

Current Adjustable LED Driver

240W | 100-277Vac Input

- Supply Voltage: 90-305Vac or 127-420Vdc
- Great Surge Immunity 10kV
- 100,000Hour Life @ Tc=75
- Output Current Adjustment with Constant Power
- +/-2% Output Current Accuracy (0-10V Dimmable Model)
- 0-10V/PWM/Time/DALI /DMX (Optional) Dimmable
- Dim Off with 0.5W Standby Power
- 12V 300mA Auxiliary Power to Power Controllers and Fans (Optional)
- UL Class P, ENEC/CB/CCC SELV Output
- Safety according to EN 61347-1, 61347-2-3, 61347-2-13, 62384



Application

- Bay lights, Pole lights, Stadium lights

Model List

Model Number	Input Voltage Range	Output Power	Output voltage	Full Power Settable Current Min.	Full Power Settable Current Max.	Certification
BKD-240-C670-XYZ	90 ~ 305 Vac	240W	21-60Vdc	4000mA	6700mA	UL/FCC/CB/ENEC/CCC

XY	Dimming Method	Adjustable	12Vaux	Dim-off
NN	-	-	-	-
NP/C	-	Potential Meter/Cable	-	-
DP/C	0-10V	Potential Meter/Cable	-	-
EP/C	0-10V/PWM/Time	Potential Meter/Cable	✓	✓
AP/C	DALI	Potential Meter/Cable	-	✓
MP/C	DMX	Potential Meter/Cable	-	✓
BT	Bluetooth	Bluetooth	-	✓

Z = U, UL cable with ground wire S, VDE cable/Class I D, VDE cable/Class II G: Global Cable/Class I

BKD-240-C Series

Technical Data

Input Voltage	90~305Vac or 127V~420Vdc
Input Frequency	47~63Hz
Power Factor	>0.9@60-100%load, refer to PF vs. Load curve
THD	<15%@60-100%load, refer to THD vs. Load curve
Input Current	2.2Amax@120Vac & Full Load, 1.1Amax@220Vac & Full Load
Inrush Current	65A peak, 1.2ms duration, <0.25A2s@230Vac, Cold Start 70A peak, 1.3ms duration, <0.5A2s@277Vac, Cold Start
Leakage Current	1mA max @277Vac 60Hz, UL8750, 0.75mAmax @240Vac 50Hz, IEC61347-1
Input Under Voltage	Shut down and auto restart
Input Over Voltage	*Optional: Shutdown @320Vac
Surge Protection	Line to line 6kV, line to ground 10kV, IEC 61000-4-5
Current Accuracy	±5%lo
Ripple Current	Ip p:5%lo max
Setup Time	1.2s max
Overshoot	10% lo max & LED Load
Output Over Voltage	120% Vomax, typ.
Short Circuit	Auto recovery. The output recovers when short is removed.
Over Temperature	Lower the output current when $T_c \geq 105 \pm 10^\circ\text{C}$; Auto Recovery When $T_c \leq 70 \pm 10^\circ\text{C}$
Auxiliary Power (Vaux)	12V+/-5%, 300mA max
Operating Temperature	-40°C ~ +70°C, 10%RH ~ 100%RH
Storage Temperature	-40°C ~ +85°C 5%RH ~ 100%RH
MTBF	≥280,000 hours, 75°C case temperature (MIL-HDBK-217F)
Lifetime	≥100,000 hours, 75°C case temperature, refer to life vs. Tc curve
Case Temperature	90°C max, marked in the Tc point of label
Dimensions	191.5mm x 69.0 by mm (D x H)
Net Weight	1950g
Packing	

Notes: Unless specified, all the test results are measured in 25°C room temperature.
 * marked items are optional and contact with sales people to get the functions.

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Safety/EMC Compliance

Safety Standard	Description
UL8750	Light emitting diode(LED) equipment for use in lighting products
UL1012/1310	Power units other than class 2 / Class 2 power units
IEC 61347-1	Lamp control gear Part 1: general and safety requirements
IEC 61347-2-13	Lamp control gear Part 2-13: particular requirement for d.c. or a.c. supplied electronic control gear for LED modules
EMI Standards	Description
IEC 55015	Conducted emission test & radiated emission test
IEC 61000-3-2	Harmonic current emissions; Class C
IEC 61000-3-3	Voltage fluctuations & flicker
FCC Part 15	ANSI C63.4:2009 Class B
EMS Standards	Description
IEC 61000-4-2	Electrostatic discharge (ESD): 8 kV air discharge, 4 kV contact discharge
IEC 61000-4-3	Radio frequency electromagnetic field susceptibility test (RS)
IEC 61000-4-4	Electrical fast transient (EFT)
IEC 61000-4-5	Surge immunity test
IEC 61000-4-6	Conducted radio frequency disturbances test (CS)
IEC 61000-4-8	Power frequency magnetic field test
IEC 61000-4-11	Voltage dips
IEC 61547	Electromagnetic immunity requirements applies to lighting equipment

Dimming

Parameter	Min.	Typ.	Max.
Vdim Sourcing Current	200uA	300uA	450uA
Vdim Allowed Input Voltage	-20 V		20 V
0-10V Dimming Range	10% (Vdim=1V)	Linear	100% (Vdim=9~10V)
PWM Dimming Range	10% (Duty=10%)	Linear	100% (Duty=90-100%)
Dim off threshold	0.4V or 4%	0.5V or 5%	0.6V or 6%
Dim on threshold	0.6V or 6%	0.7V or 7%	0.8V or 8%
PWM High	3V		10V
PWM Low	0V		0.6V
PWM Frequency	300Hz		2kHz
External PWM Controller Current Sinking Capability	300uA		
DALI Interface Standard	IEC62386		
DA1,DA2 High Level	9.5	16	22.5
DA1,DA2 Low Level	-6.5	0	6.5
DA1,DA2 Current	0		2mA

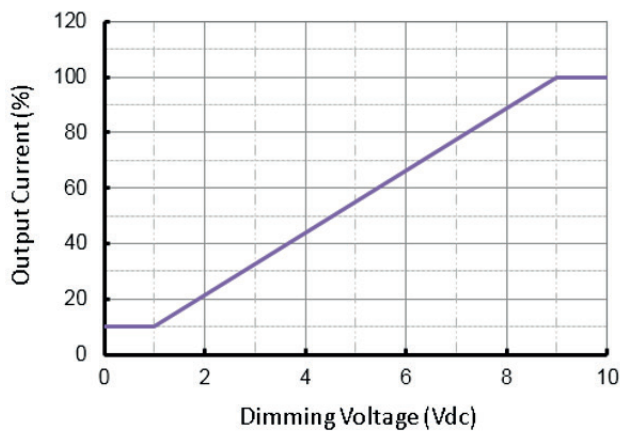
The default DALI model is programmable, contact sales for non-programmable and cost effective models.

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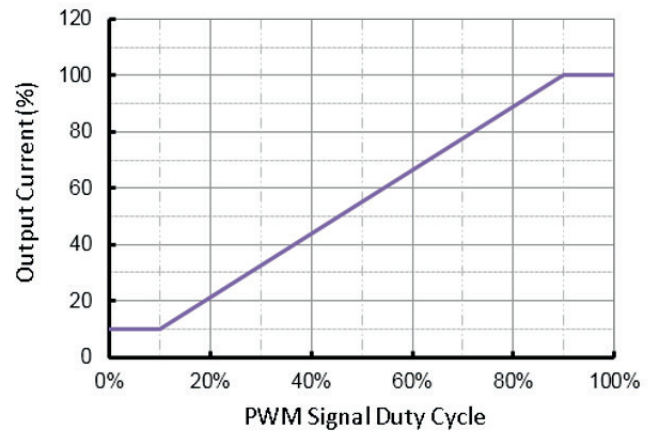
Dimming Curve

a. Without dim-off

0-10V Dimming Curve

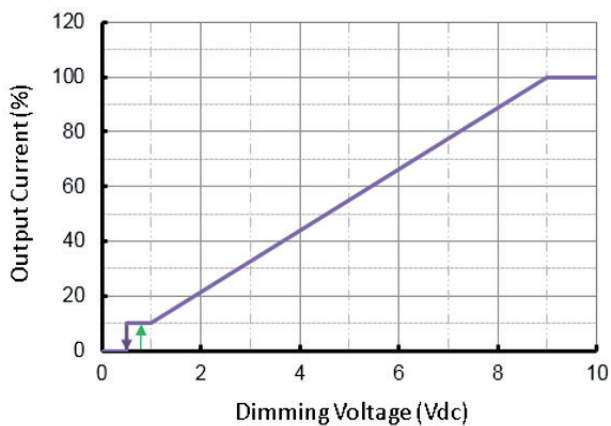


PWM Dimming Curve

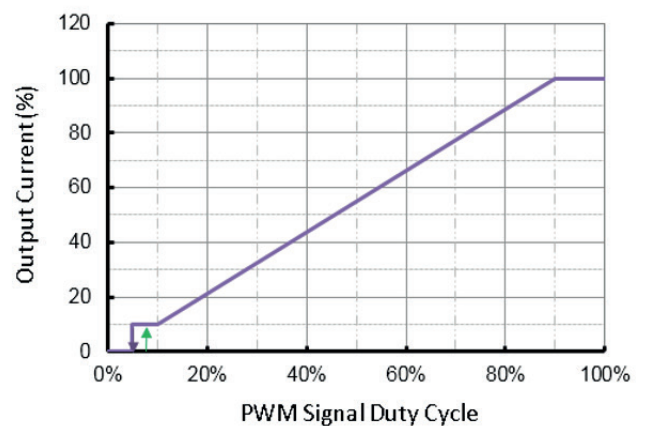


b. With dim-off

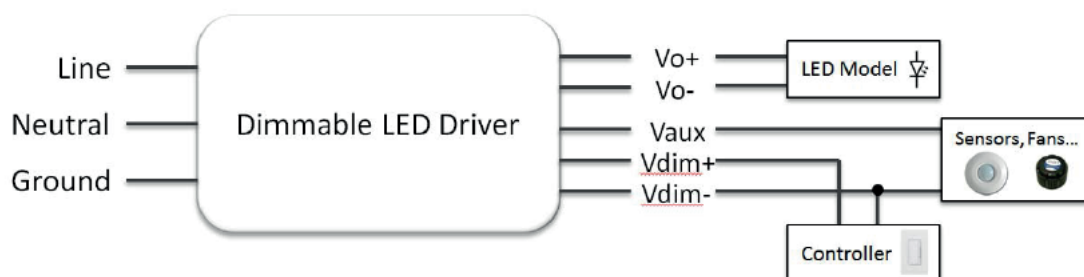
0-10V Dimming Curve



PWM Dimming Curve

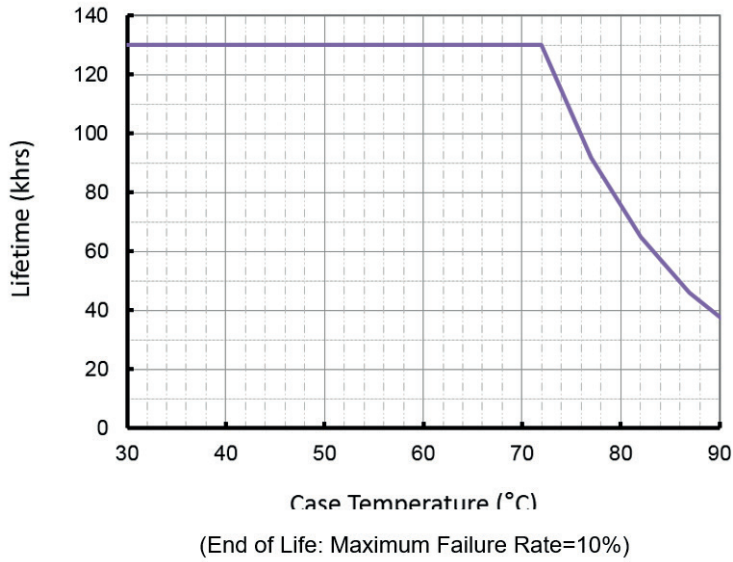


Dimming Wiring

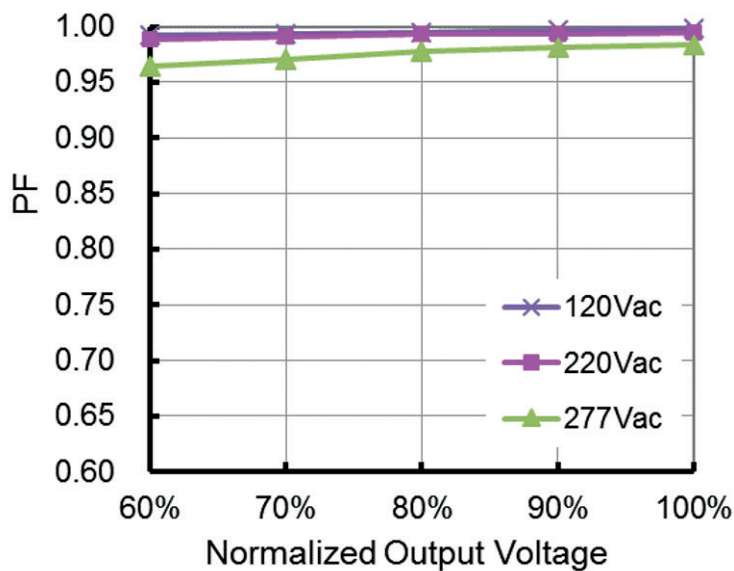


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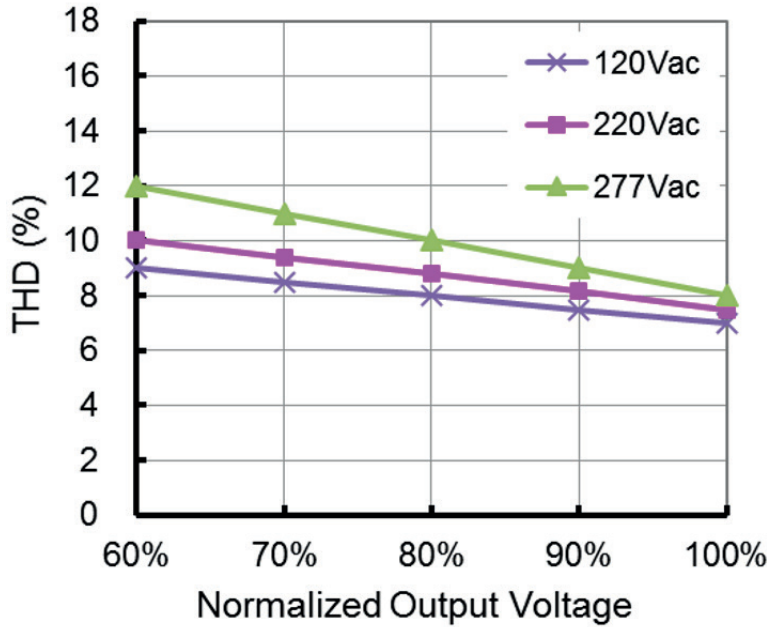
Lifetime vs. Case Temperature



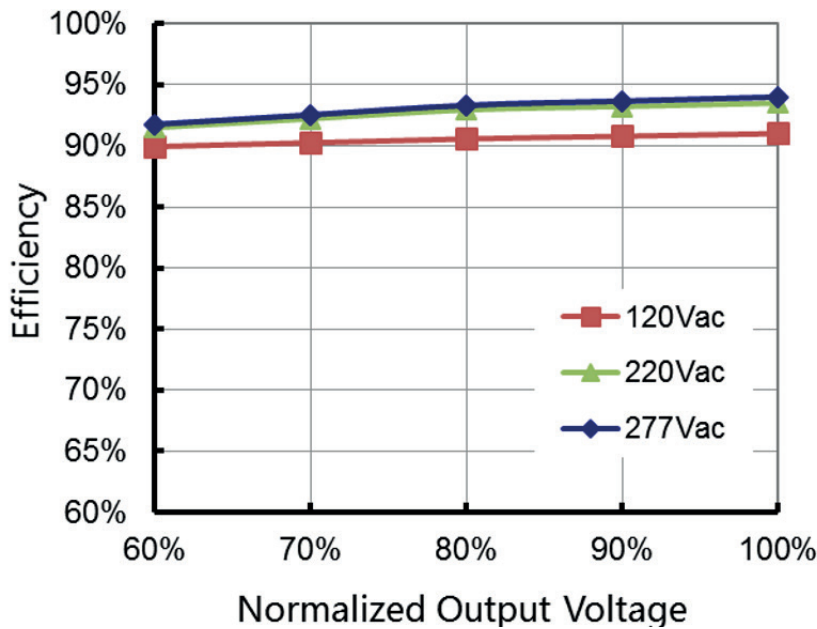
Power Factor vs. Load



THD vs. Load



Efficiency vs. Load



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Mechanical Design

