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TECHNOLOGY

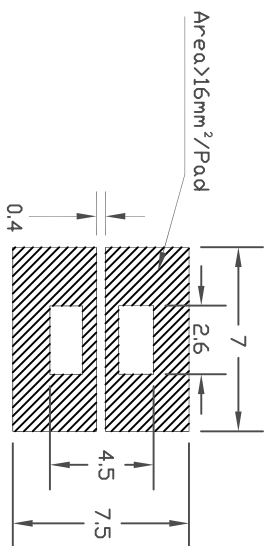
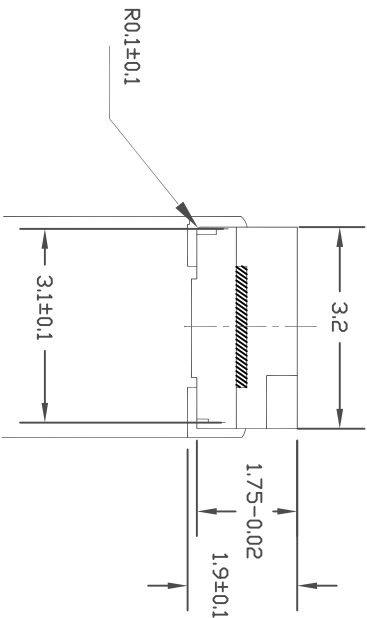
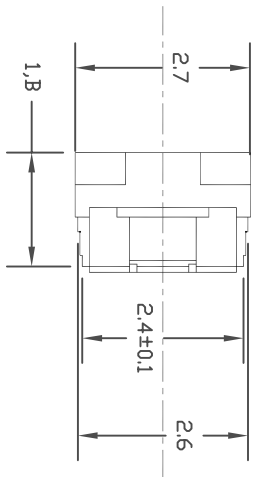
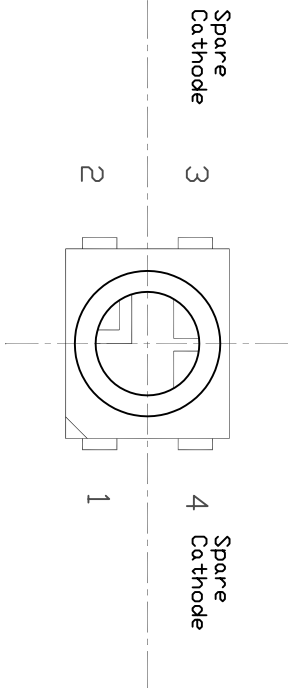
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SPC-F005.DWG

REVISONS		DOC. NO.	SPC-F005	*	Effective	7/8/02	*	DCP No	1398
DCP #	REV	DESCRIPTION	DRAWN	DATE	CHECKD	DATE	APPRVI	DATE	
XX	XX	XXXX	XXXX	18-09-08	XXXX	18-09-08	XXXX	18-09-08	
XXXX	XXXX		XXXX	18-09-08	XXXX	18-09-08	XXXX	18-09-08	

Package Outlines

RECOMMEND PAD LAYOUT



ITEM	MATERIALS
Resin	Epoxy
Bonding Wire	φ25μmAu
Lens color	clear
Dice	AllInGap
Emitted color	Yellow

NOTES:

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



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XXXX	18-09-08
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XXXX	18-09-08

DRAWING TITLE:	
Multi - Color LED	
SIZE	DWG. NO.
A	MC24184
SCALE:	U.D.M.: INCHES [mm]
NTS	
SHEET:	1 OF
ELECTRONIC FILE	REV
02P5963	XX



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DCP #	REV			DRAWN	DATE	CHECKD	DATE	APPRVI	DATE		
XX	XX	XXXX		XXXX	22-09-08	XXXX	22-09-08	XXXX	22-09-08		
XXXX	XXXX			XXXX	22-09-08	XXXX	22-09-08	XXXX	22-09-08		

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)	Ifp	125	mA

Electro-optical Characteristics

(TA=25°C)

Parameter	Test Condition	Symbol	Value		Unit
			Min	Typ	
Wavelength at peak emission	If=30mA	λ_{peak}	--	590	nm
Spectral half bandwidth	If=30mA	$\Delta\lambda$	--	20	nm
Dominant wavelength	If=30mA	λ_{dom}	--	588	nm
Forward voltage	If=20mA	Vf	--	1.9	V
Luminous intensity	*1 If=20mA	Iv	450	800	mcad
Viewing angle at 50% Iv	If=10mA	2 $\theta_{1/2}$	--	120	Deg
Reverse current	Vr=5V	Ir	--	--	μ A



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XXXX	22-09-08
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XXXX	22-09-08

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Multi Color LED

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SCALE:	NTS	U.D.M:	INCHES [mm]
		SHEET:	1 OF 1



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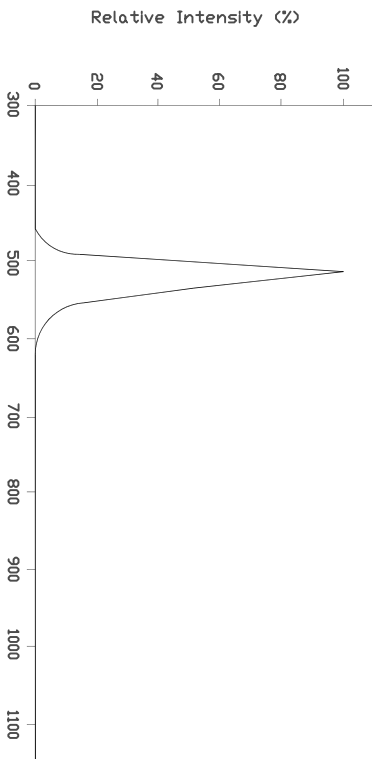
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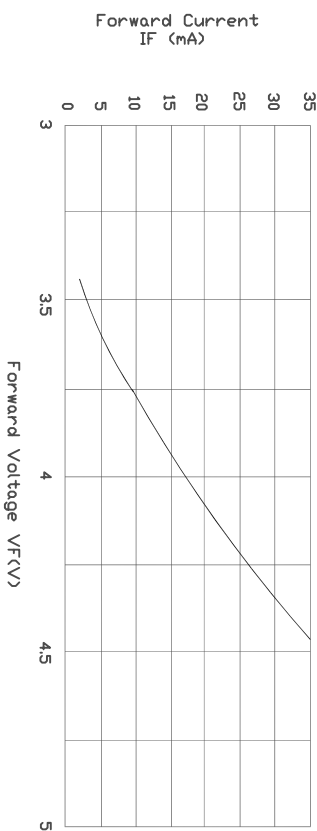
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DCP #	REV	DESCRIPTION	DRAWN	DATE	CHECKD	DATE	APPRV	DATE	
XX	XX	XXXX	XXXX	25-09-08	XXXX	25-09-08	XXXX	25-09-08	
XXXX	XXXX		XXXX	25-09-08	XXXX	25-09-08	XXXX	25-09-08	

OPTICAL CHARACTERISTIC CURVES

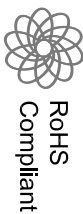
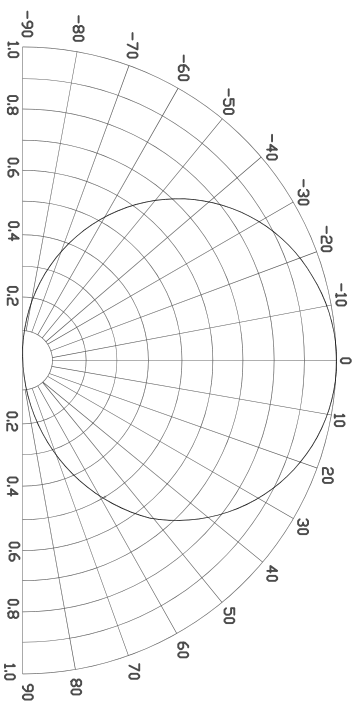
Relative Intensity vs. Wavelength



Forward Current vs. Forward Voltage



Directive Characteristics



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A	MC24184	02P5963	XX
SCALE:	NTS	U.D.M:	INCHES [mm]
		SHEET:	1 OF 1



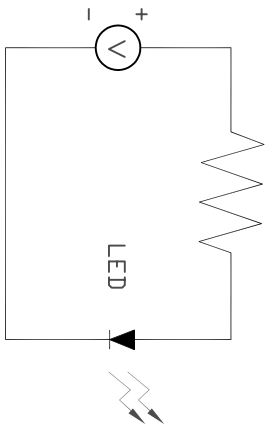
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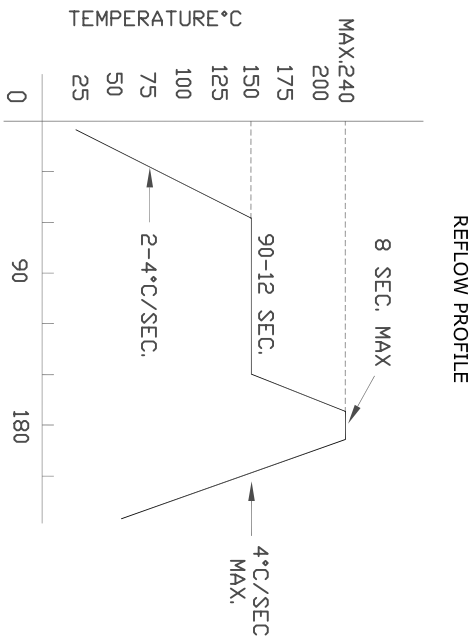
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DCP #	REV	DESCRIPTION	DRAWN	DATE	CHECKD	DATE	APPRV	DATE	
XX	XX	XXXX	XXXX	26-09-08	XXXX	26-09-08	XXXX	26-09-08	
XXXX	XXXX		XXXX	26-09-08	XXXX	26-09-08	XXXX	26-09-08	

• **Test Circuit**



• **Reflow Temp/Time**



• **Handling Precautions**

1. Over-current-proof
Customer must apply resistors for protection; otherwise slight voltage shift will cause big current change (Burn out will happen).
2. Storage
 - 2.1 It is recommended to store the products in the following conditions:
Humidity: 60% RH, Max. Temperature : 5°C~30°C (41°F~86°F)
 - 2.2 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.
3. Baking
It is recommended to baking before soldering when the pack is unsealed after 72hrs. The Conditions are as followsings:
 - 3.1 60±3°C x (12~24hrs) and <5%RH, taped reel type
 - 3.2 100±3°C x (45min~1hr), bulk type
 - 3.3 130±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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SCALE:	U.D.M:	INCHES [mm]	SHEET:
NTS			1 OF 1



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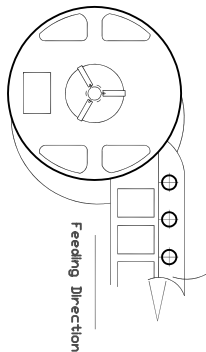
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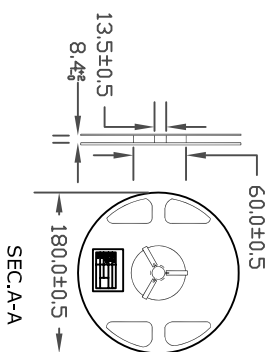
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DCP #	REV	DESCRIPTION	DRAWN	DATE	CHECKD	DATE	APPRVI	DATE	
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XXXX	XXXX		XXXX	18-09-08	XXXX	18-09-08	XXXX	18-09-08	

Top LED Lamps Packaging Specifications

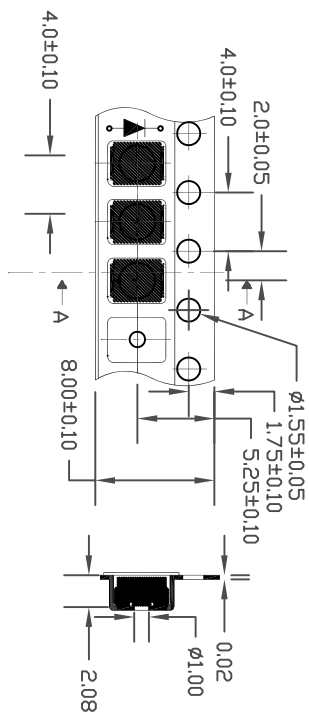
• Feeding Direction



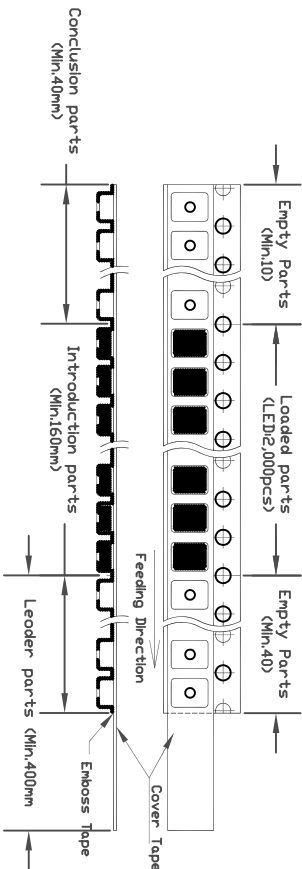
• Dimensions of Reel (Unit:mm)



• Dimensions of Tape (Unit:mm)



• Arrangement of Tape



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
4. 2,000pcs/Reel



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Multi - Color LED

SIZE	DWG. NO.	ELECTRONIC FILE	REV
A	MC24163	02P5958	XX
SCALE:	NTS	U.D.M.: INCHES [mm]	SHEET: 1 OF