Product Characteristics

- Efficiency up to 95%
- Isolated dimming:0/1-10V, Dim-to-Off
- Functional: Dim/ The output current is adjustable (external power adjust) . meet different customer requirement is optional.
- IP Rating：IP54
- Surge：DM(L/N):6KV,CM (L/N-PE) :6KV
- Warranty：5Years

c UL us LISTED E478128 FC 5YEAR WARRANTY RoHS

Product Description

B2 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.

ModelList

Model		Pout max.	Vac <V>	Output Range Vdc	Recommended Output Vdc	Iout <mA>	Default mA	Eff. %
BQ-320B2-260-D		320	120-277	180-260	200-250	1000-1500	1170	95%
"Z"	Suffix"-Z"	-D						
	Function description	0-10V+External Adj. line						

1:Explain for Model:【BQ】-Logo,【XXX】-Pout Max【B2】-Series,【260】-Vout-180-260V,【Z】-as above table

2.External Adj. line(Preg+/Preg-): means that the driver can lead out 2 lines separately for external connect board to adjust power and CCT;

* Warning*

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

Input Characteristics

Parameters	Min.	Typ.	Max.	Unit	Test Conditions/Remark
Rated Input Voltage Range	120	/	277	Vac	/
Input voltage range	108	/	305	Vac	/
Input frequency	47	50/60	63	Hz	/
Input current	/	/	3000	mA	@120Vac
Inrush Current	/	/	110	A	@100% load at 277Vac input cold start
PF	0.9	/	/	N/A N/A	@120-277Vac70% Full load
THD	/	/	20	% %	@120-277Vac70% Full load
Flicker	/	/	5	%	@120-277Vac
Turn-on Delay Time	/	/	750	mS	@120Vac
No Load Power	/	/	5	W	@120-277Vac
Short circuit power	/	/	15	W	@120-277Vac (Hiccup mode)

Output Characteristics

Parameters	Min.	Typ.	Max.	Unit	Test Conditions/Remark	
Rated Vout	180	/	260	Vdc	/	
Rate output current(adjust)	1000	/	1500	mA	±5%	Rated Vout * RatedIout ≤Pout
Rated Pout	/	/	320	W	@100% load at 120-277Vac	
No-Load Voltage	/	/	320	Vdc	@120-277Vac	
Efficiency@120Vac	91	93	/	%	@ Full load Output: 260v/1.23A	
Efficiency@230Vac	93	95	/	%	@ Full load Output: 260v/1.23A	
Efficiency@277Vac	93	95	/	%	@ Full load Output: 260v/1.23A	
Line Regulation	-5%	/	+5%	%	@ Full load	
Load Regulation	-5%	/	+5%	%		
(PK-AV) 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 isolation if the dimming cable is not in use						

Protection Function

Function	Parameters	Min.	Typical	Max.	Unit	Remark
OTP (TC)	Current drop mode	90	95	105	℃	Auto recovery
SCP	Not damaged with long time short circuit, hiccup mode					It Auto recovery
OVP	The output voltage will limit the scope					Auto recovery
Others						

Environmental Characteristics

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

Safety and EMI Standards

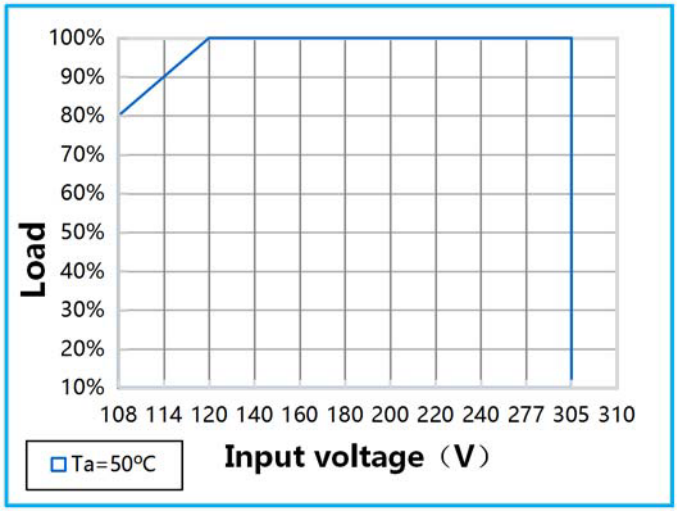
Status	Certification	Country	Safety Standard	Remark
☑	**UL/CuI**	USA/Canada	UL 8750	
☐	**CCC**	China	GB19510.1;GB19510.14 GB17625.1;GB/T17743	
☐	**CE-LVD** **ENEC**	European	EN61347-2-13; EN61347-1 EN62384	
☐	**CB**	Member states	IEC61347-2-13 IEC61347-1	
☐	**SAA**	Australia	AS/NZS61347.1+AS/NZS61347.2.13	

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

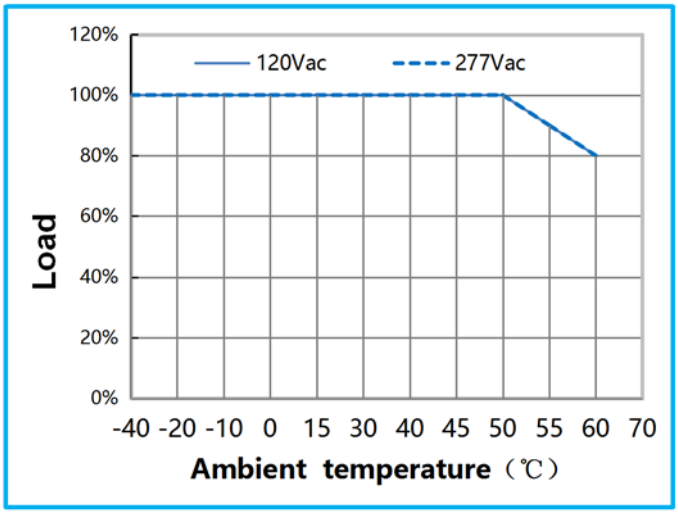
Insulation Requirements	UL	TUV	CCC	Unit	Remark
Input-Case	2U+1000	/	/	Vac	/
Input-Dim	2U+1000	/	/	Vac	Reinforced insulation 2U+1000V
Dim-Case	500	/	/	Vac	Basic insulation
Insulation Resistance	> 10	/	/	MΩ	Input-Dim@500Vdc/25℃
Ground Resistance	< 0.1	/	/	Ω	地线对外壳,PE-Case,25A/1min
Leakage Current	≤0.75	/	/	mA	@277Vac
Warning	When you test Hi-pot, Please short circuit between L/N, short circuit between positive/negative output line, short circuit between positive/negative dimming and auxiliary power supply.				

Performance Curves

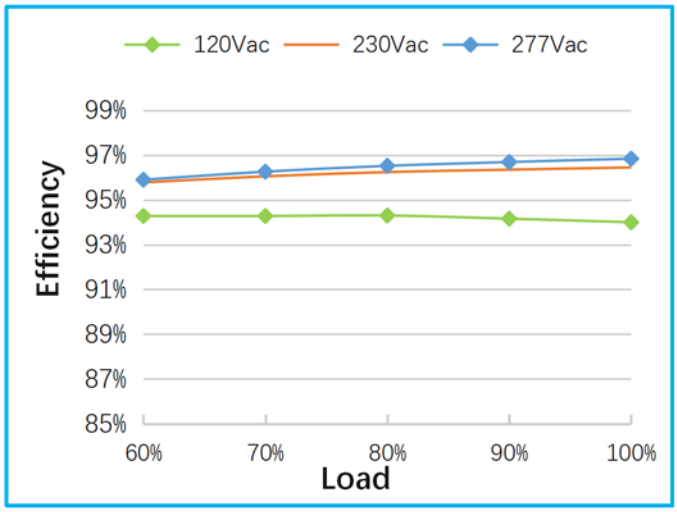
✧ Derating curve



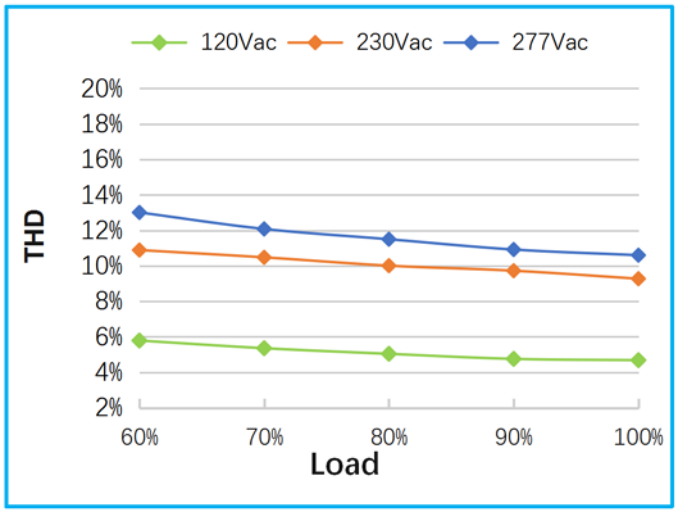
✧ Ta Vs. Load



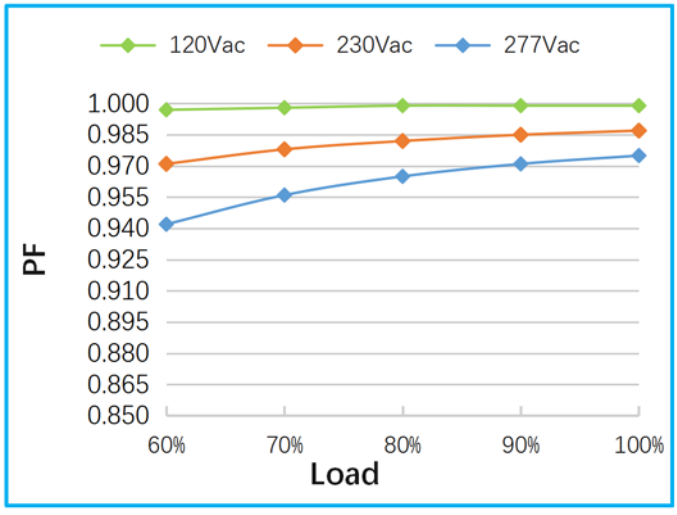
✧ Efficiency vs. Load Curve



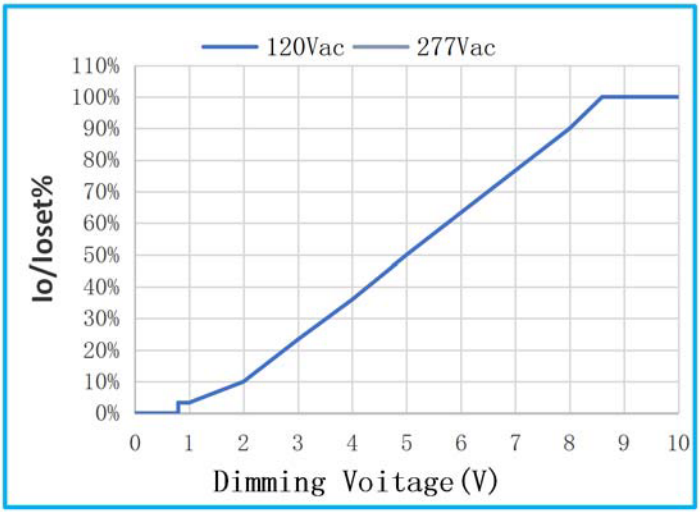
✧ THD vs. Load Curve



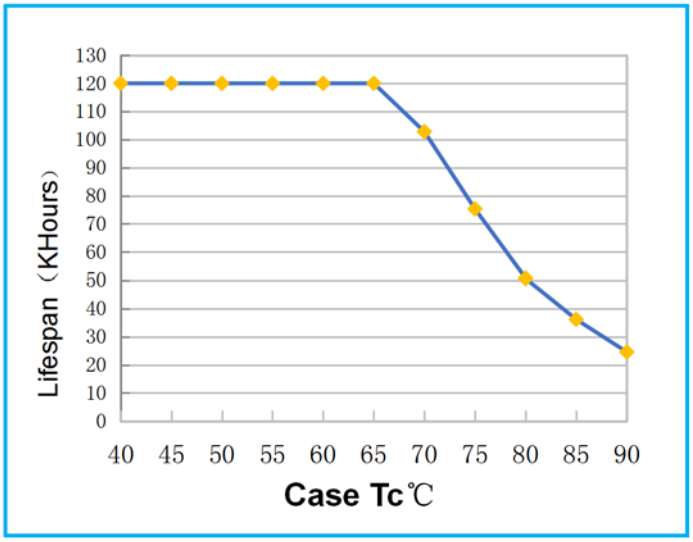
✧ PF Vs. Pout

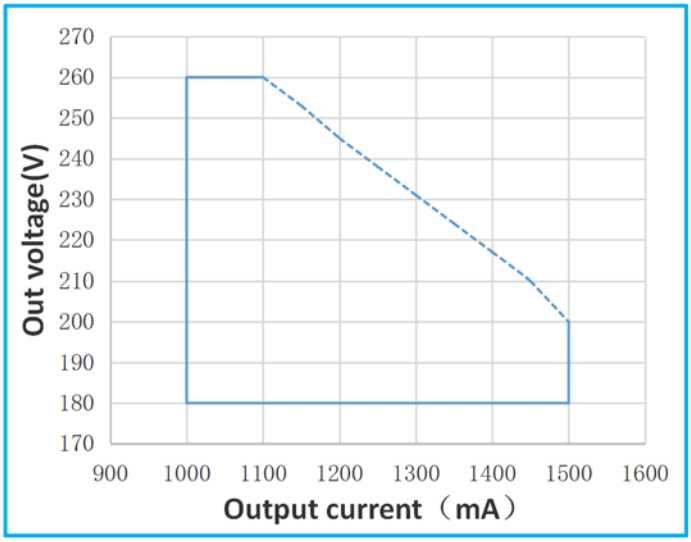


✧ Io/Ioset vs. Dimming Voltage

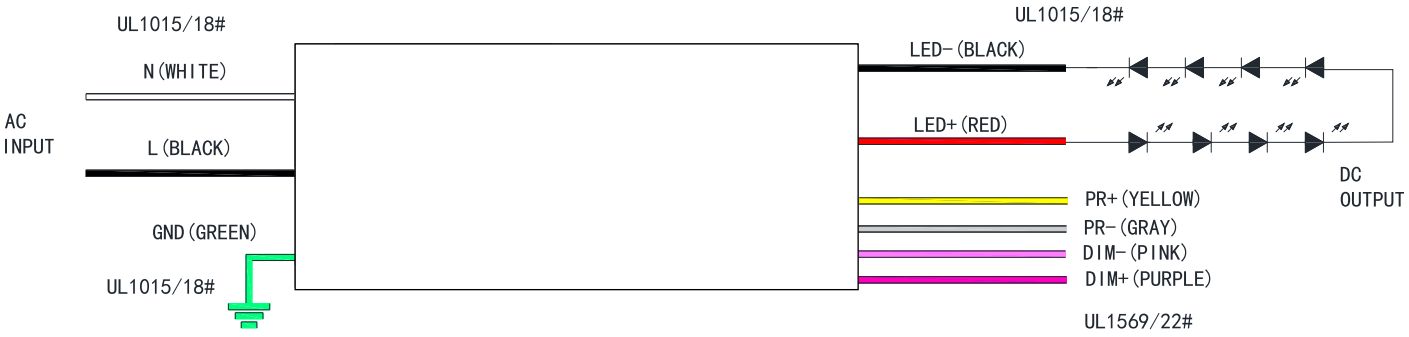


✧ Life-time VS Case Tc℃	✧ Output voltage vs. output current





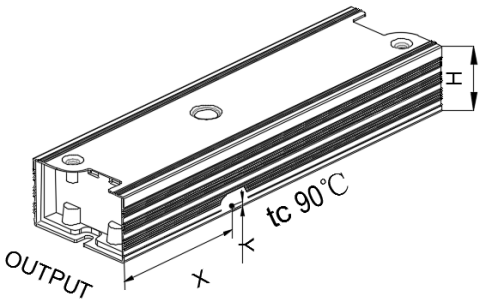
Wiring Diagram

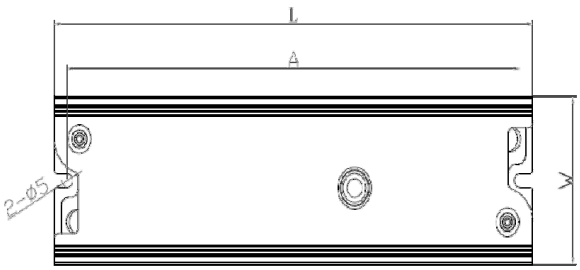


Warning:During the application operation, the isolated 0-10V dimming line/Preg+/Preg- should avoid contact with high voltage to prevent voltage backflow and damage to the power supply;

Mechanical Characteristics

Material of case	Dimension for case					Tc position		Tolerance	weight	Tolerance	Process
	A	B	L	W	H	X	Y				
Aluminum	206	/	218	61	36	80	6	±2mm	0.80kg	±50g	Glue





Item		Color	AWG	AWG	Exit method
Input line	ACL	Black	UL1015	AWG18 600V 105℃	Open skin and tin 10mm
	ACN	White			
	GND	Green			
Output line	LED+	Red			
	LED-	Black			
Dim line	Dim+	Purple	UL1569	AWG22 300V 105℃	
	Dim-	Pink			
Adj. line	PR+	Yellow			Z=D Open skin and tin 10mm)
	PR-	Gray			

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

2) **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

Considerations design for Non-isolated driver light board

1) It is recommended to arrange the lamp beads in parallel first and then in series;
2) The aluminum substrate withstands voltage >3KV;
3) The recommended distance from all traces to the copper foil on the edge of the board is >4.7mm;
4) The creepage distance between LED+ and LED- on the aluminum substrate is >2.5mm; Non-isolated power supply use light board design precautions;
5) No excess heat dissipation copper foil is covered on the aluminum substrate;