

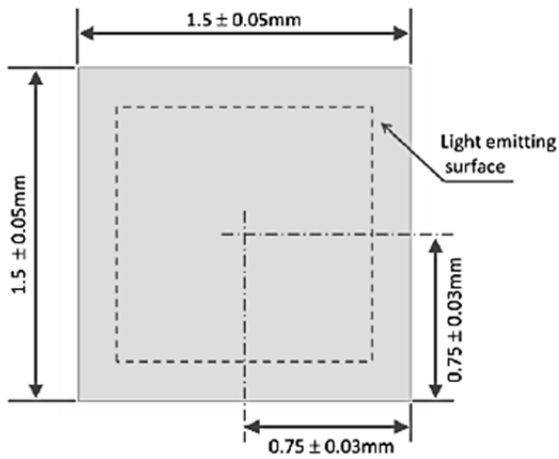


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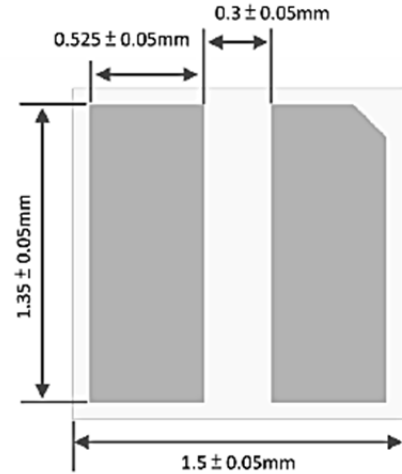
L515MWC

1.5 X 1.5 X 1.4mm COOL WHITE Water Clear SMD LED

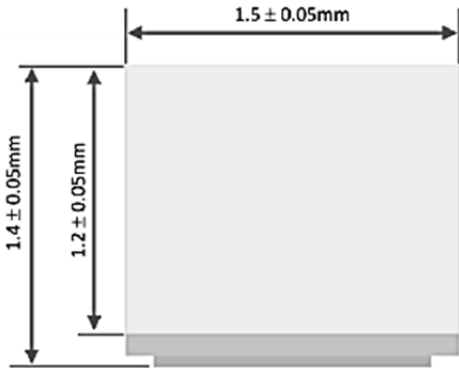
PACKAGE OUTLINES



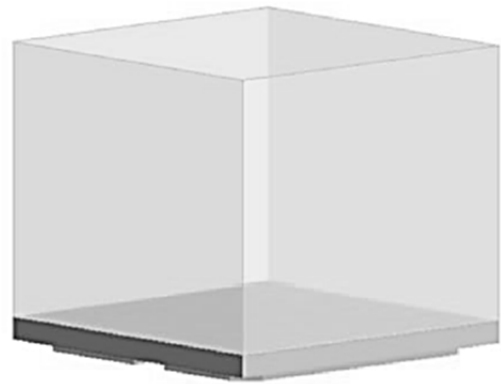
Top View



Bottom View



Side View



Notes:

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



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ABSOLUTE MAXIMUM RATINGS

(Ta=25°C)

Parameter	Symbol	Max Rating	Unit
Typ. Forward Current	I _F	700	mA
Max. Forward Current	I _F	1000	mA
Max. Peak Pulse Current	I _{PULSE}	1500	mA
Reverse Current	V	5	V
Power Dissipation (@350mA)	P _D	2.45 (typ)	W
Junction Temperature	T _J	150	°C
Operating Temperature	T _{OPR}	-40 ~ +85	°C
Storage Temperature	T _{STG}	-40 ~ +100	°C
Recommended Soldering Temperature	T _{SOL}	240	°C
Thermal Resistance	θ _{th}	4	°C/W
Allowable Reflow Cycles	-	3	Cycles
ESD Sensitivity	HBM	±2000	V

OPTICAL-ELECTRICAL CHARACTERISTICS

Parameter	Symbol	Test Condition	Cool White	Min	Typ	Max	Unit
Luminous Flux	Φ _V	700mA	5700K	200	220	-	Lm
			5000K	200	220	-	
Correlated Color Temperature	CCT	700mA	5700K	5310	6020	-	K
			5000K	4745	5310	-	
Forward Voltage	V _F	700mA	5700K	-	3.3	-	V
			5000K				
Viewing Angle	2θ _{1/2}	700mA	5700K	-	155	-	deg
			5000K				
CRI	R _A	700mA	5700K	70	80	-	-
			5000K				
Thermal Resistance	Rθ _{J-C}	700mA	5700K	-	<4	-	°C/W
			5000K				

Notes:

1. Luminous flux tolerance is ± 7%
2. Viewing angle tolerance is ± 10°



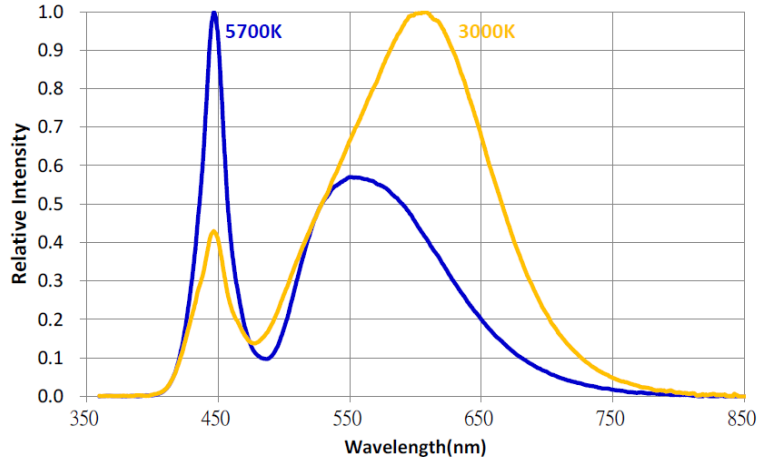
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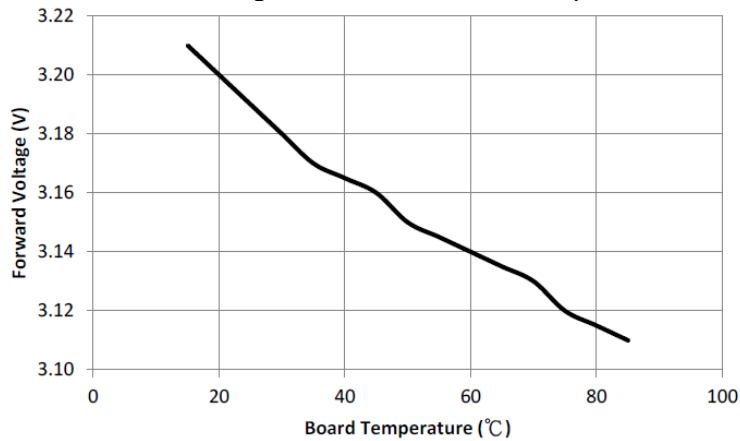
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OPTICAL CHARACTERISTIC CURVES

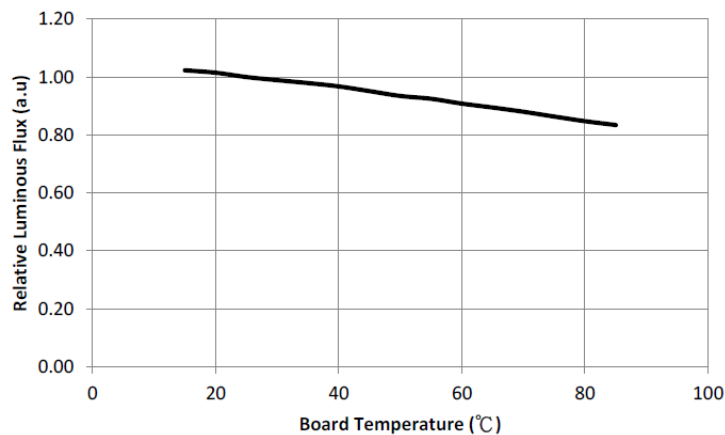
Relative Spectral Distribution vs. Wavelength Characteristics



Forward Voltage vs. Thermal Pad Temperature



Relative Luminous Flux vs. Thermal Pad Temperature

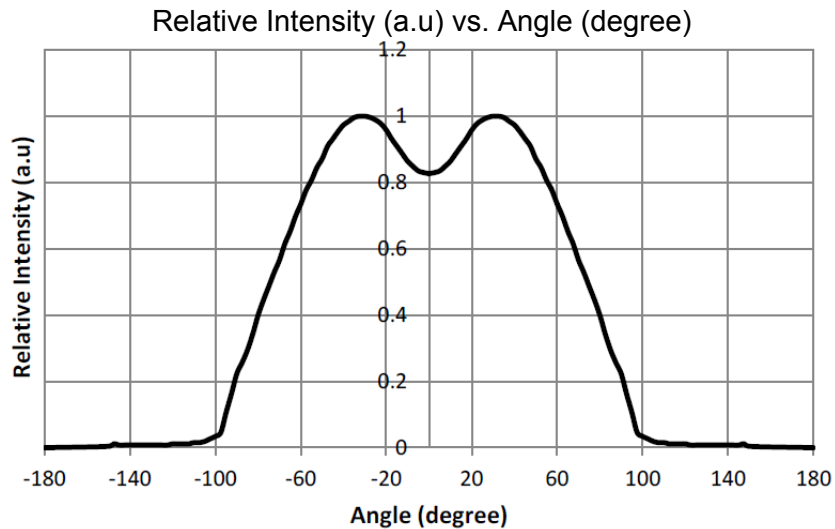
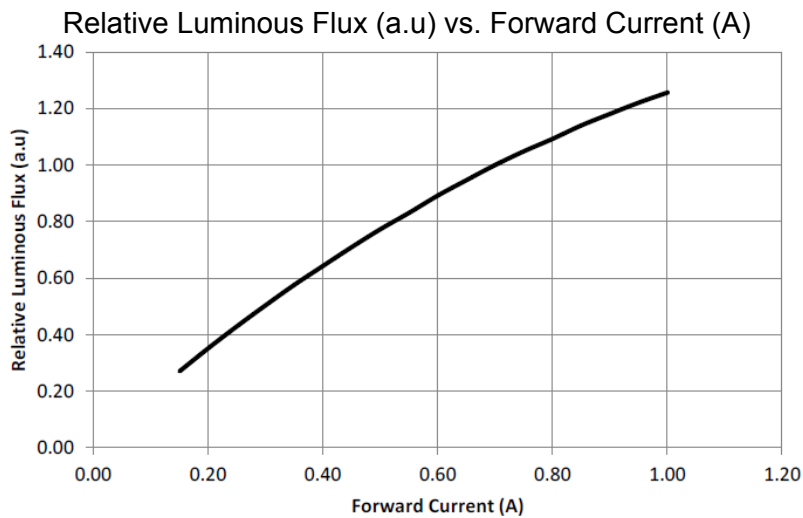
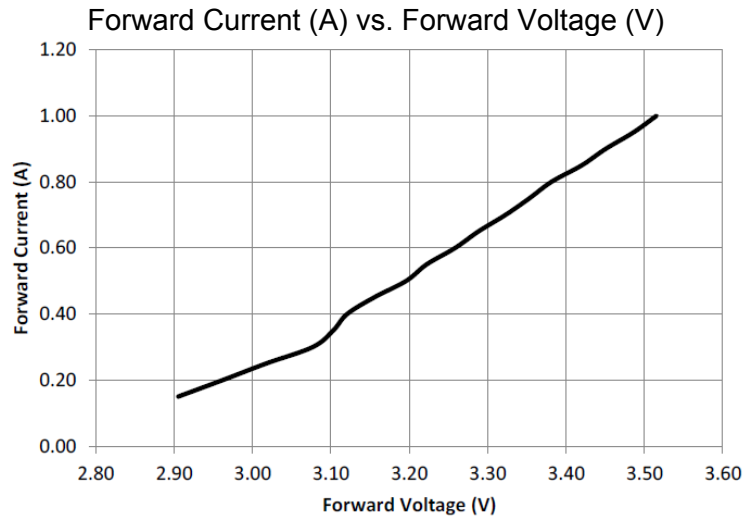




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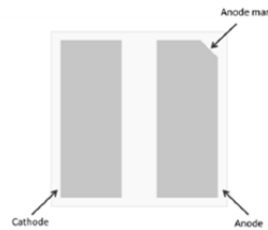
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RECOMMENDED SOLDERING PAD PATTERN

Pad Configurations

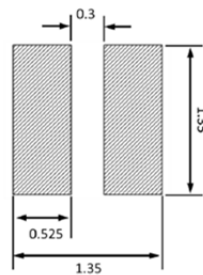


Top View



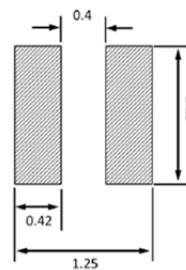
Bottom View

Recommended PCB Solder Pads



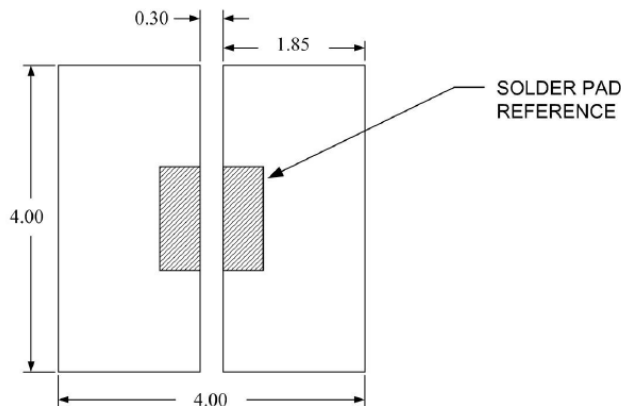
RECOMMENDED PCB SOLDER PAD

Recommended Stencil Pattern



RECOMMENDED STENCIL PATTERN
(HATCHED AREA IS OPENING)

RECOMMENDED TRACE LAYOUT ON MCPCB



Notes:

1. All dimensions are in millimeters
2. Tolerances unless mentioned are ± 0.1 mm

Version 1.0 Date: 11-13-2013

American Opto Plus LED Corp. 1206 E. Lexington Ave., Pomona CA 91766 Tel: 909-465-0080 Fax: 909-465-0130 www.aopled.com

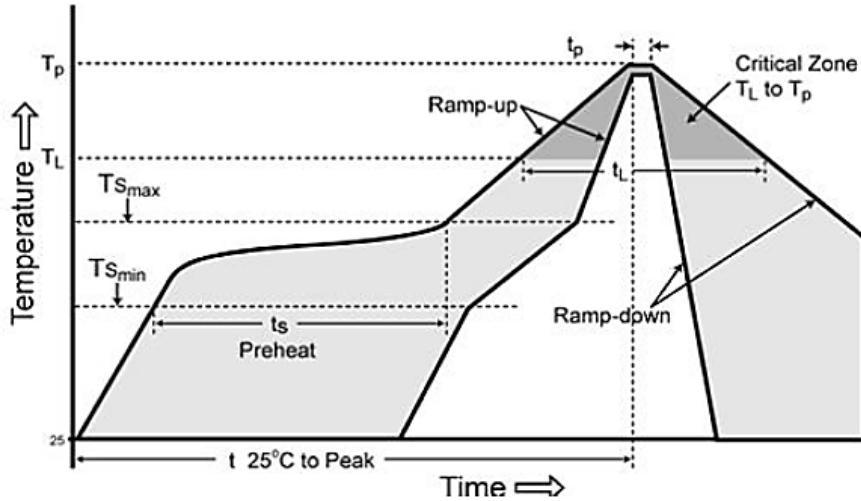


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REFLOW SOLDERING CHARACTERISTICS



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