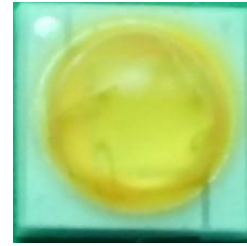
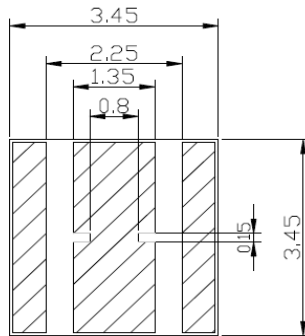
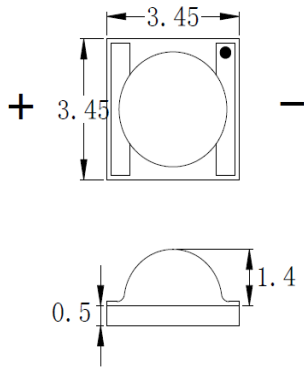


# Datasheet No.107

# High Power Emitter LED KLHP3535W 1W - 3W

## Packaging Dimensions

## SMT pad layout



Related Parts	V <sub>F</sub>	CCT	Lumens(Typ)	I <sub>max</sub>
KLHP3535W 140Lm 1W-3W	2.8-3.6	5700	130-140	800 mA
KLHP3535W 110Lm 1W	3.0-3.6	5700	110-120	400 mA

## Electrical/Optical Characteristics at Ta = 25°C

Parameters	Symbol	Min	TYP	Max.	Units	Test Condition
Forward Voltage	V <sub>F</sub>	2.8/3.0	3.2	3.6	V	I <sub>F</sub> =350mA
Reverse Current	I <sub>R</sub>	--	--	10	μA	V <sub>R</sub> =5V
Luminous Flux	φ <sub>V</sub>	130	--	140	--	I <sub>F</sub> =350mA
Color Coordinated	X	--	0.32	--	--	I <sub>F</sub> =350mA
	Y	--	0.34	--	--	I <sub>F</sub> =350mA
Color Temperature	T <sub>c</sub>	5300	5700	6100	K	I <sub>F</sub> =350mA
Color Rendering Index	CRI	70	--	--	Ra	I <sub>F</sub> =350mA
Viewing Angle			120°			

## Absolute Maximum Rating at Ta = 25°C

Parameter	Symbol	Rating	Units
Input Power	P <sub>i</sub>	140Lm - 2.7	W
	P <sub>i</sub>	110Lm - 1.28	W
DC Forward Current	I <sub>F</sub>	140Lm - 800	mA
	I <sub>F</sub>	110Lm - 400	mA
Junction Temperature	T <sub>j</sub>	150	°C
Reverse Voltage	V <sub>R</sub>	5	V
Electrostatic Discharge (HBM)	ESD	1000	V
Operating Temperature	T <sub>opr</sub>	-20°C to +85°C	°C
Lead soldering Temperature	T <sub>SOL</sub>	Max 350°C for 3sec Max.	



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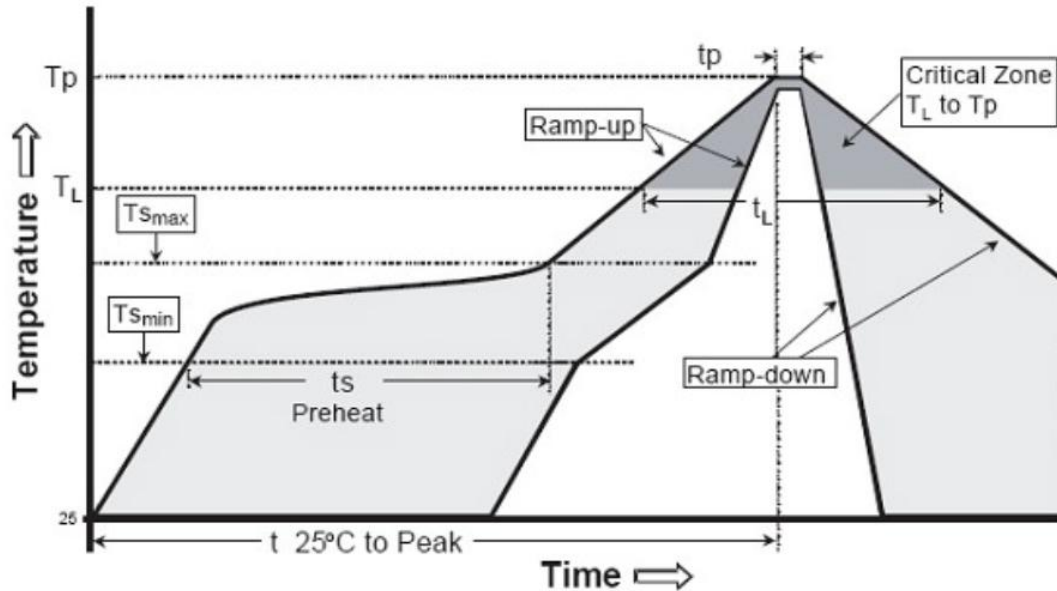
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**Reflow soldering instructions**

1. recommend to use a convection type reflow machine with 8 zones.
2. recommend to use Lead-Free Paste with a melting point between 230°C-240°C.
3. the reflow soldering time should not be more than 400s.



Profile Feature	Lead-Based solder	Lead-Free Solder
Average Ramp-Rate (T <sub>Smax</sub> to T <sub>p</sub> )	3°C/second max	3°C/second max
Preheat: Temperature Min (T <sub>Smin</sub> )	100°C	150°C
Preheat: Temperature Max (T <sub>Smax</sub> )	150°C	200°C
Preheat: Time (t <sub>Smin</sub> to t <sub>Smax</sub> )	60-120 seconds	60-180 seconds
Time Maintained Above: Temperature (T <sub>L</sub> )	183°C	217°C
Time Maintained Above: Time (t <sub>L</sub> )	60-150 seconds	60-150 seconds
Peak/Classification Temperature (T <sub>p</sub> )	215°C	260°C
Time Within 5°C of Actual Peak Temperature (t <sub>p</sub> )	10-15 seconds	20-40 seconds
Ramp-Down Rate	6°C/second max	6°C/second max
Time 25°C to Peak Temperature	6 minutes max	8 minutes max

**Use convection reflow with Sn42Bi58 solder paste melting point <210°C**



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KPDS/KLHP3535W 1W – 3W 130-140Lm 350mA Rev01

KPDS/KLHP3535W 1W 100-120Lm 350mA Rev01

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