

SPECIFICATION FOR APPROVAL

Customer Code:	B347
Customer P/N:	BW23-01-645-00
Products Name:	Constant Current Driver
Certification Model	BQ-320K2-360-AD
Samples No.:	BQ-320K2-AD-27
Becky P/N:	S320K2360AD27

Input & Output characteristics			
Rated Input Voltage	277-480	Vac	Attention: Output voltageX output current should be no more than max output wattage in adjustable current mode
Output power	320	Max.	
Output Voltage	210-360	Vdc	
Output Current/Range	880-1400	mA	
Fixed Current	1170	mA	
flicker	Title24	Bipolar flicker-free	Unipolar flicker-free
	<30%	<5%	<5%
		<input checked="" type="checkbox"/>	

Approval Of Customer Signature			
Quality Dept	R&D	ENG	Recognition seal

Wire specifications

Item	location	Color	Guage	AWG	Length	Method connecting wire	Remark
AC I/P	L	Black	UL1015	AWG18	350±10mm	Peel off the tin 10±1mm	
	N	White					
	GND	Green			250±10mm	The tail is connected with the OUT-4 gasket	
Dc O/P	V+	Red	UL1015	AWG18	200±10mm	Peel off the tin 8±1mm	
	V-	Black					
Dimming	Dim+	Purple	UL1569	AWG22	200±10mm	Peel off the tin 4±1mm	Add black protective casing
	Dim-	Pink					
Aux12V	12V+	White	UL1569	AWG22	200±10mm	Peel off the tin 4±1mm	
Preg	Preg+	Yellow	UL1569	AWG22	200±10mm	Peel off the tin 4±1mm	
	Preg-	Gray					
PS	PS+	Gray	NA	NA	NA	NA	
	PS-	Black					

Nameplate Information :

INPUT

- GREEN
- ACN---WHITE
- ACL---BLACK

Model: BQ-320K2-360-AD
Constant Current LED Driver

Input Voltage	277-480VAC 50/60Hz
Input Current	1.3A Max
Input power	350Watts Max
Power Factor	≥0.90
Output Voltage	210-360VDC
Output Current	880-1400mA
Output Power	320Watts Max
12V Output	12V 200mA Max

TC: 90°C
Made in China
www.becky-dg.com
Control Mode: 0-10V

OUTPUT

- V+ --- RED ○
- V- --- BLACK ○

DIMMING

Class 2

- DIM---PURPLE ○
- DIM---PINK ○
- 12V---WHITE ○
- Preg---YELLOW ○
- Preg---GRAY ○

Dimensions: 190-0.15 (+0.25) x 37.5-0.15 (+0.25) x 9-0.25 (+0.15)

Decal: 1170mA YYWW

Nameplate Description	Material	Surface treatment:	Thickness:	Unit:	Remark
	Silver polyester	Polishing	0.13/+0.02	mm	The bottom of the silver black
Decal	Silver polyester	Polishing	0.1±0.02	mm	The bottom of the silver black

Product Characteristics

- Efficiency up to 96%
- Isolated dimming:0/1-10V, Dim-to-Off
- Functional: Dim/Non-Dim/Aux 12V / The output current is adjustable (External Adj power And Photocell sensor Choose between) . meet different customer requirement is optional.
- Bring afterglow optional function
- IP Rating: IP54
- Surge: CM(L/N):6KV,DM (L/N-PE) :6KV
- Warranty: 5Years



Product Description

K2 Series is a long bipolar stroboscopic No strobe non-isolated constant current drive power supply, this series is specially designed and developed for shoebox lights, wall lights, flood lights, industrial and mining lights, beautiful appearance design, The overall appearance design is aesthetically pleasing, and the multifunctional configuration of the product meets the different functional design needs of customers. With ultra-high efficiency and good heat dissipation, it greatly improves the reliability of the product and ensures its lifespan. At the same time, comprehensive protection functions ensure that the product operates without obstacles. it greatly improves the reliability of the product and ensures its lifespan. At the same time, comprehensive protection

Model List

Model List	Pout	Vin	Vout	Vout	Iout	Eff.	0-10V Aux12V	
						480Vac	AP	Y
BQ-320K2-360-Z	320W	277-480V	210-360	240-350	880-1400	96%	Class 2	
Function "Z"	N	V	A	D	AD	P	AP	Y
					☑			

N : No Dimming , V : 0-10V Dimming;
 A : 0-10V Dimming and Aux12V D : 0-10V+External Adj power
 AD : 0-10V Dimming + Aux12V+External Adj power
 P : 0-10V dimming+Photocell sensor
 AP : 0-10V dimming+ Aux12V+ Photocell sensor
 Y : Indicates that the afterglow function is removed

*** The output voltage * output current must not exceed the maximum output power when using the current adjustable function;**

Input Characteristics

Parameters	Min.	Typical	Max.	Unit	Testing Conditions/Remark
Rated Input Voltage Range	277	/	480	Vac	/
Input voltage range	249	/	528	Vac	/
Input frequency	47	50/60	63	Hz	/
Input current	/	/	1300	mA	@277Vac
Inrush Current	/	/	120	A	100%load at 480Vac input cold start
PF	0.9	/	/	N/A	@277-480Vac 80%full load
THD	/	/	20	%	@277-480Vac 80%full load
Flicker	/	/	5	%	@277-480Vac
Turn-on Delay Time	/	/	750	mS	@277Vac
No Load Power	/	/	5	W	@277-480Vac
Short circuit power	/	/	15	W	@277-480Vac(Enter hiccup mode)

Output Characteristics

Parameters	Min.	Typical	Max.	Unit	Testing Conditions/Remark
Rated Output Voltage	210	/	360	Vdc	/
Rated output current(adjustable)	880	/	1400	mA	±5% Rated Vout*Rate Iout≤Rated Pout
Rated output wattage	/	/	320	W	@100% Load at277-480Vac
No-Load Voltage	/	/	420	Vdc	@277-480Vac
Efficiency@277V ac	94	95	/	%	@Full Load Output: 350v/0.91 A
Efficiency@347V ac	94	96	/	%	@Full Load Output:350v/0.91A
Efficiency@480V ac	94	96	/	%	@Full Load Output: 350v/0.91A
Line Regulation	-5%	/	+5%	%	@Full Load
Load Regulation	-5%	/	+5%	%	
Ripple Current	/	5%	10%	%	

Dimming Characteristics

Function	Parameters		Min.	Typical	Max.	Unit	Remark
0-10V Class 2	Applied maximum voltage		0	/	12	V	
	Dimming output current range		0	/	100	%	High compatibility
	Dimming Voltage		0	/	10	V	
	Dimming Current		90	100	110	uA	
Dim to Off (Optional)	0-10V	Turn-off voltage	0.6	0.8	1.0	V	Dim short circuit- Off
		cut-in voltage	0.7	0.95	1.2	V	
	1-10V		/	/	/		Dim short circuit-Not Off
Noted	Please take good insulation measures if the dimming cable is not in use						

Auxiliary Characteristics

Function	Parameters		Min.	Typical	Max.	Unit	Remark
■ (Optional) Class 2	Output Voltage		11	12	13	V	
	Output Current		0	/	200	mA	
	Ripple Voltage		/	/	500	mV	
	Dynamic Load		◆ Please pay attention to the compatibility verification with the LED Driver when using the Aux12V or other sensor.				
(Optional)	Adj.Power		/	/	/	%	L/M/H Third gear output percentage
	3CCT		/	/	/	K	CW:Cool whiteMC:Colour mixture(CW and WW mixed)WW:Warm white

Test enviroment	Start-up delay			Power-on delay		
	Min	Type	Max.	Min	Type	Max.
Incandescent lamp	/	/	/	/	/	/
Photocell sensor	Notes 1. The position of photocell should be designed to avoid the reflection interference of body light source; 2. Should be avoid interference from light source reflection when installing lamps 3. This data is for reference only. The actual value varies due to the selection of light control head and the structural design of lamps 4. Infrared light sensitive head					

Function	Parameters	Min.	Typical	Max.	Unit	Remark
OTP (TC)	Current drop mode	90	95	105	°C	Current is automatically restored when overtemperature is lifted
SCP	Not damaged with long time short circuit, hiccup mode					Automatic recovery after short circuit release
OVP	Output voltage will be limited to the specified range.					Auto recovery
Others						

Parameters	Min.	Typical	Max.	Unit	Remark
Operating Temp.	-40	/	90	°C	Tc
Storage Temp.	-40	/	90	°C	RH:5%~95%
Tc Temp.	/	/	90	°C	
Life Time 50000H/ @Tc80°C at full load	/	80	/	°C	Refer to the life curves.
MTBF200000 H/@ 25°C	/	25	/	°C	80%load MIL-HDBK-217F

Safety and EMI Standards

Status	Certification	Country	Safety Standard	备注 Remark
<input checked="" type="checkbox"/>	UL/Cul	USA/Canada	UL 8750	
	CCC	China	GB19510.1;GB19510.14 GB17625.1;GB/T17743	
	CE-LVD ENEC	European	EN61347-2-13; EN61347-1 EN62384	
	CB	CB Member states	IEC61347-2-13 IEC61347-1	
	SAA	Australia	AS/NZS61347.1+AS/NZS61347.2.13	

EMI/EMS	Area	Standard	Requirement
FCC	USA	Part 15,ANSI C63.4	Class B
EMC	European	EN/IEC55015; EN61547 EN/IEC61000-3-2 EN61000-3-3	Class C
Surge	European	IEC/EN61000-4-5	DM:6KV CM:6KV



PLT-13231

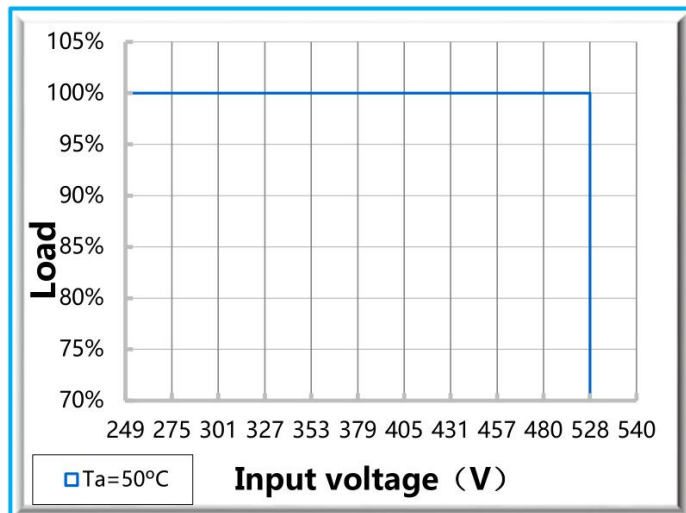
Ring wave	USA	IEC/EN 61000-4-12;ANSI/C82.77-5	2.5KV
ESD	European	EN 61000-4-2	8 KV air discharge ; 4 KV contact discharge

Remark: The LED Driver itself complies with EMC standard. However, the LED Driver's EMC should be re-checked with lamp when integrated into lighting systems.

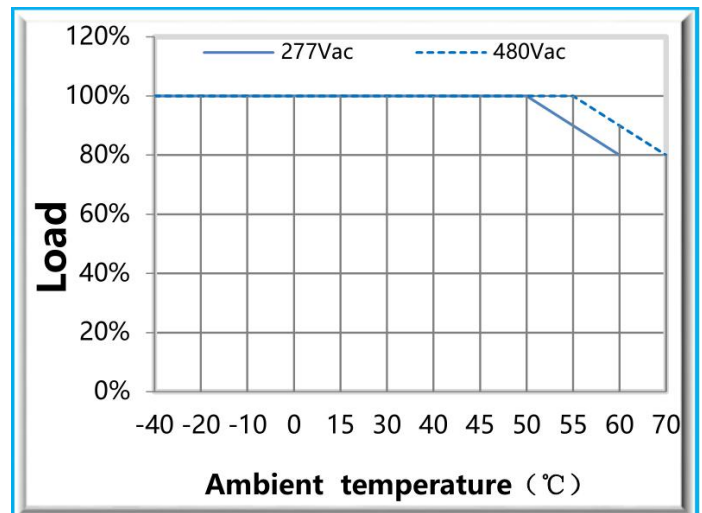
Insulation Requirements	UL	TUV	CCC	Unit	Remark
Input-Case	2U+1000	/	/	Vac	
Input-Dim	2U+1000	/	/	Vac	Reinforced insulation 2U+1000V
Dim-Case	500	/	/	Vac	Basic insulation
Insulation Resistance	> 10	/	/	MΩ	Input-Dim@500Vdc/25°C
Ground Resistance	< 0.1	/	/	Ω	PE-Case,25A/1min
Leakage Current	≤0.75	/	/	mA	@480Vac

Performance Curves

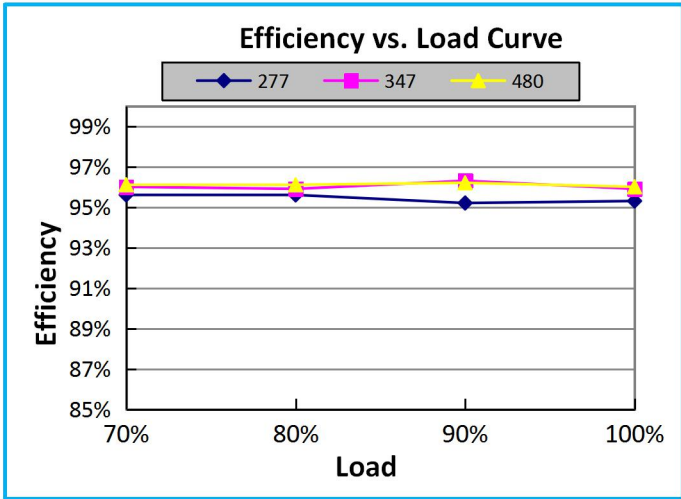
◇ Derating curve



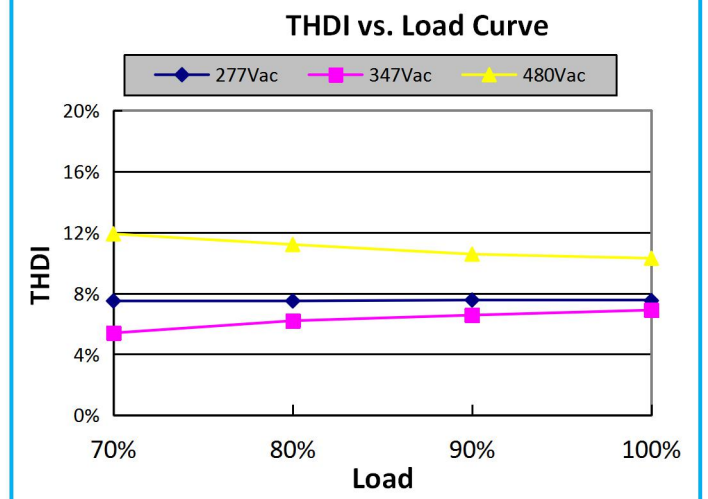
◇ Ta Vs. Load



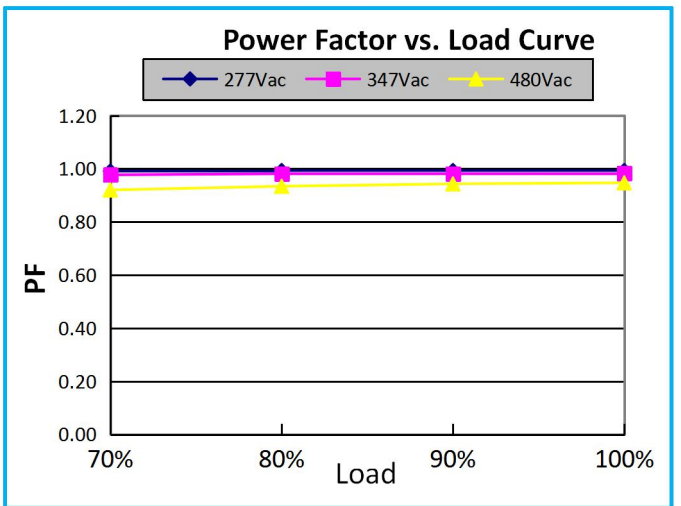
Efficiency vs. Load Curve



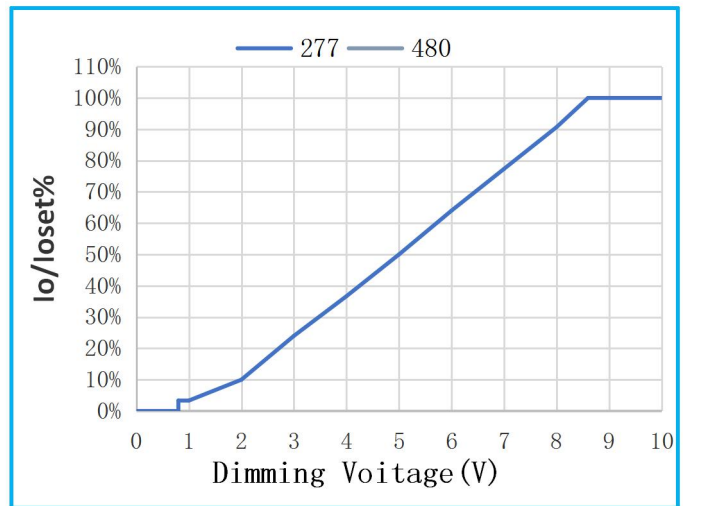
THD vs. Load Curve



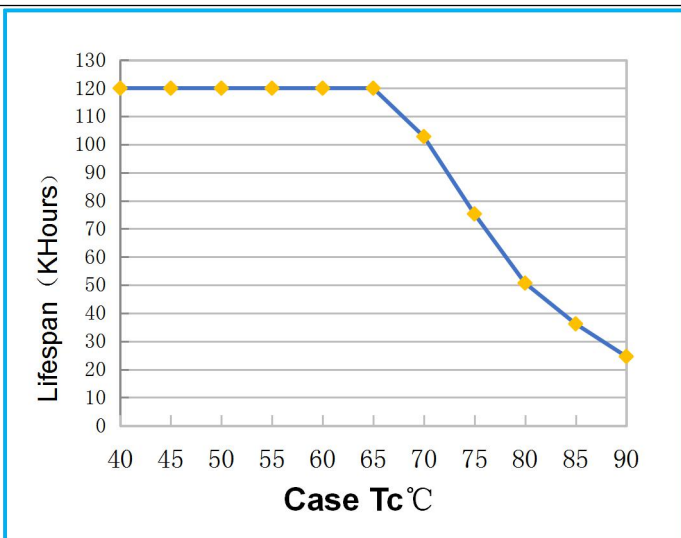
PF Vs.Pout



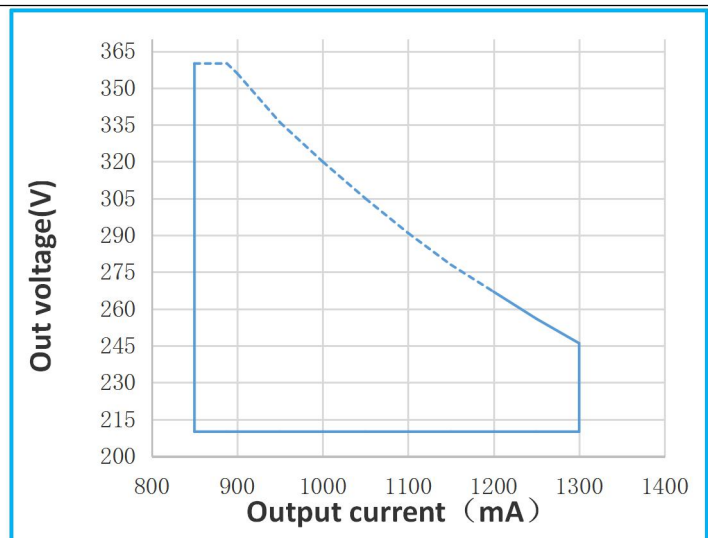
Dimming Curve



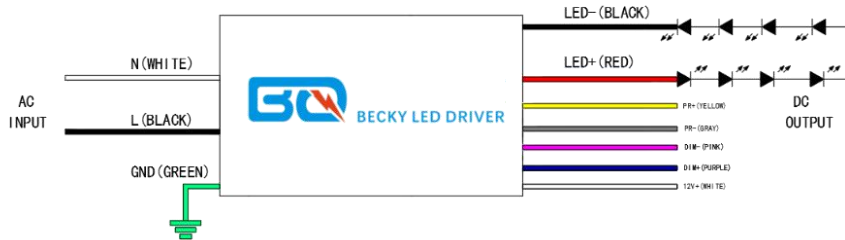
Life-time VS Case Tc °C



Output voltage vs. output current

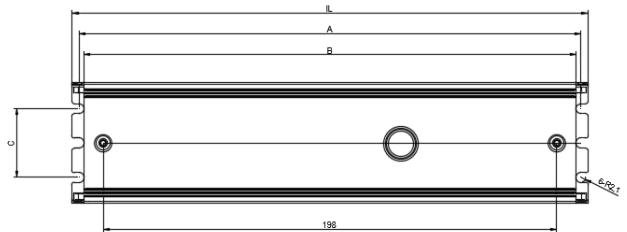
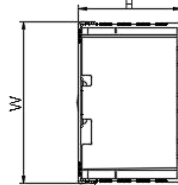
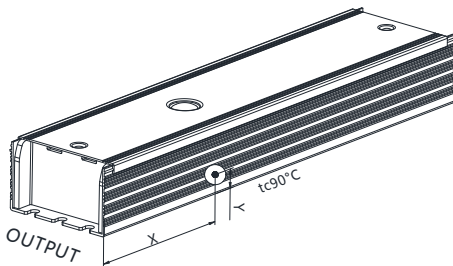


Typical Applications



Mechanical Characteristics

Material of case	Dimension for case						Tc position		Toleranc e	Weight	Toleranc e	Toleranc e
	A	B	C	L	W	H	X	Y				
Aluminu m	219	214.5	30	225	52.5	34	68	9	±2mm	0.80kg	±50g	(Glue)



Item	Color	AWG	AWG	Outlet mode	Remark	
Input line	ACL	Black	UL1015	AWG18 600V 105°C	Only for customers to select the reference, the detailed wire specifications and wire length and the color of the wire to acknowledge the sample after the specification page 2 shall be subject to;	
	ACN	White				
	GND	Green				
Output line	LED+	Red	UL1569	AWG22 300V 105°C		Peel off the tin 10mm
	LED-	Black				
Adjust the lightAux 12v	Dim+	Purple	UL1569	AWG22 300V 105°C		Z=D&AD(Peel off the tin10mm) Z=P&AP (PH2. 0-2PIN)
	Dim-	Pink				
	12v	White				
Power modulation line&Light control	PR+	Yellow	UL1569	AWG22 300V 105°C	Z=D&AD(Peel off the tin10mm) Z=P&AP (PH2. 0-2PIN)	
	PR-	Gray				

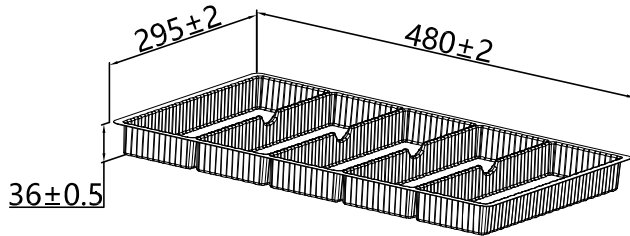
The Products comply with RoHS Directive (2011/65/EU) and REACH(No.1907/2006).

1) Notes for design of non-isolated driver light board:

- 2.1 The arrangement of lamp beads is recommended to design parallel first then series;
- 2.2 Withstand voltage of dielectric layers between aluminum PCB and LED>3KV.
- 2.3 Safety space between aluminum base and LED coppers coil than 4.7mm
- 2.4 The creepage distance than 2.5mm between LED+ and LED- on the aluminum substrate
- 2.5 Aluminum substrate is not covered with excess heat dissipation copper foil

Packaging information

PACKING DRAWING



Qty :	_____	PCS
G.W :	_____	Kgs
N.W :	_____	Kgs
SIZE :	X X	cm
Made in china		

Side marking

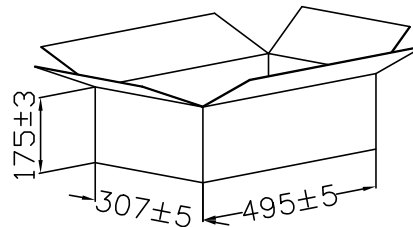
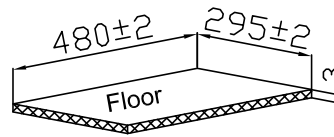
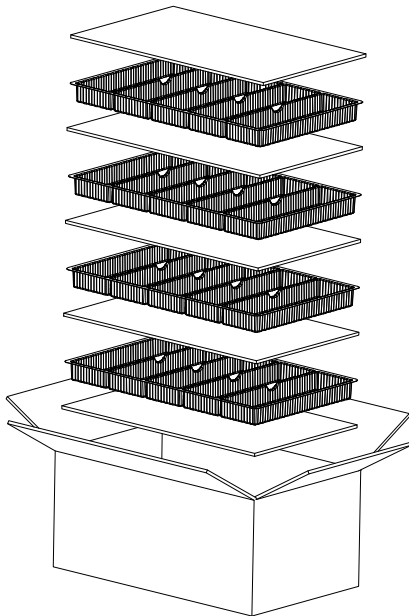


The Leader of Non-Isolated LED Driver

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



Packing Box

Not in Scale
For reference only
Unit: mm

Material	Material part list	Size	Dosage PCS	Total amount
Floor	JD480295A6320000	480 x 295mm(A636A)	5/Box	
Blister Box	UT4829536W020000	480 x 295 x36 x 0.35mm	4/Box	20Pcs
Packing Box	JC503118A6320000	495 x 307x 175mm(A636A)	1/Box	