23105 Kashiwa Court, Torrance, CA 90505
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E-mail: webmaster@ledtronics.com
Website: http://www.ledtronics.com

SML13RGB2KT-TR

Red/Green/Blue
Surface Mount LED
3.5 ×2.75 ×1.9 mm Chip LED
120° viewing angle

DWG BY: LL / GP 11-22-11
CHK BY: PL 11-22-11
REVISION LTR: - 11-22-11

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1. SPECIFICATIONS

(1) Absolute Maximum Ratings (Ta=25℃)

Parameter	Symbol		MAX.	Unit
Continuous Forward Current	If	R	25	mA
		G	25	
		B	25	
Pulse Forward Current*	Ifp	R	100	mA
		G	100	
		B	100	
Power Consumption	Pc	R	65	mW
		G	95	
		B	95	
Electrostatic Discharge	ESD	R	2000	V
		G	1000	
		B	1000	
Operating Temperature Range	Topr		-40 ~ +85	℃
Storage Temperature Range	Tstg		-40 ~ +100	℃
Reverse Voltage	Vr		5	V
Soldering Temperature	Tsld		Reflow Soldering: 260℃ /10sec	
			Hand Soldering: 350℃ /3sec	

*Duty 1/10 @ 1KHZ

(2) Electrical / Optical Characteristics (Ta=25℃)

Parameter	Symbol		Min.	Typ.	Max.	Unit	Test Condition
Forward Voltage*	Vf	R	1.5	2.2	2.5	V	If=20mA
		G	2.8	3.2	3.8		
		B	2.8	3.1	3.8		
Luminous intensity*	Iv	R	460	670	/	mcd	If=20mA
		G	460	980	/		If=20mA
		B	140	310	/		If=20mA
Dominant Wavelength	λd	R	615	622	625	nm	If=20mA
		G	520	524	530		
		B	465	469	475		
Spectrum Radiation Bandwidth	Δλ	R	/	22	/	nm	If=20mA
		G	/	33	/		
		B	/	26	/		
Reverse Current	Ir	R	/	/	10	uA	Vr=5V
		G	/	/	10		
		B	/	/	10		
Viewing Angle*	$2\theta_{1/2}$		/	120	/	Deg	If=20mA

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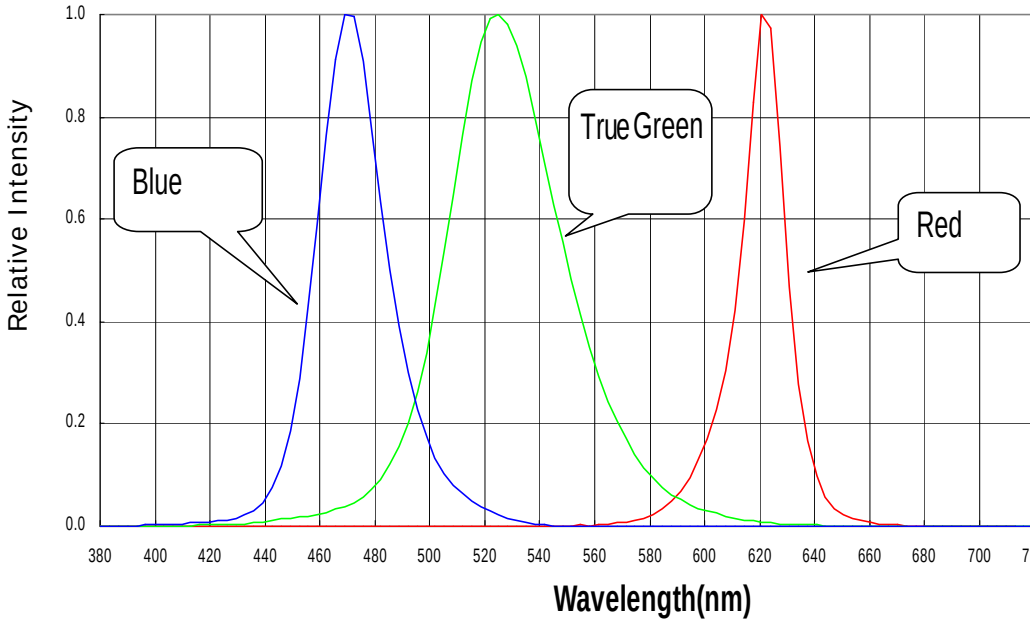
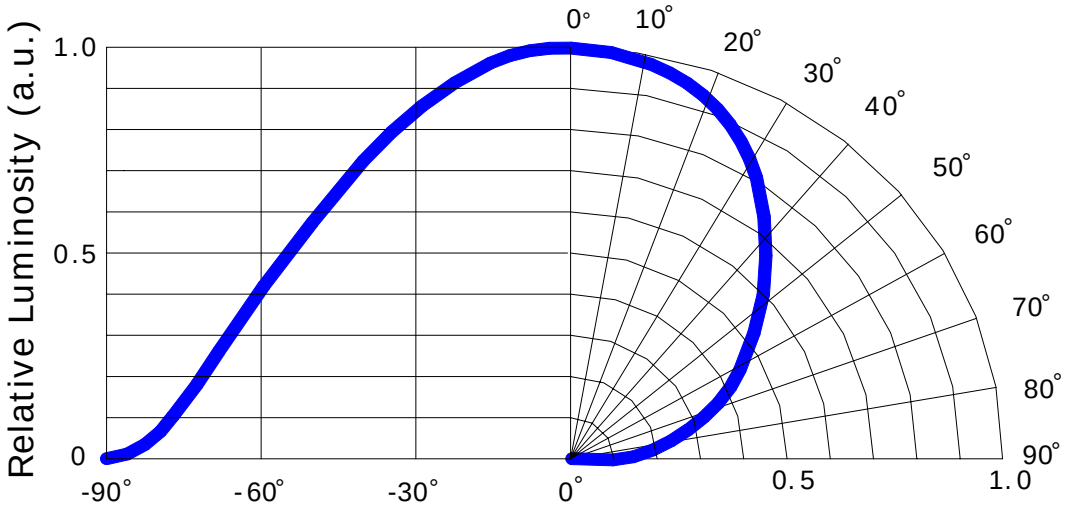
*Forward voltage measurement allowance is ±0.1V.
*Luminous intensity is measured with a light sensor and filter combination that approximates the CIE eye-response curve.
*Luminous Intensity Measurement Allowance is ± 10%.
*Dominant Wavelength measurement allowance is ±1nm.
*2 $\theta_{1/2}$ is the off-axis angle at which the luminous intensity is half the axial luminous intensity.

Typical Electrical / Optical Characteristics Curves

Wavelength Distribution



Beam Pattern



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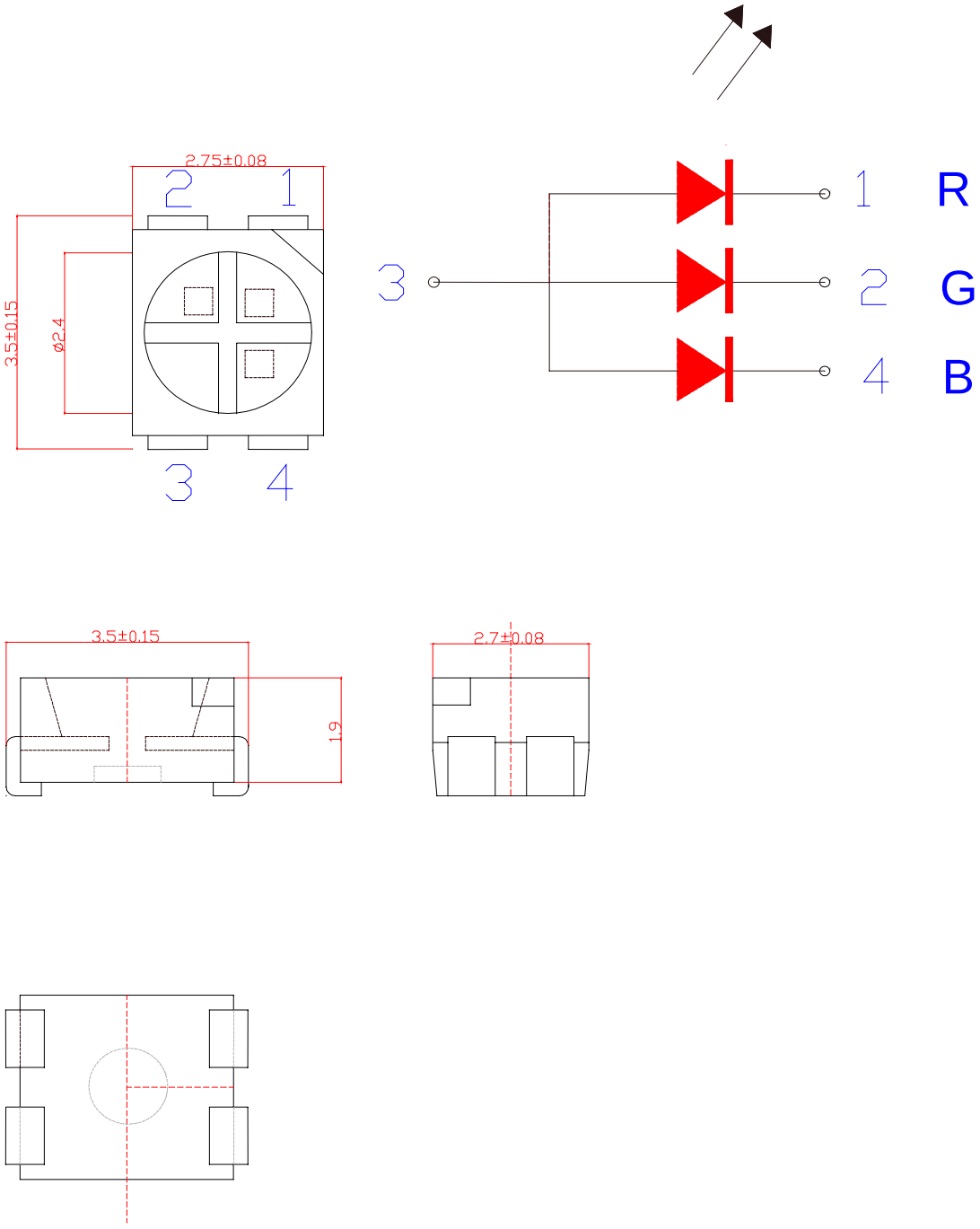
2. Package

Outline Dimension (unit= mm)



1. All dimensions are in millimeters.
2. Tolerances are ±0.1 mm, unless otherwire noted.

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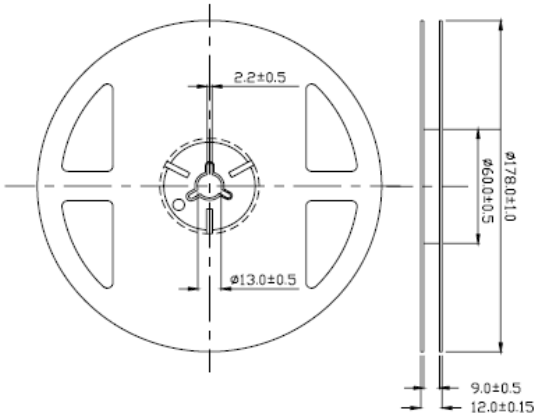
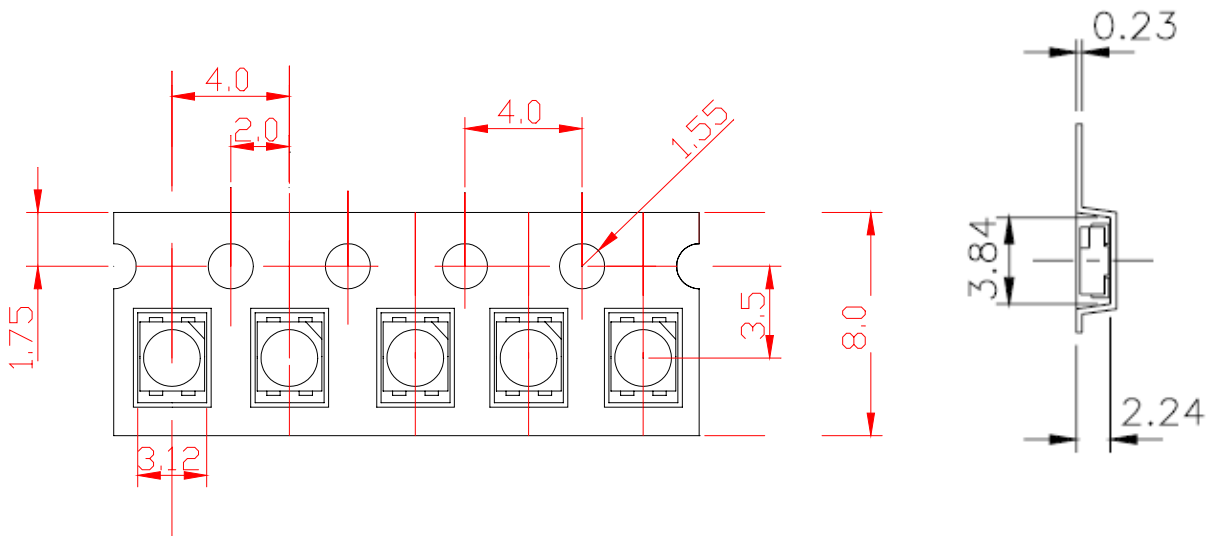
Taping Dimension (unit = mm)





Tolerance: ±0.2 (unit = mm)

Quantity: 1000 pcs/Reel

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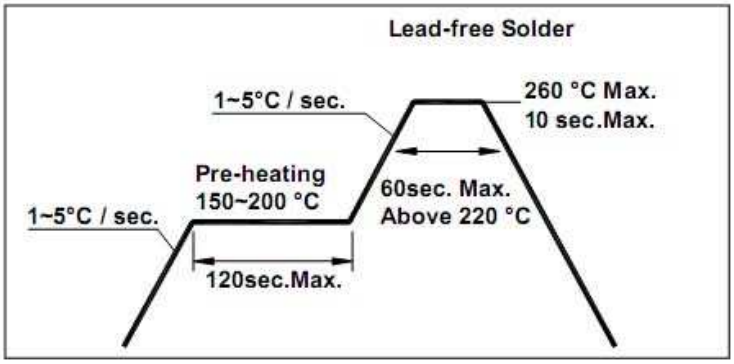
3. Handling Precaution

Recommended soldering conditions

1.1 Reflow solder temperature profile



1.2 Soldering conditions

- Reflow soldering should not be done more than twice.
- When soldering, do not stress on LEDs during heating.
- After soldering, do not warp the circuit board.

Repairing

- Repair should not be done after the LEDs have been soldered. When repair is unavoidable, double-head soldering iron should be used. It should be confirmed beforehand whether the characteristics of the LEDs will be damaged by repair or not.

Cleaning

- It is recommended to use isopropyl alcohol as a solvent to clean the LEDs. When using other solvents, it should be confirmed beforehand whether the solvents will dissolve the package and the resin or not.

Advice on Device Usage

- It is recommended that user should complete the use of the whole package within 8 hours upon unsealing. In the event of incomplete usage, it is advised that user preheat the remaining devices at 60? for 8 hours prior to use.