

■ Features

- Supply Voltage: 180-528Vac
- Surge Immunity 10kV
- 100,000Hour Life @ Tc=75C
- 5 Year Warranty @ Tc<=80C
- Near Field Communication Programmability
- High-Efficiency @ 90% and above
- +/-2% Output Current Accuracy (Programmable Model)
- 0-10V/PWM/Timer/DALI (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
LHA240-C105-XYZ	180-528 Vac	250W	143-357Vdc	700mA	1050mA	UL/FCC/CB ENEC/CCC
LHA240-C140-XYZ	180-528 Vac	250W	107-238Vdc	1050mA	1400mA	UL/FCC/CB ENEC/CCC
LHA240-C210-XYZ	180-528 Vac	250W	71-179Vdc	1400mA	2100mA	UL/FCC/CB ENEC/CCC
LHA240-C420-XYZ	180-528 Vac	250W	36-89Vdc	2800mA	4200mA	UL/FCC/CB ENEC/CCC

XY=	Dimming Method	Programmable	12Vaux	Dim-off
NN	-	-	-	-
EN	0-10V	-	√	√
TR	Timer	√	-	-
ER	0-10V/PWM/Time	√	√	√
AR	DALI	√	√	√
Z = K,	UL cable with ground wire	S, VDE cable/Class I	D, VDE cable/Class II	

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■ Technical Data

Input Voltage	180-528Vac
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	1 Amax@277Vac & Full-Load, 0.6Amax@480Vac & Full-Load
Inrush Current	65A peak, 1.2ms duration, <0.25A2s@277Vac, Cold Start 70A peak, 1.3ms duration, <0.5A2s@480Vac, Cold Start
Leakage Current	1mA max @277Vac 60Hz, UL8750,0.75mAmax @240Vac 50Hz, IEC61347-1
Input Under Voltage	Shut down and auto-restart
Surge Protection	Line to line 6kV, line to ground 10kV, IEC 61000-4-5
Current Accuracy	±5%Io
Ripple Current	Ip-p:5%Io max
Setup Time	1.2s max
Overshoot	10% Io 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 (See Derating Curve for more details)
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	9.29x3.54x1.63 by inch (body), 10.35x3.54x1.63 by inch (endcaps included) 236x 90 x 41.5 by mm (body), 263 x 90 x 41.5 by mm (endcaps included)
Net Weight	1600g
Packing	10pcs/Carton/19kg, 500x370x335mm

Notes: Unless specified, all the test results are measured in 25°C room temperature.

* Marked items are optional. Please contact Sales to specify the required functions.

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■ Safety/EMC Compliance

Safety Standard	Description
UL8750	Light emitting diode(LED) equipment for use in lighting products
UL1012	Power units other than class 2
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

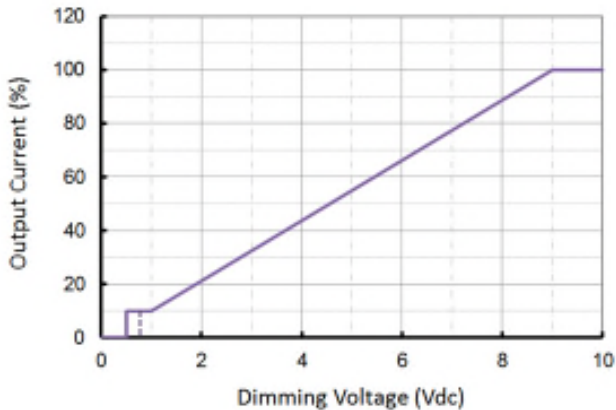
Parameter	Min.	Typ.	Max.
Vdim Sourcing Current	200uA	300uA	450uA
Vdim Allowed Input Voltage	-20 V		20 V
0-10V Dimming Range	10% (Vdim=1V)	Linear	100% (Vdim=9~10V)
PWM Dimming Range	10% (Duty=10%)	Linear	100% (Duty=90-100%)
Dim off threshold		0.5V or 5%	0.6V or 6%
Dim on threshold	0.6V or 6%	0.7V or 7%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

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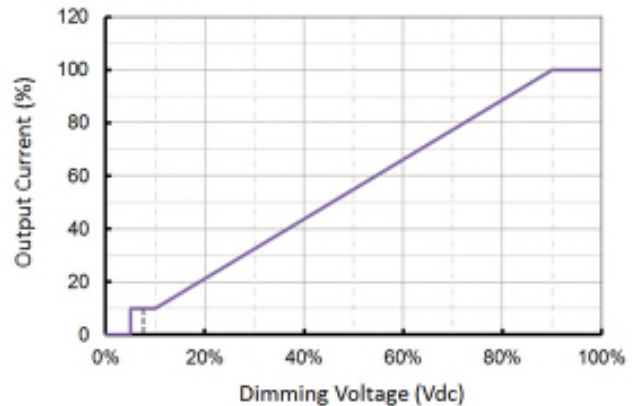
Dimming Curve

a. With dim-off (default)

0-10V Dimming Curve

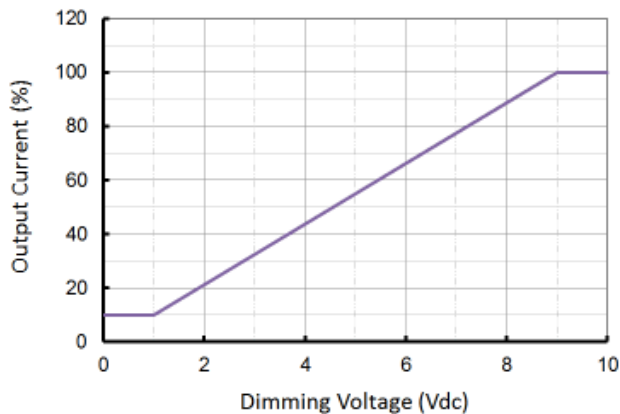


PWM Dimming Curve

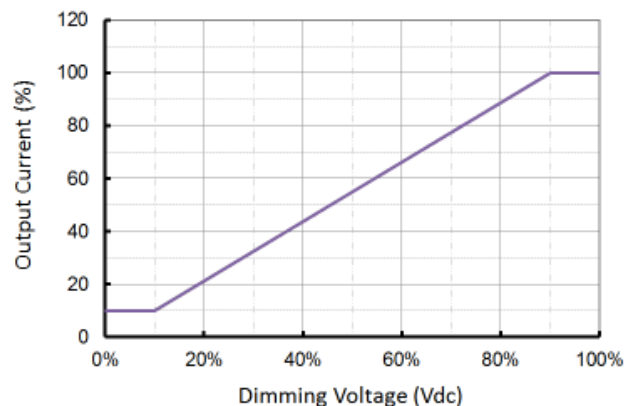


b. Without dim-off (contact sales to get this feature)

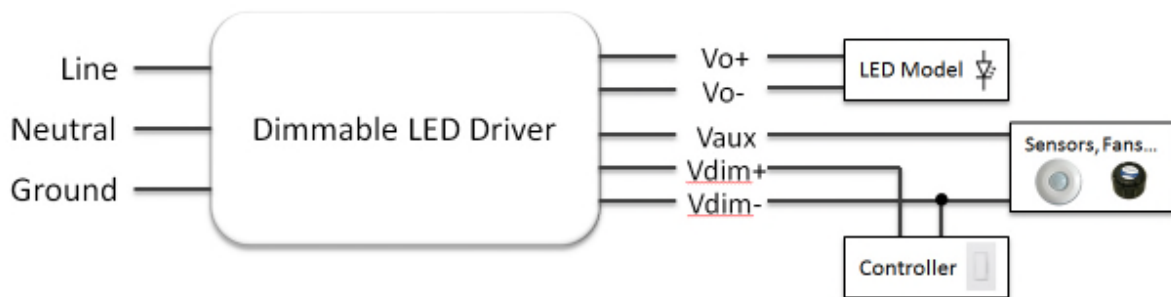
0-10V Dimming Curve



PWM Dimming Curve



- Dimming Wiring



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■ Lifetime vs. Case Temperature

