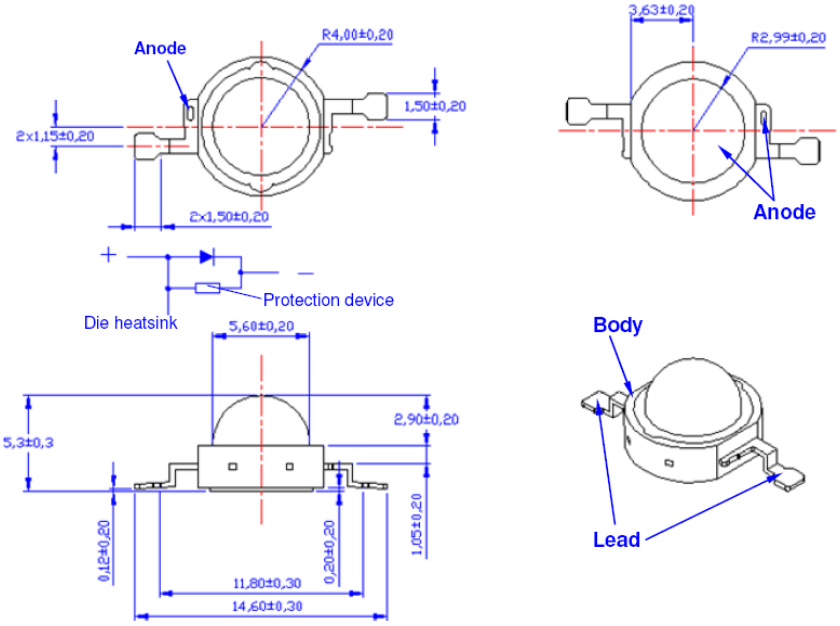
Datasheet no.47 POLYWA POWER LEDs KLHP3433XE

KLHP3433XE POLYWA Power LED EMITTER is an excellent high power LED for **Solid Sate Lighting** applications. This emitter (with Star MPCB option) with **silicone lens** technology provides the good life and can be **reflow soldered** at 260˚C.The ULTRA LOW DECAYin light output is less than 10% at severe stress conditions (700mA, 85˚C ,85%RH) proves high reliability.

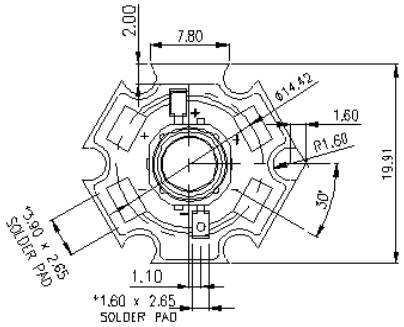
With special **phosphor** technology, warm white KLHP3433WWE has very good color stability in high temperature. The typical CCT change is less than 50K when junction temperature achieves 100˚C.

KLHP3433XE has special design to fit second optics. The user can easily get the uniform light with any secondary optics.

1. MECHANICAL DIMENSIONS



Star with MPCB



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ISO 9001-2000

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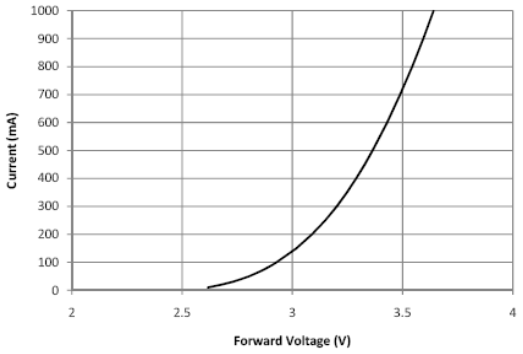
2. Absolute Ratings

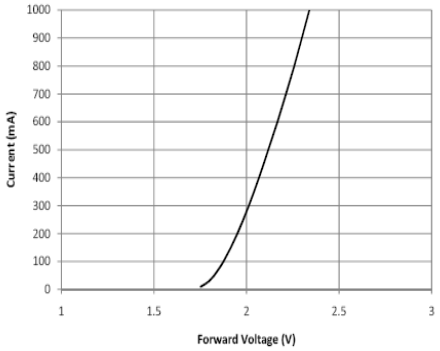
Parameter	Rating
	White Series / Royal Blue / Blue / Green / Amber / Red
Typical DC Forward Current (mA)	350~700 mA
LED Junction Temperature	125℃
LED Operating Temperature	-40℃~110℃
Storage Temperature	-40℃~110℃
Soldering Temperature	Max. 260℃ / Max. 10sec. (JEDEC 020c)
ESD Sensitivity	2,000 V HBM (JESD-22A-114-B)
Reverse Voltage	Not design to be driven in reverse bias (VR≦5V)
Preconditioning	Acc. to JEDEC Level 2

2.Typical Forward I-V Characteristics

2.1 White Series/Green / Blue / Royal Blue



2.2 Amber / Red



3. General Characteristics

3.1 Luminous Flux and Forward Voltage at 350mA and 700mA

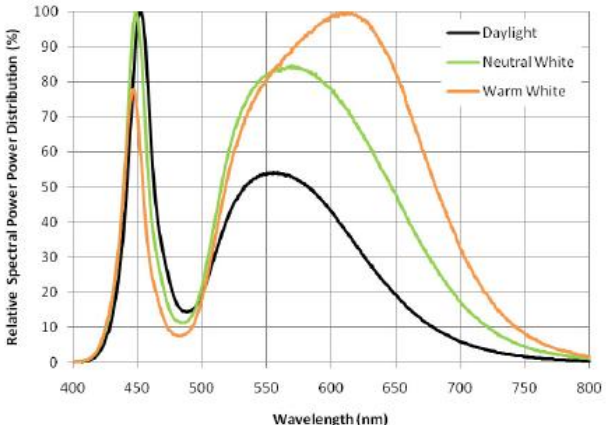
Part Number	colour	Luminous Flux(lm) Or Radiometric power *(mW) @350mA		Luminous Flux(lm) Or Radiometric power *(mW) @700mA		Forward voltage Vf(v) @350mA	Forward voltage Vf(v) @700mA	Typ. CRI	CCT/λp	2θ1/2
		Min lumen	Typ lumen	Min lumen	Typ lumen					
KLHP3433W	W	80	100-130	140	160-210	2.8-3.8	3.0-4.1	70	4750K-7000K	135
KLHP3433NW	NW	70	80	119	136	2.8-3.8	3.0-4.1	75	3700K-4750K	130
KLHP3433WW	WW	50	60	85	120	2.8-3.8	3.0-4.1	80	2600K-2700K	125
KLHP3433R	Red	35	45	65	83	2.0-3.4	2.2-3.7	-	620-635	145
KLHP3433A	Amber	35	45	61	79	2.0-3.4	2.2-3.7	-	580-600	145
KLHP3433G	Green	45	60	74	99	2.8-3.8	3.0-4.1	-	520-535	150
KLHP3433B	Blue	10	18	17	31	2.8-3.8	3.0-4.1	-	460-470	140

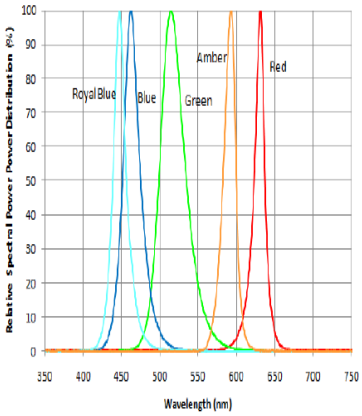
Temperature coefficient of Vf : -3 mV/˚C W,G,B,-2 mV/˚C Thermal Resistance Junction to LED case: 10˚C/W

Note:

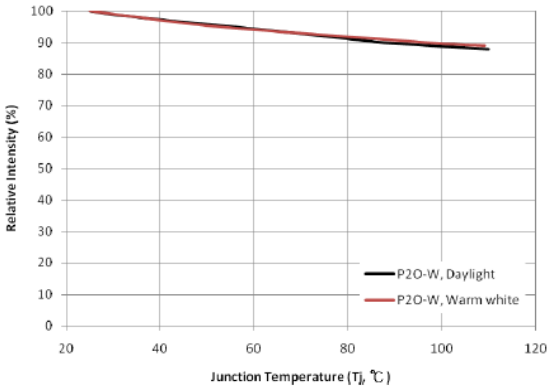
1. Luminous flux is measured with an accuracy of ±10%
2. the CCT colour correlated color temperature is measured with an accuracy of ±200K
3. The peak/dominant wavelength is measured with an accuracy of ±1nm
4. The forward voltage is measured with an accuracy of ±0.1V

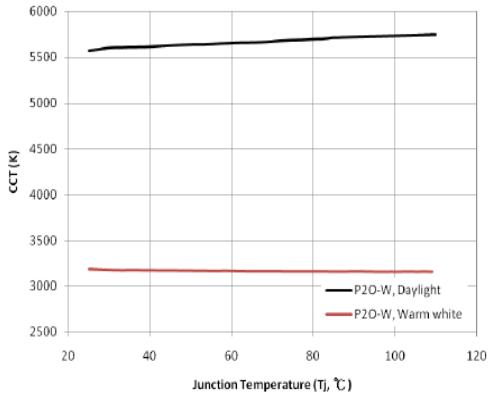
5. Spectral Characteristics of White LEDs & other Colors





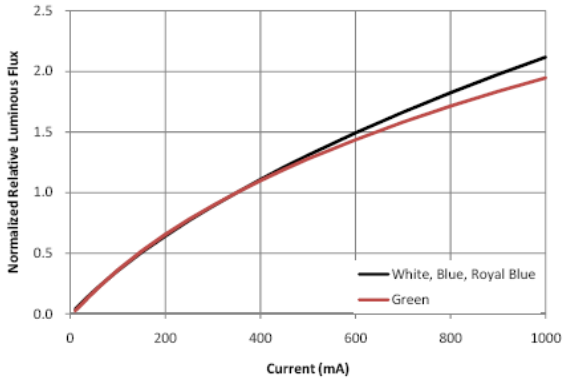
5.Light output Characteristics over Temperature



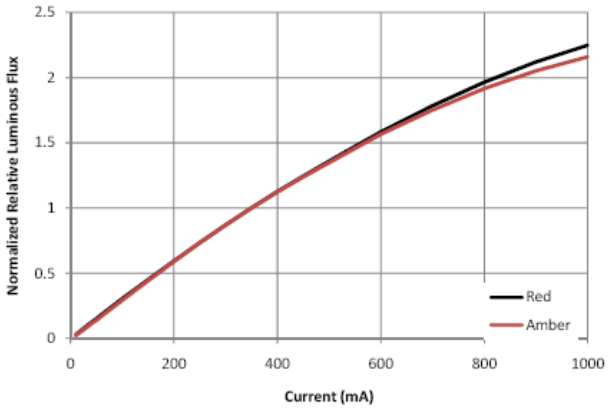


6.Typical Forward I-V Characteristics

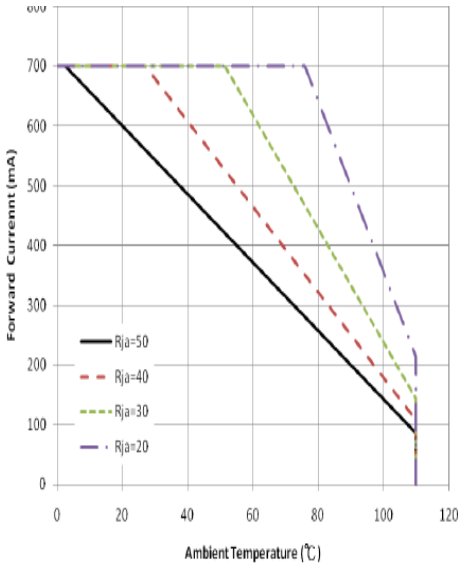
6.1 White Series/Green / Blue / Royal Blue



6.2 Amber / Red

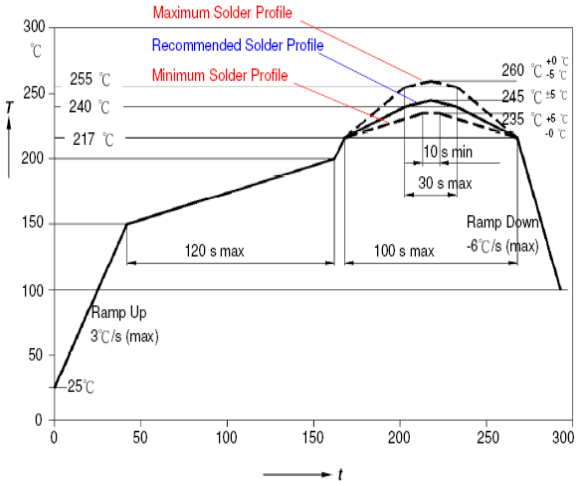


7. Current Derating Curve



Note : R_{ja} is thermal resistance from LED junction to ambient

8. Recommended Soldering Profile

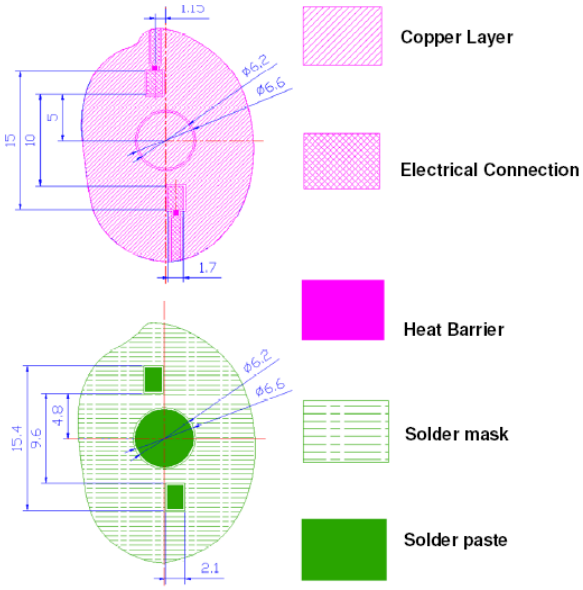


9. Reliability Information

Stress Test	Stress Condition	Stress Duration
High Temperature/High Humidity Operation Life, WHTOL	Ta-85ºC,RH-85% If = 700mA	1000hour
Temperature Cycles	-40ºC/125.15min dwell 5min transfer	200 cycles

Failure Criteria: 1.Brightness attenuate difference <10% 2.Forword voltage difference: ±20%

10. Recommended Solder Pad Design



Notes :
1. Drawing is not to scale
2. All dimensions are in millimeter

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1) Drawing is not to scale
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This Data sheet is available from our website www.kwalityindia.com in the PowerLEDs section

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