



PLT-13232

### SPECIFICATION FOR APPROVAL

Customer Name:	
Customer Code:	B347
Customer Model:	BW23-01-326-00
Products Name:	Constant Current LED Driver
Product Characteristics:	<input type="checkbox"/> Non-Dimming <input type="checkbox"/> Traic Dimming <input checked="" type="checkbox"/> 0-10V Dimming <input checked="" type="checkbox"/> Title 24 <input type="checkbox"/> No Stroboscopic <input type="checkbox"/> Bipolar No Strobe
Products Color:	Iron shell white
Product Specification:	Input: 120~277 VAC 50/60 Hz    Output: 93 ~ 115 V 460 mA
Finished Product No. :	S55NA15046DACVB-FG
Model NO. :	BQE55-0460-115-PVF-PSA
Samples No. :	B2012003R2
Recognized Standards:	UL8750

### CUSTOMER APPROVE

PURCHING	R/D	QUALITY

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## 四. Product standard

### 4.1 Overview

This document describes in detail the electronic, mechanical and environmental specifications for the LED drive power product;The product USES high PF technology, which has the characteristics of low noise, energy saving and environmental protection, long life and so on.Suitable for indoor and semi-outdoor environment, it is a small electrical product box for easy installation and use.

### 4.2 Electrical parameters

Light control head with sample number B2103037/B2103038-S1S2 to test the power adjustment and color adjustment temperature

#### 4.2.1 Input characteristics

Testing project	standard	unit	Testing Conditions		Remark
1. Input voltage range	108-305	VAC			
2. Rated input voltage	120~277	VAC			
3. Input frequency	50/60	Hz	60Hz Test		
4. Input current	≤550	mA	120-277VAC		
5. Start time	≤750	mS	120-277VAC		
6. Power factor	≥0.9	/	120-277VAC		
7. No-load power	≤1.5	W	120VAC		
8. Short circuit power	≤5	W	120-277VAC		
9. THD	≤20	%	120-277VAC		
10. Flicker percentage	≤30	%	120-277VAC		
11. Ringing wave	2.5	KV	L-N L-PE N-PE		
12. Surge test	4	KV	L-N		only for LED driver. The withstand volatege of aluminum PCB must be enough
	6	KV	L-PE N-PE PE: During the test, two ground wires short-circuited		
13. Dielectric Strength	10mA/60s (UL 8750-8.6 CSA 250.13-9.4 2U+1000V)	VAC	NA	NA	
		VAC	AC-PE	1600VAC	PE: Green line, no heat shrinkable sleeve at the end
		VAC	DC-DIM	500VAC	

#### 4.2.2 Output characteristics (Constant Current Mode:CC Mode)

(Rated input condition 120-277VAC) ( With customer lamp board test)

Testing project	standard	unit	Testing Conditions		Remark
1. Output voltage range	93 ~ 115	VDC			
2. Output current ( I )	460	mA			±5%
3. Output current range	437 ~ 483	mA			
4. Output power	52.9	W			
5. No-load voltage	≤ 160	VDC			
6. Output Ripple	≤ 8000	mV.			
7. Efficiency (%)	≥ 90	%			
8. 12V Output voltage range	10-14	VDC			The 12V auxiliary
9. 12V Output current	50	mA			White+ Pink

Remark:

\* Ripple test matters needing attention:

1) Measurements shall be made with an oscilloscope with 20MHz bandwidth.

2) Outputs shall be bypassed at the connector with a 0.1uF ceramic capacitor and a 10uF electrolytic capacitor to simulate system loading.



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## 4.2.3 Test instrument

Name	Model	Name	Model
Led Integrated Tester	LED Power Driver Tester (WT2080)	Lightning surge generator	Ringing wave Meter (LSG-6K10D-J)
Oscilloscope	GDS-2204A	Electronic load	M9711
Dynamometer	GPM-8213\IV-1001B	Withstand Voltage Tester	Hipot tester 19073
Flicker photometer	Flicker Puotometer (FP2000)		

## 4.3 Protective value

4.3.1、Open protection: when the output when open, input normal input, the product will not damage, and open voltage can't more than ratings.

4.3.2、Short circuit protection: if the output appears unusual, causes the product of anode and short sub, this product will start short circuit protection function, and not because this abnormality in product permanent damage.

4.3.3、Overload protection: this product is the constant flow design, the LED lights in the design of the product value VF voltage range, the product output current will be constant; When LED lamp of the design of value over VF voltage range, the product will enter overload protection status.

4.3.3.1、Output voltage is too low, the power supply will enter frequent start and shut off, at this time will frequently LED twinkle.

4.3.3.2、The output terminal voltage is too high, the product enters the over-voltage protection state, at this time the LED lamp's luminous intensity is obviously weaker, the current cannot reach the rated value.

### 4.3.3.3 Light Control Protection: Lux Parameter

light leve to turn ON (CDS 90°C)	MAX:30 LUX
light leve to turn OFF (CDS 90°C)	Min:60 LUX



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## 4.4. Dimming Control

Dimming Control: the current will adjust from 10% Load~100% Load by 0-10V dimmer

Brand	Model	Applicable voltage	Rating power	Brand	Model	Applicable voltage	Rating power
Leviton	IP710-LFZ	120--277VAC 60HZ	1200VA/1500VA	Lutron	DVSTV	120-277VAC 50/60HZ	8A
Lutron	NTSTV	120-277VAC 50/60HZ	8A				

Remark:

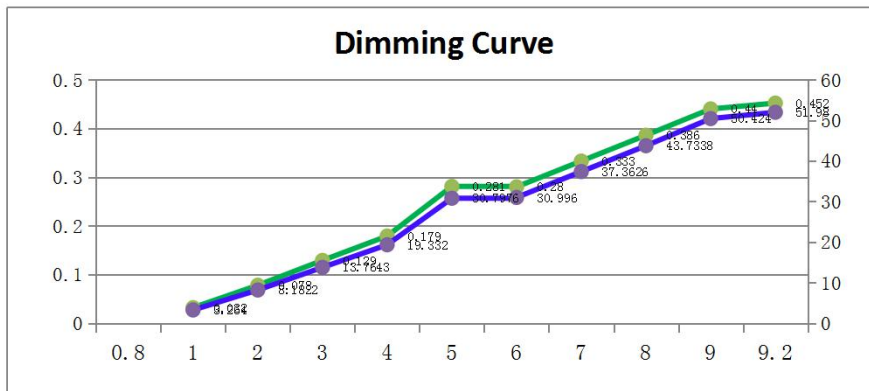
When the dimmer is 0-10V, the lamp is off when the dimmer is 0.6-0.8 V

### 4.4.2. Inductor Blocks

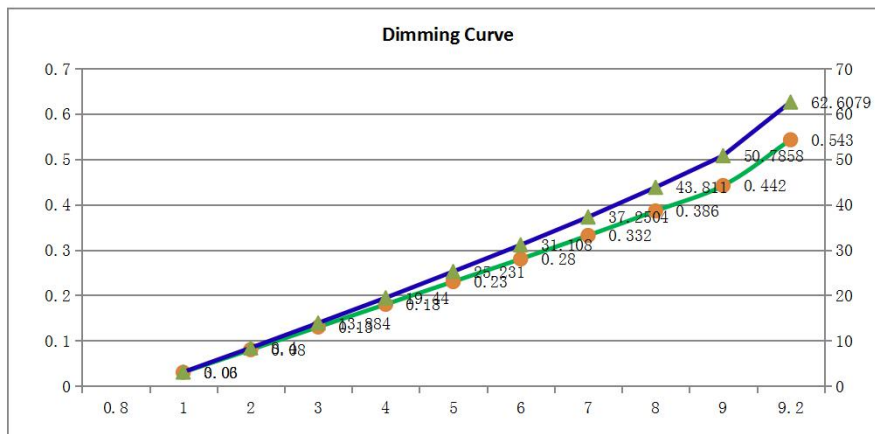
Inductor Blocks	Model	MC090D

Remark: The sensor needs to be turned off

#### 4.4.1. Dimming curve (120VAC)



#### 4.4.2. Dimming curve (277VAC)





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## 五、 Certification standard

### 5.1、 Safety

The power supply shall compliance with the following Criterion:

- 1) \* UL8750

### 5.2、 EMC

#### 5.2.1 EMI

The power supply shall compliance with the following Criterion:

#### 5.2.1.1 Conduction Emission :

- 1) \* FCC PART15 , CLASS B

#### 5.2.1.2 Radiated Emission :

- 2) \* FCC PART15 , CLASS B

## 六、 Environmental Requirement

This part describes the constant current drive power LED to use and storage environment.

### 6.1、 Storage temperature and humidity

6.1.1、 Storage temperature range: from  $-40^{\circ}\text{C}$  to  $+85^{\circ}\text{C}$

6.1.2、 Storage humidity range: from 5 %RH to 95 %RH

### 6.2、 Using temperature and humidity

6.2.1、 Using temperature range: from  $-40^{\circ}\text{C}$  to  $+50^{\circ}\text{C}$  (Max),  $T_c=90^{\circ}\text{C}$  (Max)

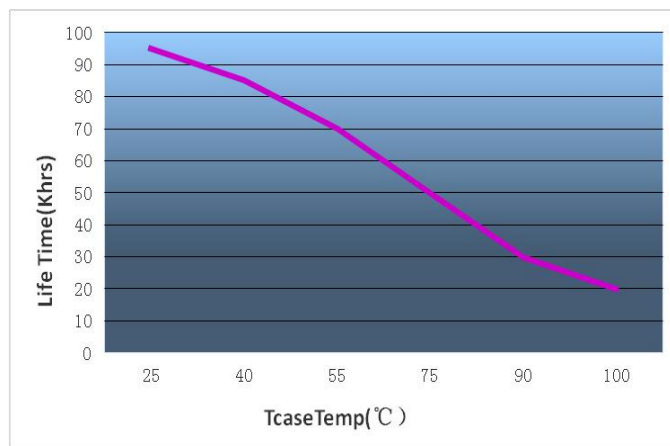
6.2.2、 Case  $T_c$  Temperature:  $T_c$  :  $90^{\circ}\text{C}$  @ $T_a$  :  $50^{\circ}\text{C}$

6.2.3、 Use humidity range: from 5 %RH to 95 %RH ,

6.2.4、 MTBF @  $25^{\circ}\text{C}$  ( $t_a$ ): 500000 hours

6.2.5、 LIFE @  $75^{\circ}\text{C}$  ( $t_c$ ): 50000 hours @ full load

6.2.6、 Warranty:5 years





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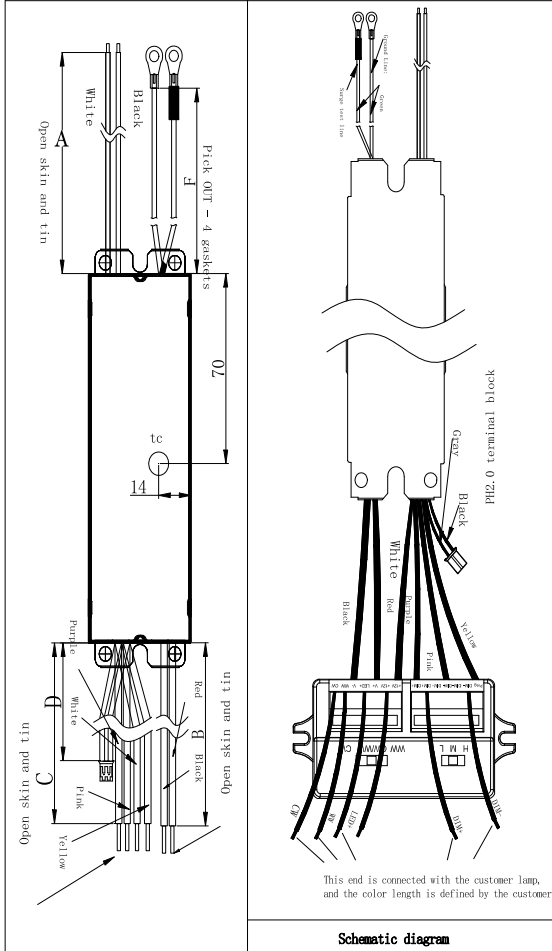
## 七、Product Mix

### 7.1 Product Appearance Figure :

#### 7.1.1 Dimensions of the outline

Remark:

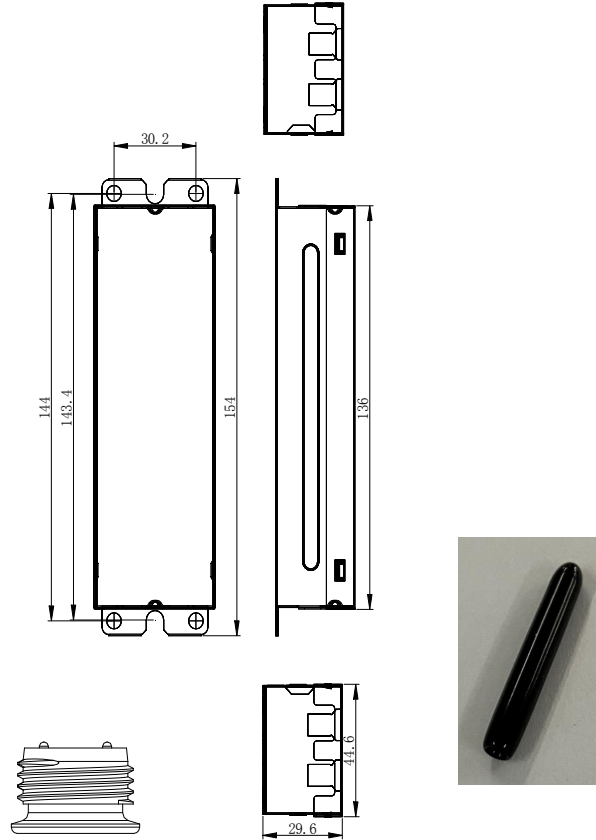
Unit:mm, Tolerance:  $\pm 1.5\text{mm}$



#### 7.1.2 Shell dimension positioning drawing:

Remark:

Unit:mm, Dimensional tolerances are shown in the table below



Optical head

12V cable. Black protective casing for Preg cable and light adjusting sleeve as shown

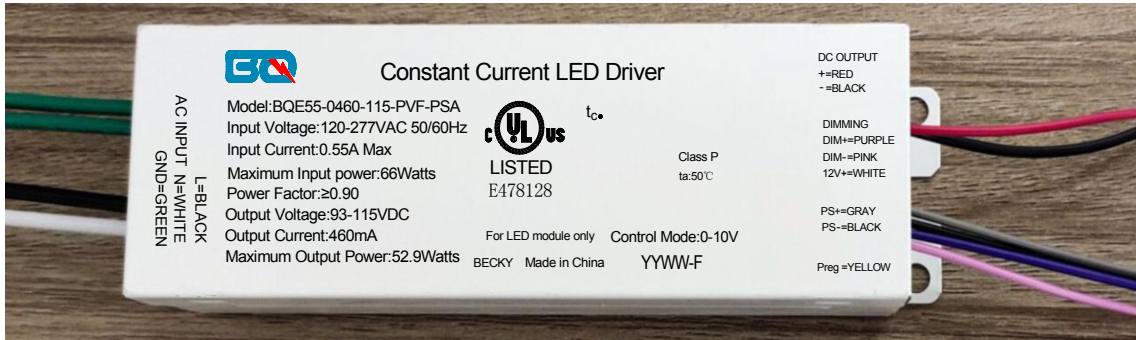
With light control box BQE-PS2+ light control head (light sensing)BQE-PS1 test

<b>7.2 Shell Color:</b>		Iron shell white
<b>7.3 Input output specification:</b>		
Input:	UL1015 AWG18 A=400 $\pm$ 10mm White color Pick up N Black color Pick up L, Open skin and tin 10 $\pm$ 1mm	
Output:	UL1569 AWG22 B=200 $\pm$ 10mm Red color Pick up +, Black color Pick up -, Open skin and tin 10 $\pm$ 1mm	
Dimming:	UL1569 AWG22 C=200 $\pm$ 10mm Purple color Pick up DIM+, Pink color Pick up DIM-, Open skin and tin 10 $\pm$ 1mm (Tail sleeve black sleeve)	
Optical control:	UL1569 AWG22 D=200 $\pm$ 10mm Gray color Pick up PS+, Black color Pick up PS-, PH2.0 terminal block	
12V+:	UL1569 AWG22 C=200 $\pm$ 10mm White color Pick up 12V+, Open skin and tin 10 $\pm$ 1mm (Very common Pink) (Tail sleeve black sleeve)	
Surge test line	UL1569 AWG18 F=200 $\pm$ 10mm Green color Pick up GND Pick OUT - 4 gaskets (Heat shrinkable sleeve)	
Ground Line: Pressure line	UL1569 AWG18 F=200 $\pm$ 10mm Green color Pick up GND Pick OUT - 4 gaskets	
Preg	UL1569 AWG22 C=200 $\pm$ 10mm Yellow color Pick up Preg Open skin and tin 10 $\pm$ 1mm (Tail sleeve black sleeve)	



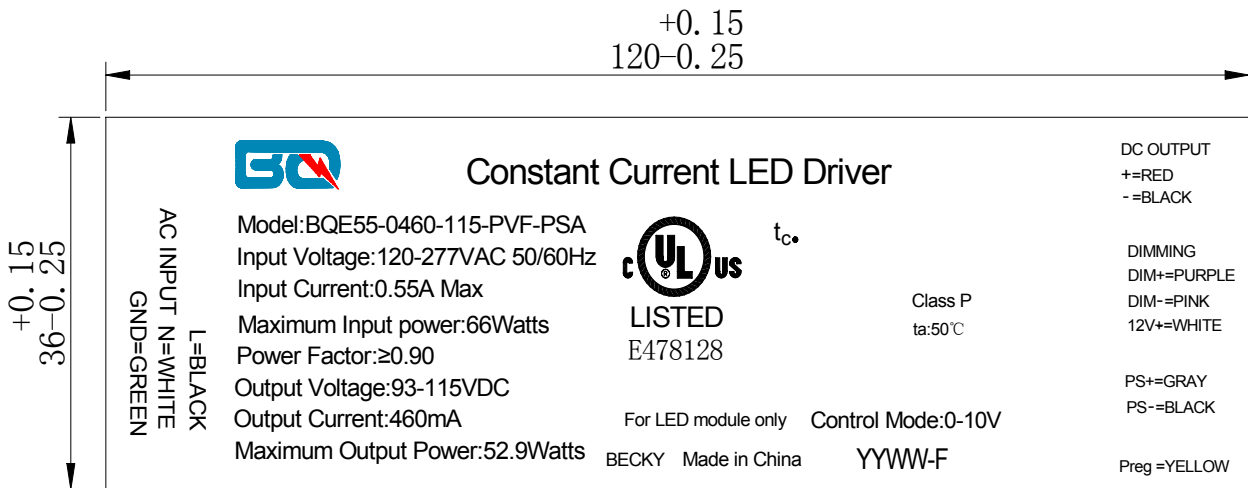
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7.4 Picture of real products:



The pictures are for reference only

7.5 Nameplate figure:



Remarks:	YYWW means:	year week;				
	H means:	NA				
	F means:	When the dimmer is 0-10V, the lamp is off when the dimmer is 0.6-0.8V				
Material:	Colour :	Surface treatment:	Thickness:	Unit:	else:	Customer confirmation signature:
coated paper	black character on a white background	Polishing	0.12±0.03	mm		

八、Packaging Technology

Glue process



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## 九、Related test data

### 9.1 LED electrical performance test report

Model NO. :		BQE55-0460-115-PVF-PSA										Output voltage:		93 ~ 115 VDC			
Input voltage:		120~277 VAC										Output current:		460 mA			
test item	Serial	1				2				3				Decide			
	Voltage	108 VAC	120 VAC	277 VAC	305 VAC	108 VAC	120 VAC	277 VAC	305 VAC	108 VAC	120 VAC	277 VAC	305 VAC	Condition	Standard	Pass Fail	
Vout	NO Load	148	148	150	151	147	148	150	151	146	146	151	151	120-277Vac	≤ 160 V	Pass	
Input Power	NO Load	0.18	0.2	1.11	1.21	0.15	0.19	1.12	1.22	0.15	0.18	0.97	1.13	120Vac	≤ 1.5 W	Pass	
	115 V	57.1	56.5	56.4	56.6	57	57	57.1	57.3	57	56.8	56.6	56.8	120-277Vac	≤ 66 W	Pass	
Input current	115 V	530	477	208	193	533	477	209	193	535	479	210	194	120-277Vac	≤ 550 mA	Pass	
THD	93 V	10.7	9.8	11.3	14.1	10.9	10.4	10.9	13.1	10.4	9.3	11.3	13.1	120-277Vac	≤ 20%	Pass	
	115 V	9.4	8.8	10.1	12.8	9.4	9.2	10.2	12.1	9.3	8.7	10.2	13.1			Pass	
Power factor	93 V	0.99	0.99	0.96	0.95	0.99	0.99	0.96	0.95	0.99	0.99	0.96	0.95	120-277Vac	> 0.9	Pass	
	115 V	0.99	0.99	0.97	0.97	0.99	0.99	0.97	0.97	0.99	0.99	0.97	0.97			Pass	
Outputcurrent (I)	93 V	457	458	460	461	460	460	464	465	458	459	462	462	120-277Vac	437 ~ 483 mA	Pass	
	115 V	456	456	457	457	454	457	461	460	457	458	459	459			Pass	
12V+TEST	50 mA	12.6	12.6	12.6	12.6	12.6	12.6	12.6	12.6	12.6	12.6	12.6	12.6	120-277Vac	10 ~ 14 V	Pass	
Shut off the voltage	115 V	0.8	0.8	0.8	0.8	0.79	0.79	0.79	0.79	0.78	0.78	0.78	0.78	120-277Vac	0.6 ~ 0.8 V	Pass	
Start time	115 V	372	330	192	162	384	308	166	172	372	330	172	160		≤ 750 ms	Pass	
Flicker percentage	93 V	16.7				18				17.5				120-277Vac	≤ 30%	Pass	
	115 V	14.9				15.5				15						Pass	
Ripple	115 V	3520	3520	3920	4080	3520	3520	4000	4080	3520	3520	4000	4080	120-277Vac	≤ 8000 mV.	Pass	
Efficiency	93 V	92.5	93	92.8	92.2	92.2	92.4	92.8	92.4	92.4	92.9	92.8	92.4	120-277Vac	≥ 90%	Pass	
	115 V	92	92.8	93.1	92.8	92.1	92.6	93.1	92.8	92.1	92.7	93.2	92.8			Pass	
High-voltage insulation test		NA				NA				NA				NA			Pass
Test engineer:	MeiJiang Huang				Inputter:				Yue Li				Auditor:		YuTing Shu		
Date:	2021/8/7				Date:				2021/8/7				Date:		2021/8/7		

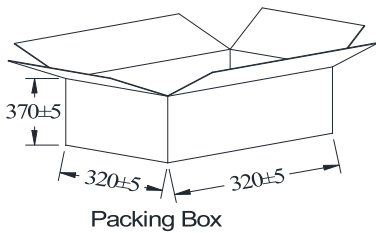
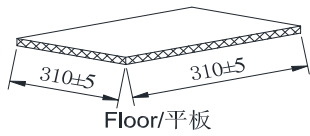
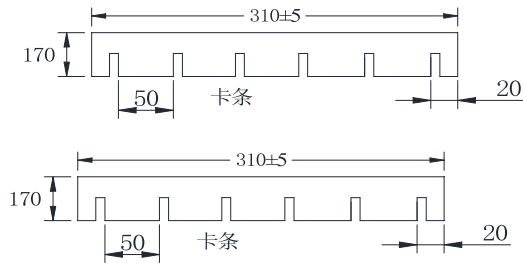
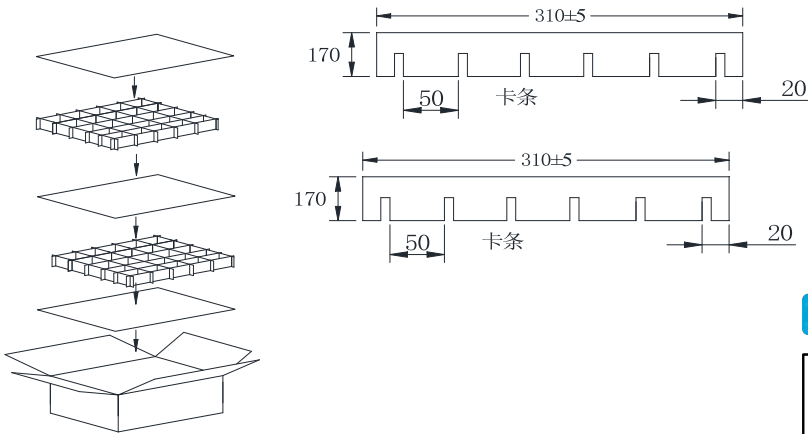




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十、Packaging figure

PACKING DRAWING



Qty :	_____	PCS
G.W :	_____	Kgs
N.W :	_____	Kgs
SIZE :	X X	cm
<b>Made in china</b>		



Side marking

The Leader of Non-Isolated LED Driver

Professional Manufacturer of Outdoor LED Driver

Web: <http://www.becky-dg.com> <http://www.becky-usa.com>

Address: Yinyong Industrial zone Jinma Road  
Hengli Town Dongguan City



Not in Scale  
For reference only  
Unit: mm  
±2mm

Material	Material part list	Size	(PCS)	By	CHECKED BY	APPROVED BY
Floor	JD313100A3310000	310 x 310mm(A33)	3/Box			
Card Board	JD311700A2A10000	310x170mm 4+2刀卡(A=A)	12/Box			
	JD311700A2A10000	310x170mm 4+2刀卡(A=A)	12/Box	Total amount:	50Pcs	
Packing Box	JC323237K2K10000	320 x 320x370mm(A=A)	1/Box			