# 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.

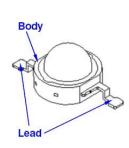
With special **phosphor** technology, warm white KLHP3433WWE has very good color stability in high temperature. The typical CCT change is less than 50K when junction temperature achieves 100°C.



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

#### R4,00±0,20 Anode 2x1. +0.20 2×1,50±0,20 Protection device Die heatsink 5,60±0,20 2,90±0,20 5,3±0,3 02,0120,1 03(0±51,0 11,80±0,30 14,60±0,30

# 1. MECHANICAL DIMENSIONS



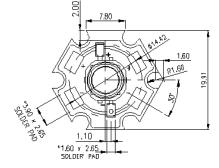
3,63±0,20

R2,99±0,20

Anode

Star with MPCB





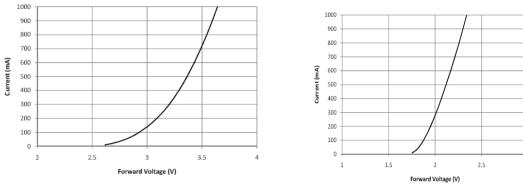
#### 2. Absolute Ratings

Parameter	Rating				
Farameter	White Series / Royal Blue / Blue / Green / Amber / Red				
Typical DC Forward Current (mA)	350~700 mA				
LED Junction Temperature	125°C				
LED Operating Temperature	-40°C∼110°C				
Storage Temperature	-40°C∼110°C				
Soldering Temperature	Max. 260°C / 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





## 3. General Characteristics

#### 3.1 Luminous Flux and Forward Voltage at 350mA and 700mA Forward Forward T D ( I uminous Luminous CCT/-m 00

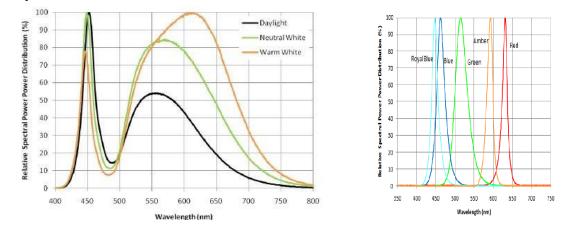
Part Number	colour	Luminou Flux(lm) Or Radic power *( @350m/ Min lumen	ometric (mW)	Luminou Flux(lm) Or Radio power *( @700m/ Min lumen	) ometric (mW)	Forward voltage Vf(v) @350mA	Forward voltage Vf(v) @700mA	Typ. CRI	CC17 <sub>3</sub> p	201/2
KLHP3433W	W	110-120	130-140	240	260-280	2.8-3.8	3.0-4.1	70	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

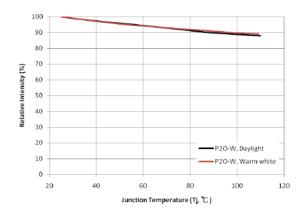
Note:

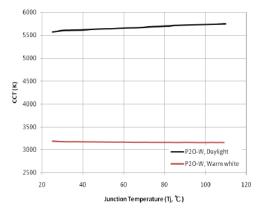
- 1. Luminous flux is measured with an accuracy of ±10%
- 2. the CCT colour correlated color temperature is measured with an accuracy of ±200K
- 3. The peak/dominant wavelength is measured with an accuracy of ±1nm
- 4. The forward voltage is measured with an accuracy of ±0.1V



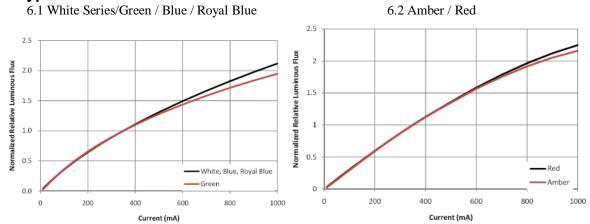
#### 5. Spectral Characteristics of White LEDs & other Colors

#### 5. Light output Characteristics over Temperature



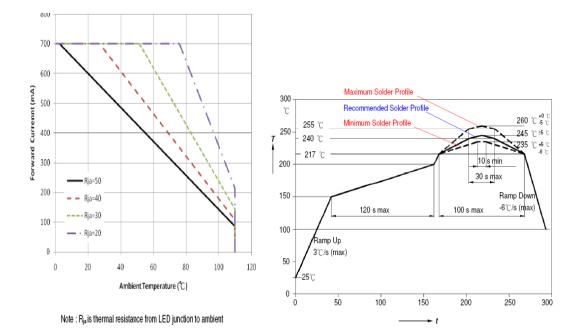


#### 6. Typical Forward I-V Characteristics



#### 7. Current De-rating Curve

#### 8. Recommended Soldering Profile



### 9. Reliability Information

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

Failure Criteria:1.Brightness attenuate difference <10%</th>

2.Forword voltage difference:  $\pm 20\%$ 

# Copper Layer Note: 1) Drawing is not to scale All dimensions are in millimeter 2) 10 **Electrical Connection** Heat Barrier Solder mask This Data sheet is available from our website www.kwalityindia.com in the PowerLEDs section Solder paste Notes : 1. Drawing is not to scale 2. All dimensions are in millimeter LEDCHIP INDUS PRIVATE LIMITED 29A&B Electronics Complex, Kushaiguda Hydarabad 500 062 Ph 91-40-27123555 kwalitypolywa@gmail.com, sales@kwalityindia.com www.kwalityphotonics.com

### 10. Recommended Solder Pad Design