



RECOMMEND PAD LAYOUT



ITEM	MATERIALS
Resin	Epoxy
Bonding Wire	∅ 25 μm Au
Lens color	clear
Dice	InGaN
Emitted color	True Green



- NOTES:
- All dimensions are in millimeters (inches);
 - Tolerances are ±0.2mm (0.008inch) unless otherwise noted.

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DRAWING TITLE:

Multi Color LED

SIZE	DWG. NO.	ELECTRONIC FILE	REV
A	MC24182	02P5961	XX
SCALE:	NTS	U.D.M.: INCHES [mm]	SHEET: 1 OF



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XXXX	XXXX			XXXX	23-09-08	XXXX	23-09-08	XXXX	23-09-08	XXXX	23-09-08

Absolute Maximum Ratings

(TA=25°C)

Parameter	Symbol	Value	Unit
Forward current	If	30	mA
Reverse voltage	Vr	5	V
Power dissipation	Pd	120	mW
Operating temperature range	Top	-20~+80	°C
Storage temperature range	Tstg	-40~+100	°C
Peak pulsing current (1/8 duty f=1kHz)	I _{fp}	125	mA

Electro-optical Characteristics

(TA=25°C)

Parameter	Test Condition	Symbol	Value		Unit
			Min	Typ Max	
Wavelength at peak emission	If=30mA	λ_{peak}	--	525	nm
Spectral half bandwidth	If=30mA	$\Delta\lambda$	--	--	nm
Dominant wavelength	If=30mA	λ_{dom}	--	525	nm
Forward voltage	If=20mA	Vf	3.2	--	V
Luminous intensity	If=20mA	Iv	500	800	mcd
Viewing angle at 50% Iv	If=10mA	2 $\theta_{1/2}$	--	120	Deg
Reverse current	Vr=5V	I _r	--	--	μ A



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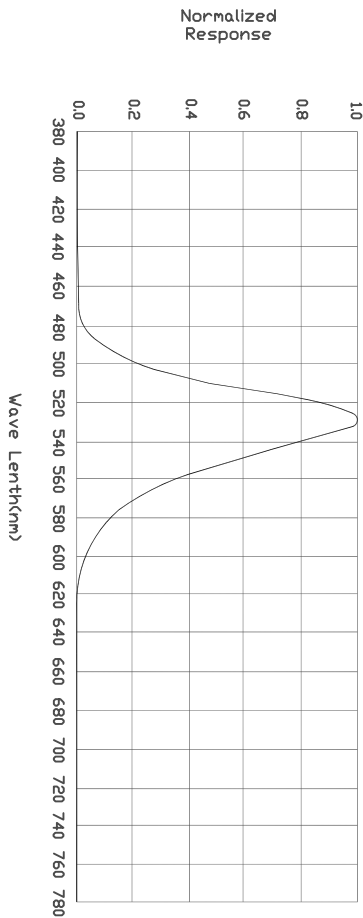
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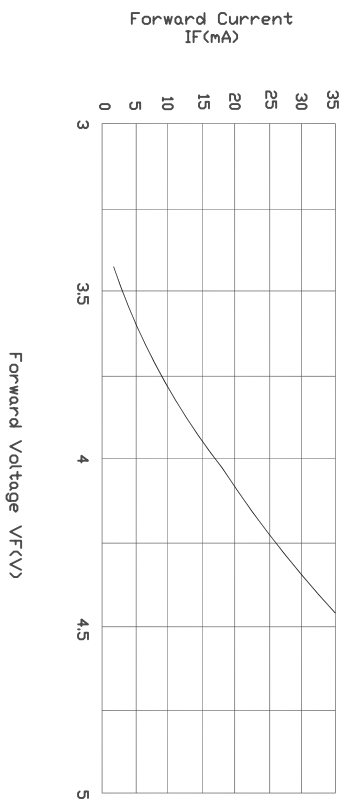
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OPTICAL CHARACTERISTIC CURVES

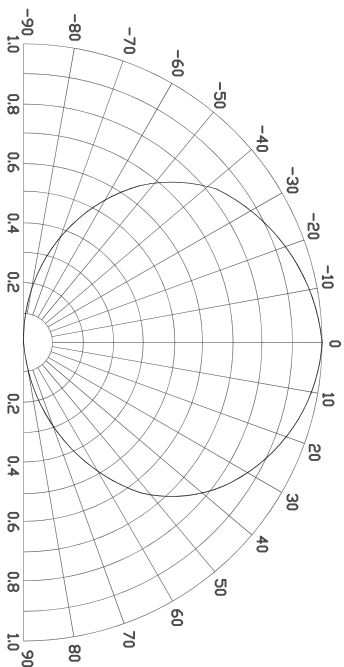
Spectral Radiance (Peak @525nm)



Forward Current vs Forward Voltage



Directive Characteristics



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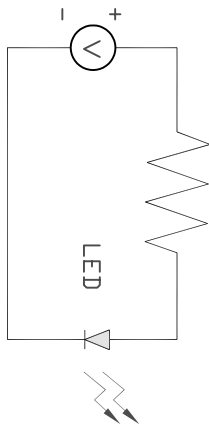
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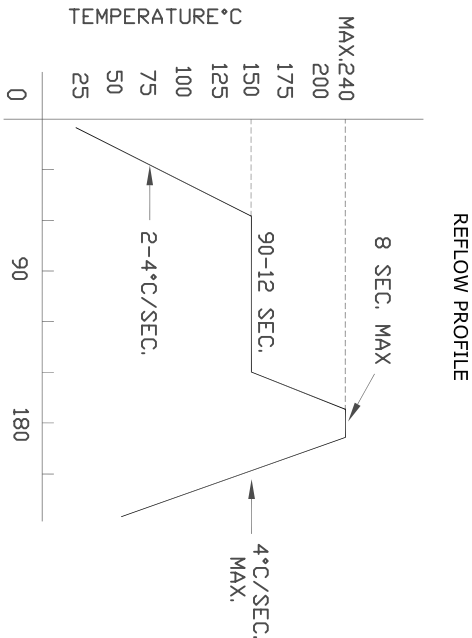
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XX	XX	XXXX	XXXX	26-09-08	XXXX	26-09-08	XXXX	26-09-08	
XXXX	XXXX		XXXX	26-09-08	XXXX	26-09-08	XXXX	26-09-08	

• Test Circuit



• Reflow Temp/Time



• Handling Precautions

- Over-current-proof
Customer must apply resistors for protection; otherwise slight voltage shift will cause big current change (Burn out will happen).
- Storage
 - It is recommended to store the products in the following conditions:
Humidity: 60% RH, Max. Temperature : 5°C~30°C (41°F~86°F)
 - Shelf life in sealed bag: 12 month at <5°C~30°C and <30% RH, after the package is opened, the products should be used within a week or they should be keeping to stored at ≤ 20 RH, with zip-lock sealed.
 - Baking
It is recommended to baking before soldering when the pack is unsealed after 72hrs. The Conditions are as followings:
 - 60±3°C x (12~24hrs) and <5%RH, taped reel type
 - 100±3°C x (45min~1hr), bulk type
 - 130±3°C x (15~30min), bulk type

• Soldering Iron

Basic spec is ≤ 5sec when 260°C. If temperature is higher, time should be shorter (+10°C → -1sec). Power dissipation of iron should be smaller than 15W and temperatures should be controllable. Surface temperature of the device should be under 230°C.



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Test Items and Results of Reliability

Type	Test Item	Test Conditions	Note	Number of Damaged
Environmental Sequence	Temperature Cycle	-20°C 30min ↑ ↓ 80°C 30min	100 cycle	0/22
	Thermal Shock	-20°C 15min ↑ ↓ 80°C 15min	100 cycle	0/22
	High Humidity Heat Cycle	30°C ⇄ 65°C 90%RH 24hrs/1cycle	10 cycle	0/22
	High Temperature Storage	Ta=80°C	1000 hrs	0/22
	Humidity Heat Storage	Ta=60°C RH=90%	1000 hrs	0/22
	Low Temperature Storage	Ta=-30°C	1000 hrs	0/22
Operation Sequence	Life Test	Ta=25°C If=20mA	1000 hrs	0/22
	High Humidity Heat Life Test	60°C RH=90% If=20mA	500 hrs	0/22
	Low Temperature Life Test	Ta=-20°C If=20mA	1000 hrs	0/22



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ELECTRONIC FILE	REV
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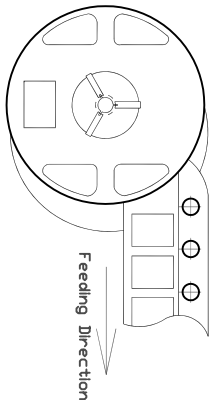
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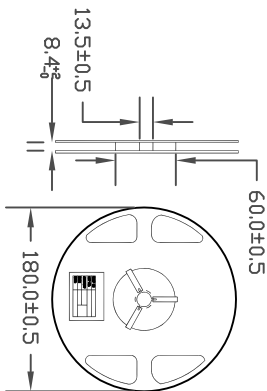
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Single-Color High Performance SMD Top LEDs Packaging Specifications

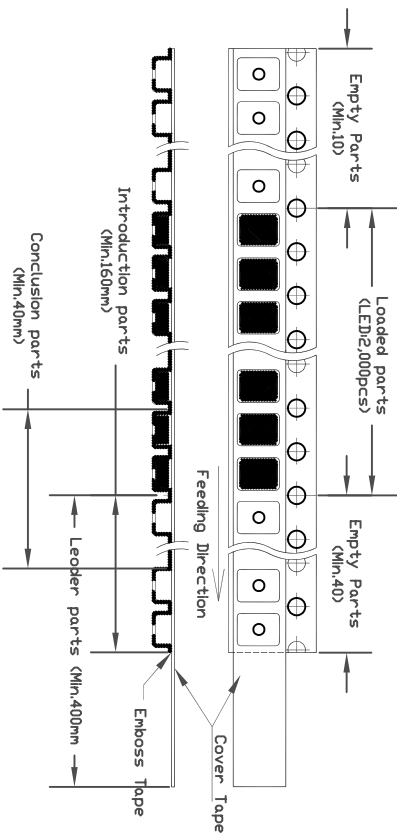
• Feeding Direction



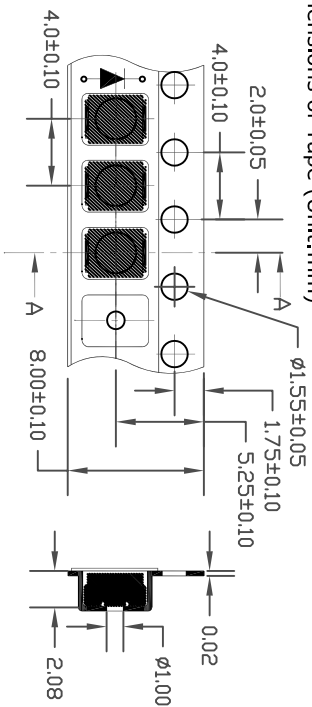
• Dimensions of Reel (Unit:mm)



• Arrangement of Tape



• Dimensions of Tape (Unit:mm)



NOTES

1. Empty component pockets are sealed with top cover tape;
2. The maximum number of missing lamps is two;
3. The cathode is oriented towards the tape sprocket hole in accordance with ANSI/EIA RS-481 specification;



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NTS			1 OF



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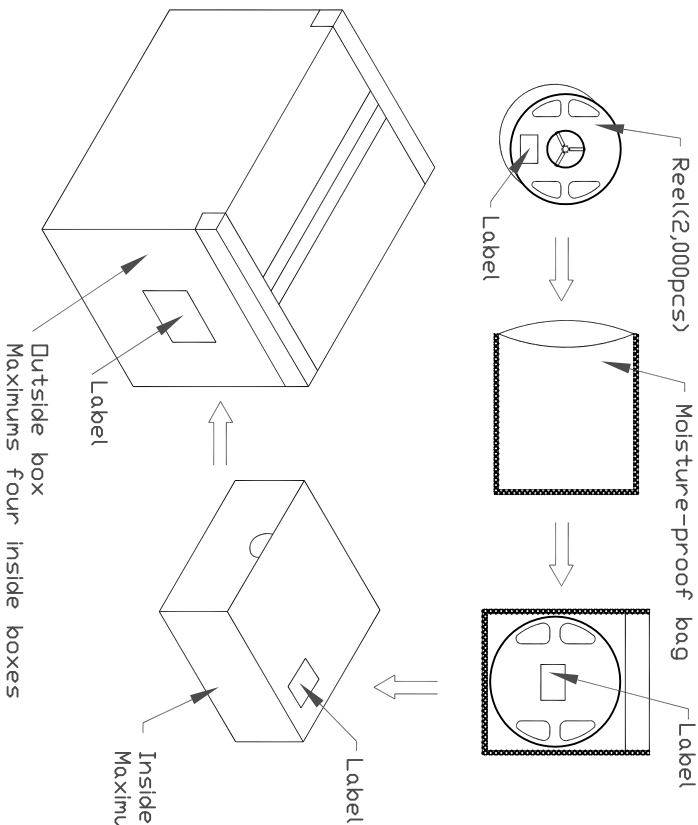
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Single-Color High Performance SMD Top LEDs Packaging Specifications

• Packaging specifications



NOTES:

Reeled products (numbers of products are 2,000pcs) packed in a seal off moisture-proof bag along with a desiccant one by one, Ten moisture-proof bag of maximums (total maximum number of products are 20,000pcs) packed in an inside box (size: about 220mm x about 120mm x about 145mm) and four inside boxes of maximums are put in the outside box (size: about 450mm x about 300mm x about 230mm) Together with buffer material, and it is packed. (Part No, Lot No, quantity should appear on the label on the moisture-proof bag, part No. And quantity should appear on the label on the cardboard box.) The number of the loading steps of outside box (cardboard box) has it to three steps.



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