

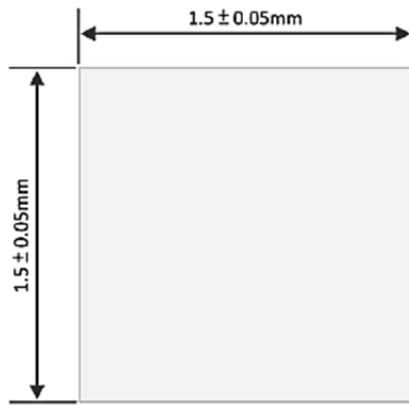


# American Opto Plus LED Corp.

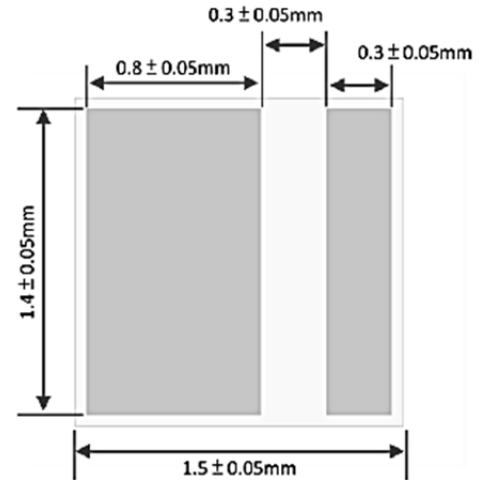
## L515MEC

1.5 X 1.5 X 1.4mm RED Water Clear SMD LED

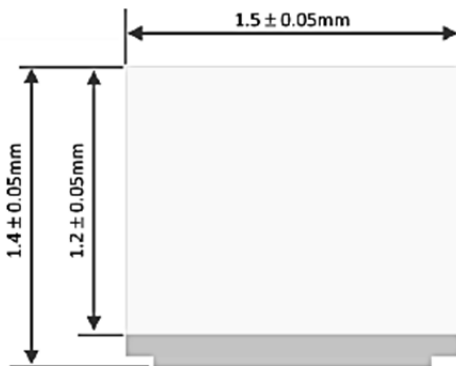
### PACKAGE OUTLINES



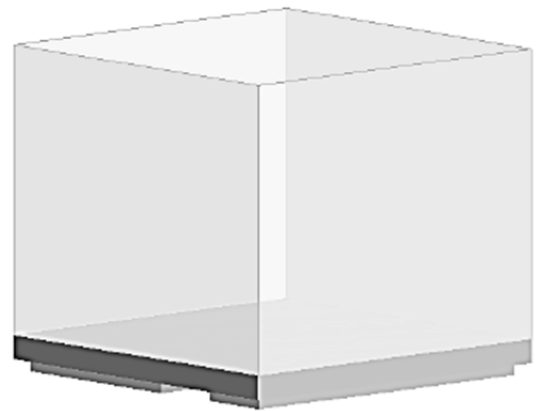
Top View



Bottom View



Side View



#### Notes:

1. All dimensions are in millimeters (inches);
2. Tolerances unless mentioned are  $\pm 0.1\text{mm}$



# American Opto Plus LED Corp.

## L515MEC

1.5 X 1.5 X 1.4mm RED Water Clear SMD LED

### ABSOLUTE MAXIMUM RATINGS

(Ta=25°C)

Parameter	Symbol	Max Rating	Unit
Typ. Forward Current	I <sub>F</sub>	350	mA
Max. Forward Current	I <sub>F</sub>	450	mA
Reverse Current	V	5	V
Power Dissipation (@350mA)	P <sub>D</sub>	0.77	W
Junction Temperature	T <sub>J</sub>	115	°C
Operating Temperature	T <sub>OPR</sub>	-40 ~ +85	°C
Storage Temperature	T <sub>STG</sub>	-40 ~ +100	°C
Recommended Soldering Temperature	T <sub>SOL</sub>	240	°C
Thermal Resistance	θ <sub>th</sub>	4	°C/W
Allowable Reflow Cycles	-	3	Cycles
ESD Sensitivity	HBM	±2000	V

### OPTICAL-ELECTRICAL CHARACTERISTICS

(Ta=25°C)

Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Luminous Flux	Φ <sub>V</sub>	350mA	--	40	--	Lm
Wavelength	λ	350mA	620	--	630	nm
Forward Voltage	V <sub>F</sub>	350mA	1.8	2.2	--	V
Thermal Resistance	Rθ <sub>J-C</sub>	350mA	--	4	--	°C/W

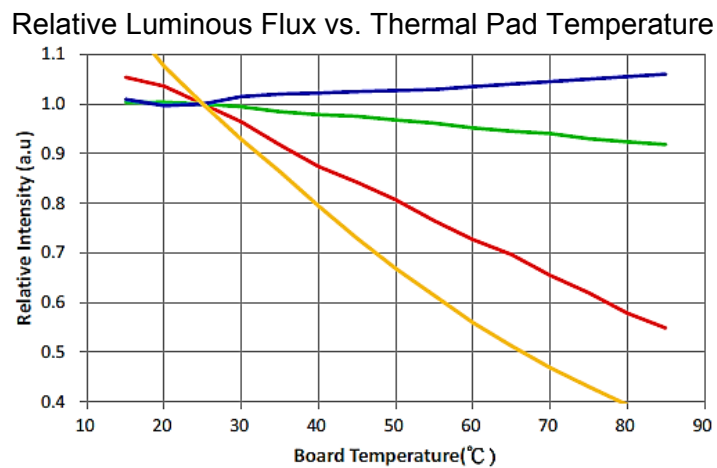
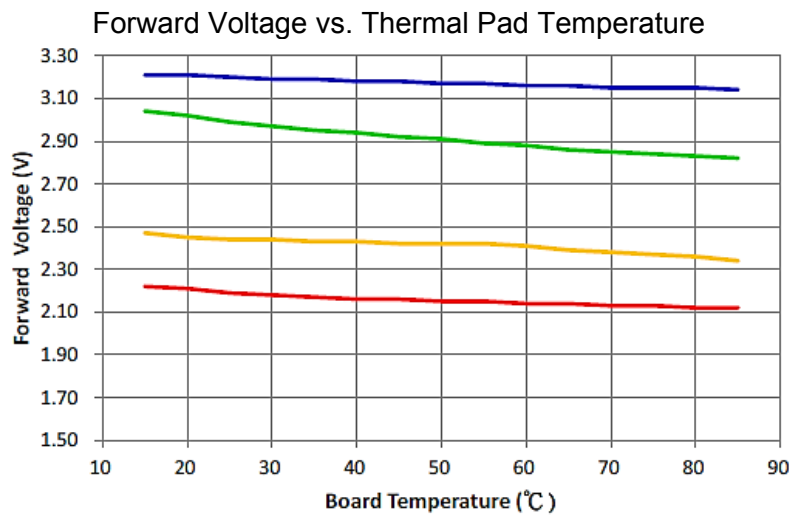
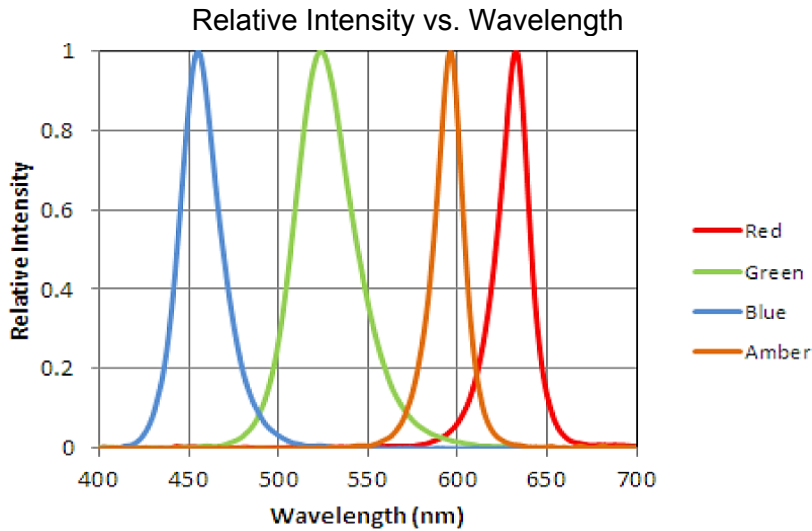
### OPTICAL CHARACTERISTIC CURVES



# American Opto Plus LED Corp.

## L515MEC

1.5 X 1.5 X 1.4mm RED Water Clear SMD LED



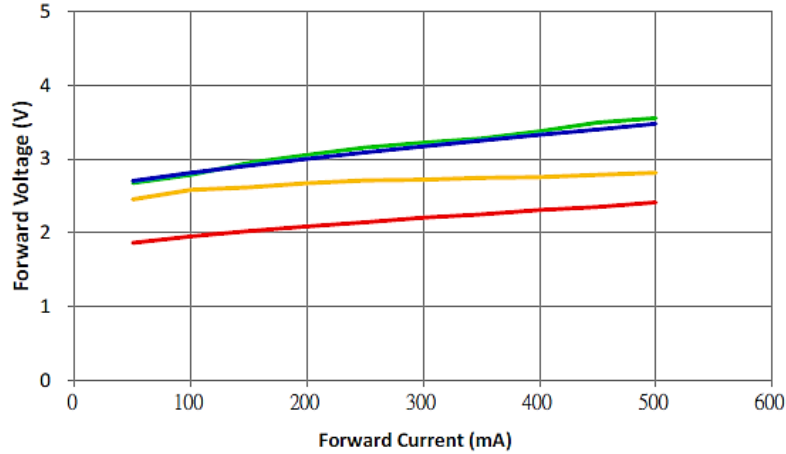


# American Opto Plus LED Corp.

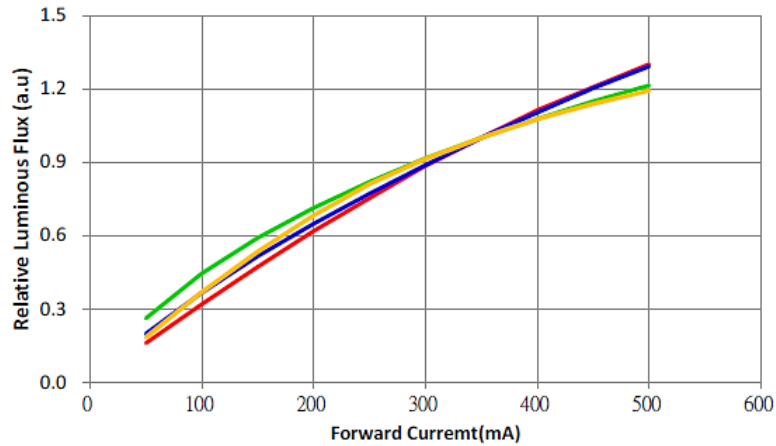
## L515MEC

1.5 X 1.5 X 1.4mm RED Water Clear SMD LED

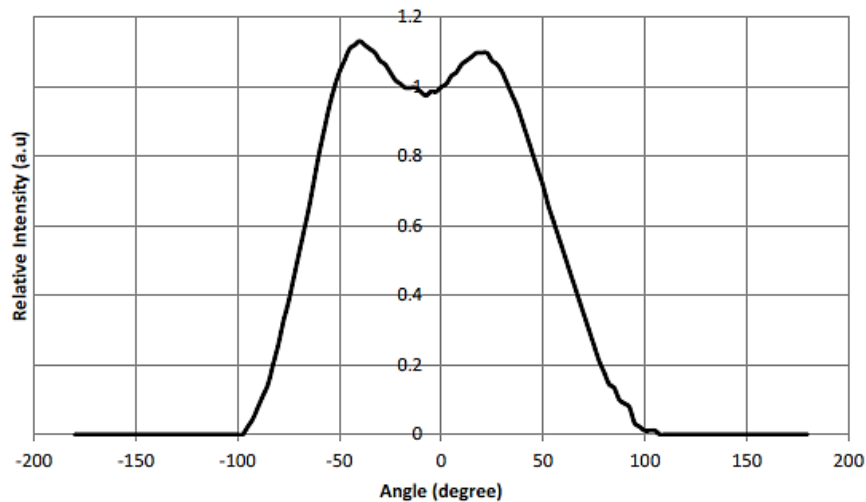
Forward Voltage (V) vs. Forward Current (mA)



Relative Luminous Flux (a.u) vs. Forward Current (A)



Relative Intensity (a.u) vs. Angle (degree)





# American Opto Plus LED Corp.

## L515MEC

1.5 X 1.5 X 1.4mm RED Water Clear SMD LED

### RECOMMENDED SOLDERING PAD PATTERN

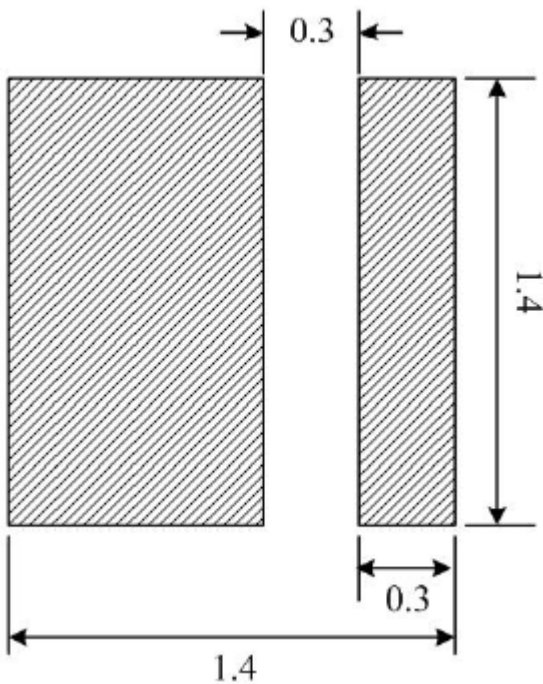


Top View

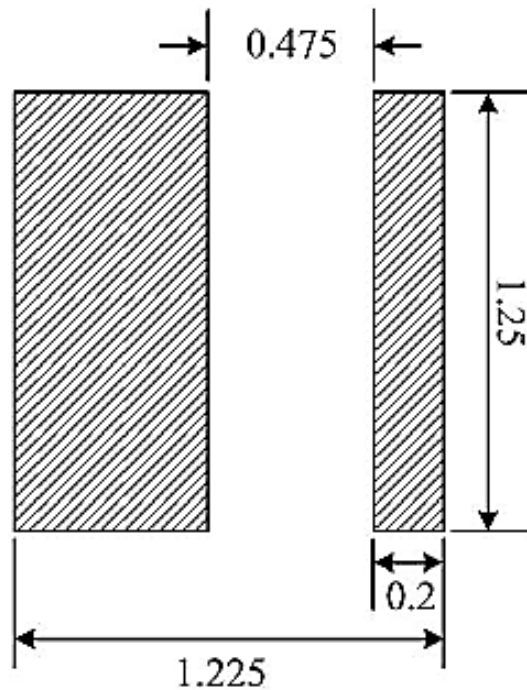


Bottom View

### RECOMMENDED PCB SOLDER PAD



### RECOMMENDED STENCIL PATTERN



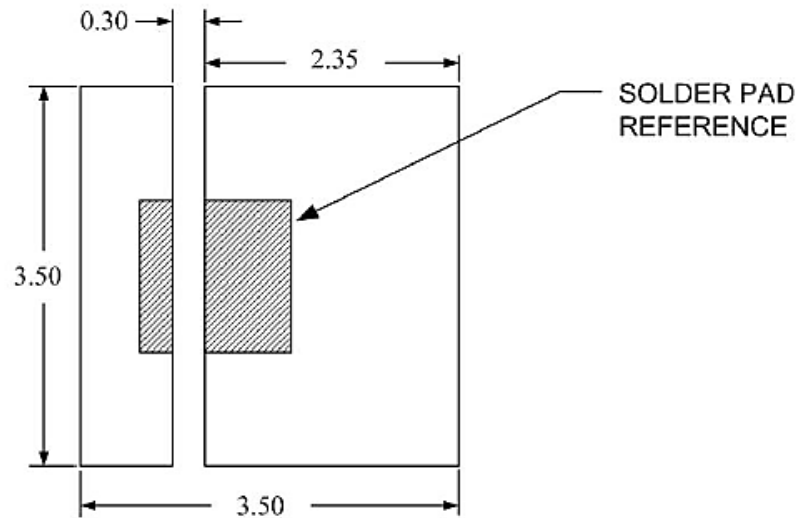


# American Opto Plus LED Corp.

## L515MEC

1.5 X 1.5 X 1.4mm RED Water Clear SMD LED

### RECOMMENDED TRACE LAYOUT



#### Notes:

1. All dimensions are in millimeters
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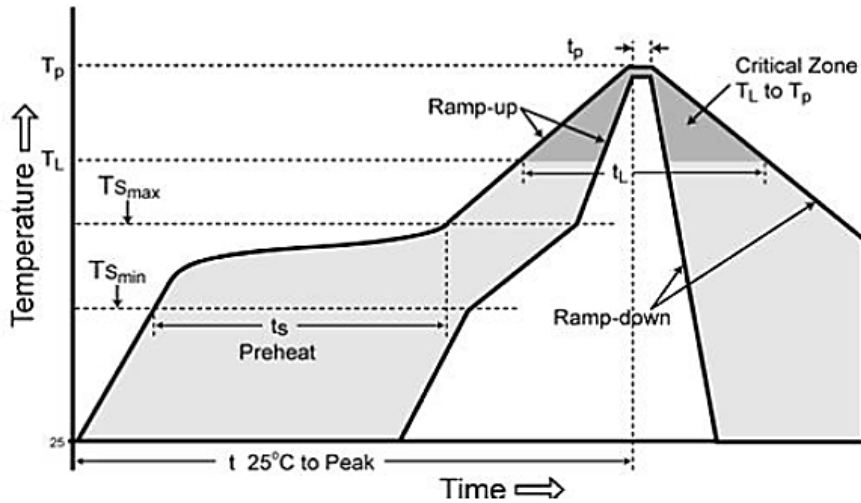


# American Opto Plus LED Corp.

## L515MEC

1.5 X 1.5 X 1.4mm RED Water Clear SMD LED

### REFLOW SOLDERING CHARACTERISTICS



Profile Feature	Pb-Free Assembly
Average ramp-up rate (TL to TP)	3°C/second max
Preheat	
Temperature Min ( $T_{SMIN}$ )	150°C
Temperature Max ( $T_{SMAX}$ )	200°C
Time (min to max) ( $t_s$ )	60-180 seconds
Time maintained above:	
Temperature (TL)	217°C
Time ( $t_L$ )	60-150 seconds
Peak/Classification Temperature ( $T_p$ )	240°C
Time within 5°C of actual Peak Temperature ( $t_p$ )	20-40 seconds
Ramp-down rate	6°C/second max
Time 25°C to Peak Temperature	8 minutes max