



RoHS PARTS

# 请 承 认 书

SPECIFICATION FOR APPROVAL

CUSTOMER:

PROGRAM NO. : LED-00-72V-0.110A-001-R1-V6

ISSUE DATE: 2020-09-03

VERSION	Details		
V1	NEW		
V2	Improve overvoltage protection		
V4	Improve Surge		
V6	PCB changed		
<b>DESIGNED BY</b>		<b>CHECKED BY</b>	
GMJ			
<b>CUSTOMER APPROVED SIGNATURE:</b>			
<b>APPROVED DATE:</b>			

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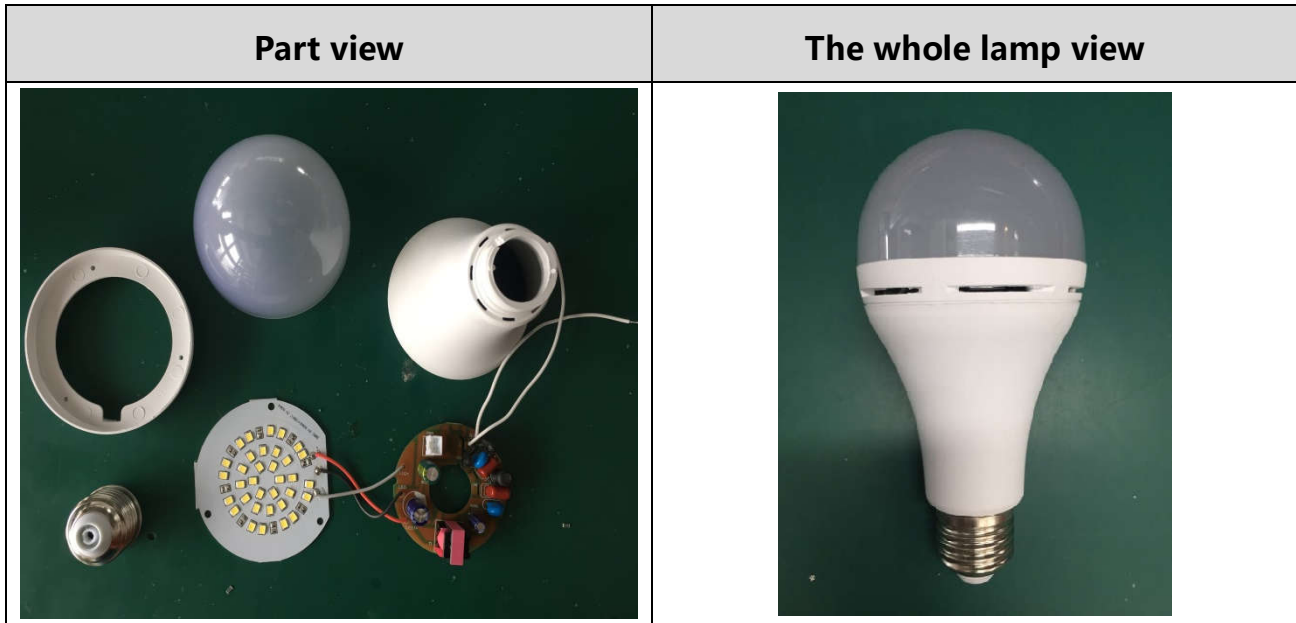
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# LED-00-72V-0.110A-001-R1-V6

## 1. Photograph

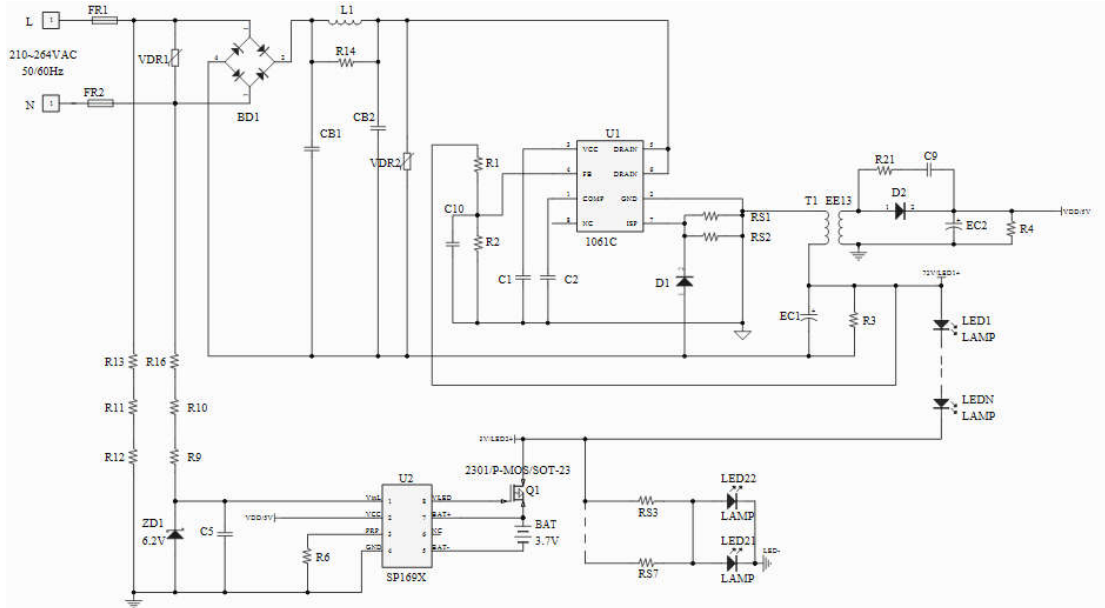


## 2. Input & Output Parameters

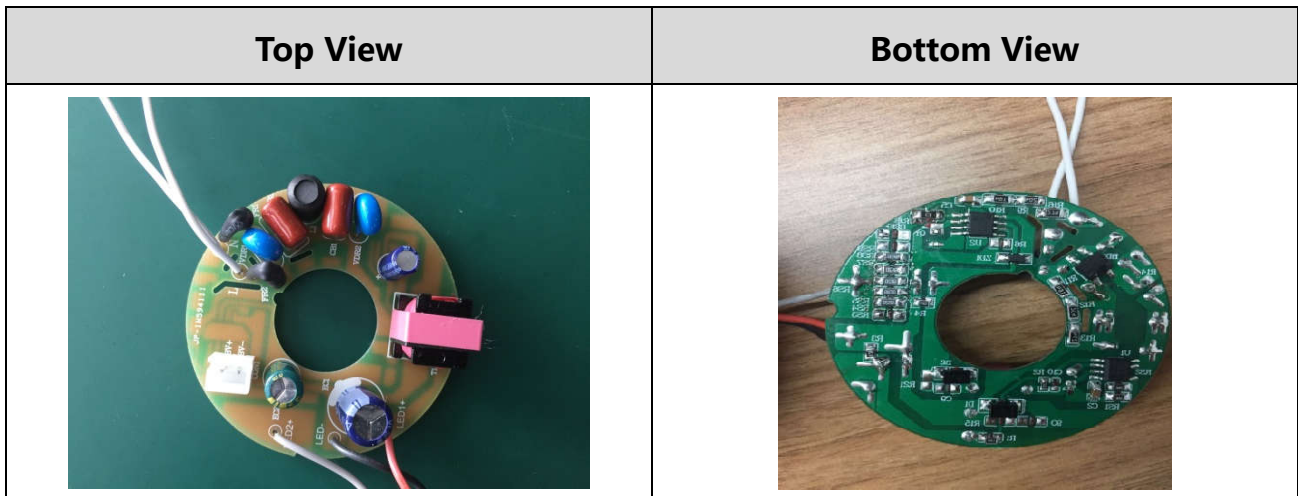
### Disconnet BAT

	Min	Normal	Max
Input Voltage(Vac)	210	230	400
Input Power(W)		9	
Output Voltage(Vdc)		72	
Output Current(mA)		110	
Efficiency		0.88	
Surge		3KV	

### 3. Schematic diagram



### 4. PCB layout



## 5. Test Reports

### 1) No load Output Voltage

AC input Voltage(Vac)	210Vac	230Vac	264Vac	300Vac
Output voltage(Vdc)	87	88	84	84

### 2) General Test

Input : AC input voltage is 210Vac,230Vac,264Vac,300Vac.

Load condition: 2P8S 9V 100mA 18P1S 3V 60Ma Vbat=4V

Input Voltage	condition	Input Power (W)	PF	Output Voltage (V)	Output Current (mA)	Eff (%)
210Vac	NO BAT	9.02	0.964	72.4	111.6	89.58
230Vac		9.02	0.954	72.3	111.7	89.53
264Vac		9.08	0.93	72.2	111.8	88.90
300Vac		9.17	0.9	72.2	111.2	87.55
210Vac	BAT	9.2	0.965	72	111.4	87.18
230Vac		9.25	0.955	72	111.5	86.79
264Vac		9.34	0.933	72.1	111.8	86.30
300Vac		9.45	0.904	72.2	111.9	85.49

### 3) Short-Circuit Test

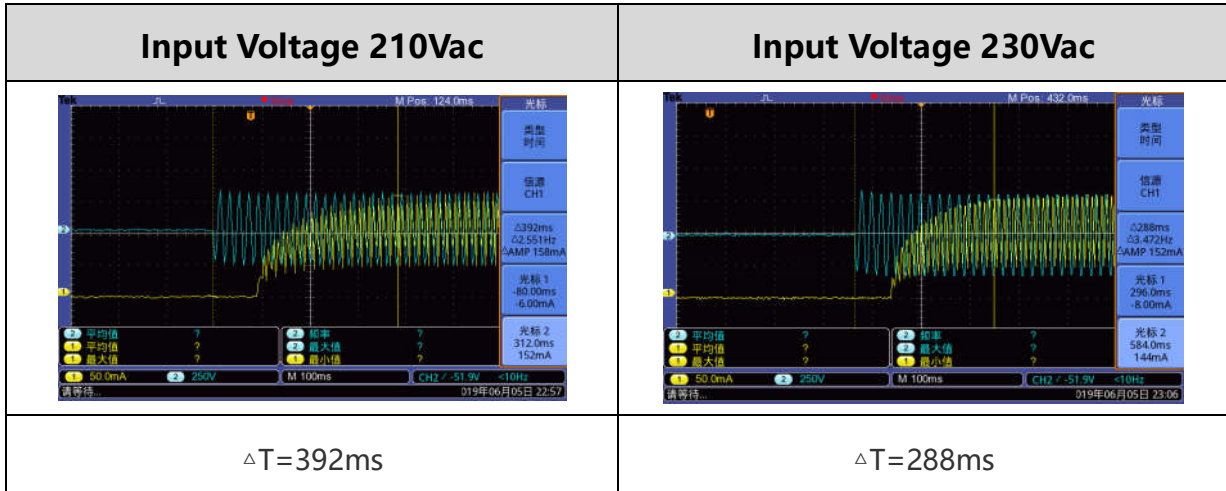
Input: AC210~300V; Output: short.

Test result: No components damaged, the demo board should be working when the short-circuit is removed.

AC input Voltage(Vac)	210Vac	230Vac	264Vac	300Vac
Input Power (W)	0.32	0.35	0.39	0.44

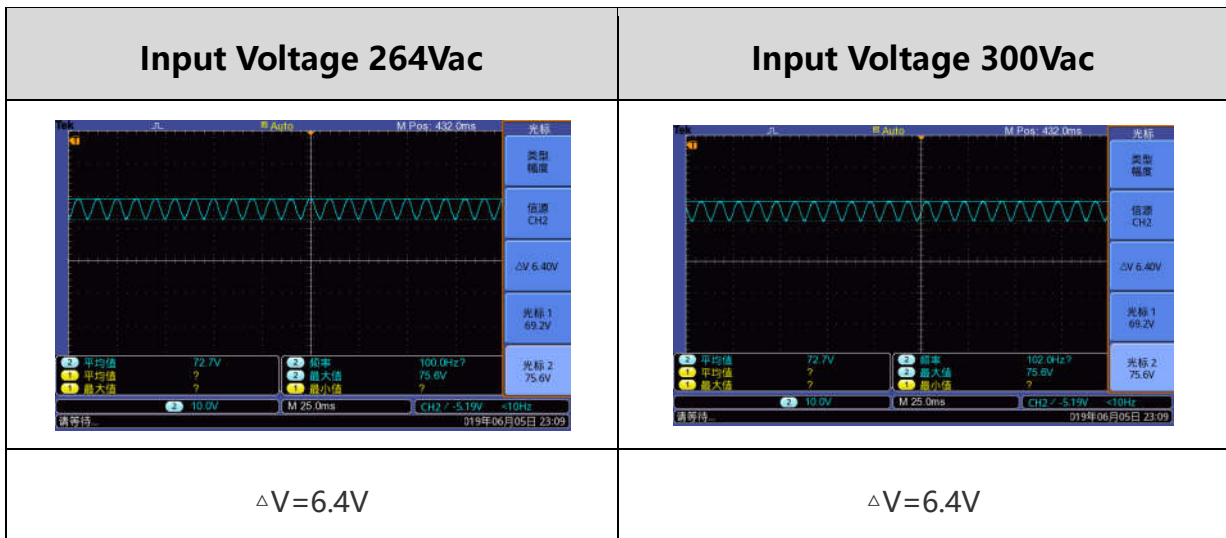
### 4) Start-up Time

Load condition: 2P8S 9V 100mA 18P1S 3V 60mA



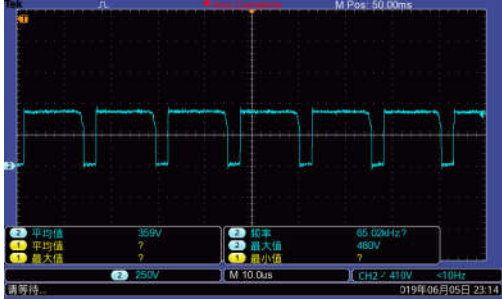
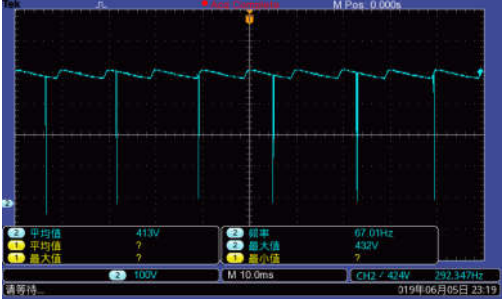

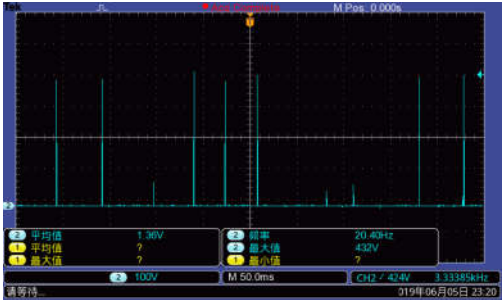
### 5) Ripple Voltage Test

Load condition: 2P8S 9V 100mA 18P1S 3V 60mA



## 6) Mosfet and DIODE Voltage Stress Test

Input voltage: 300Vac, Load condition: full load/short

<b>MOSFET Voltage</b> <b>300Vac,full load</b>	<b>MOSFET Voltage</b> <b>300Vac,short</b>
	
<p style="text-align: center;"><math>\Delta V=480V</math></p>	<p style="text-align: center;"><math>\Delta V=432V</math></p>
<b>Diode Voltage</b> <b>300Vac,full load</b>	<b>Diode Voltage</b> <b>300Vac,short</b>
	
<p style="text-align: center;"><math>\Delta V=470V</math></p>	<p style="text-align: center;"><math>\Delta V=432V</math></p>

## 7) Temperature Test

Case Closed, No wind environmental tests. Vin:230Vac

Condition: Connect Battery

<b>Position</b>	<b>230Vac</b>
T1-COIL	84.59
T1-CORE	90
EC1	80.59
EC2	80.3
FR1	76.3
FR2	80.8
VD1	76.59
VD2	78.69
CB1	75.9
CB2	75.19
L1	75.3
U1	85.4
U2	91.59
D1	83.19
D2	79.19
BAT	53.9
Ambient temperature	25
LED1-	101.69

## 8) Surge Testing

Test Voltage:230VAC

Surge Voltage:3KV

Connect BATTERY

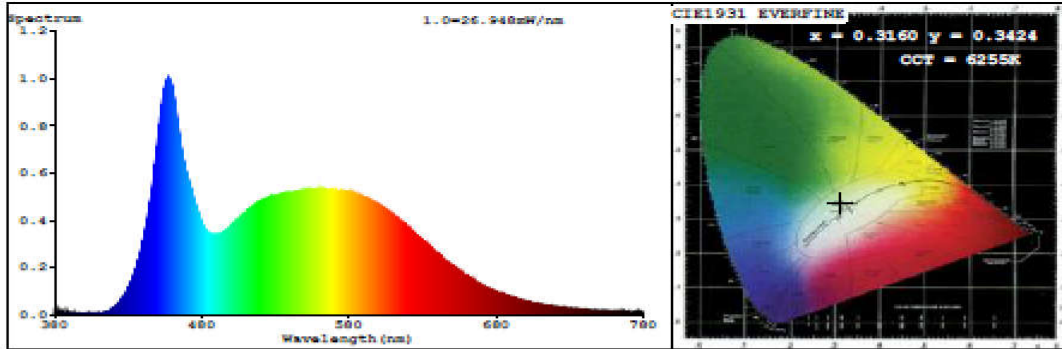
Angel	Positive or Negative	times	Pass/Fail
0	+	5	P
0	-	5	P
90	+	5	P
90	-	5	P
180	+	5	P
180	-	5	P
270	+	5	P
270	-	5	P



## 9) Lumen Testing

Condition: 230VAC Full Loading

### AC Source test



#### Color Parameters:

Chromaticity Coordinate:  $x=0.3160$   $y=0.3424$   $u'=0.1951$   $v'=0.4758$   
 CCT=6255K (Duv=0.0083) Dominant WL:  $\lambda_d = 498.5nm$  Purity=5.4%  
 Ratio: R=13.3% G=80.4% B=6.3% Peak WL:  $\lambda_p = 457.1nm$  FWHM=28.4nm  
 Render Index: Ra=82.9  
 R1 =81 R2 =91 R3 =94 R4 =77 R5 =80 R6 =87 R7 =86  
 R8 =66 R9 =3 R10=79 R11=76 R12=59 R13=84 R14=97 R15=75

#### Photo Parameters:

Flux = 926.9 lm Eff. : 104.42 lm/W  $P_e = 2.957 W$

#### Electrical parameters:

V = 230.14 V I = 0.04069 A P = 8.877 W PF = 0.9480  
 LEVEL:OUT WHITE:ANSI\_6500K

Status: Integral F = 144 ms  $I_p = 45099 (69\%)$

Battery model	2000mAh				
Environmental	25°C				
Comment	Battery full state Vbat=4.2V				
project number	Luminous flux (lm)	Light efficiency (lm/W)	CCT	R9	Explicit index
#1Initial state 0min	1079	117.68	5813	-6	81.3
#2Steady-state 30min	926.9	104.42	6255	3	82.9

#### Requirements:

1. Battery voltage control before testing
2. Environmental temperature record
3. Test record initial state and aging 30 minutes data

### Emergency test

Emergency Test						
Battery model	2000mAh					
Environmental	25°C					
Comment	Battery full state Vbat=4.2V					
project number	Emergency time	Luminous flux (lm)	Explicit index	output current (mA)	CCT	R9
#2	0h	280.9	81.4		5913	4
	1h	239	82		5968	6
	2h	218.6	81.9		5944	5
	3h	198	82		5940	5
	4h	35.37	83.4		6013	11
Requirements:						
1. Battery voltage control before testing						
2. Environmental temperature record						

## 10) EMI Testing

