

**■ 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<br>ENEC/CCC |
| LHA240-C140-XYZ | 180-528 Vac         | 250W         | 107-238Vdc     | 1050mA                          | 1400mA                          | UL/FCC/CB<br>ENEC/CCC |
| LHA240-C210-XYZ | 180-528 Vac         | 250W         | 71-179Vdc      | 1400mA                          | 2100mA                          | UL/FCC/CB<br>ENEC/CCC |
| LHA240-C420-XYZ | 180-528 Vac         | 250W         | 36-89Vdc       | 2800mA                          | 4200mA                          | UL/FCC/CB<br>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,<br>0.6Amax@480Vac & Full-Load   |
| Inrush Current         | 65A peak, 1.2ms duration, <0.25A2s@277Vac, Cold Start<br>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)<br>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   |

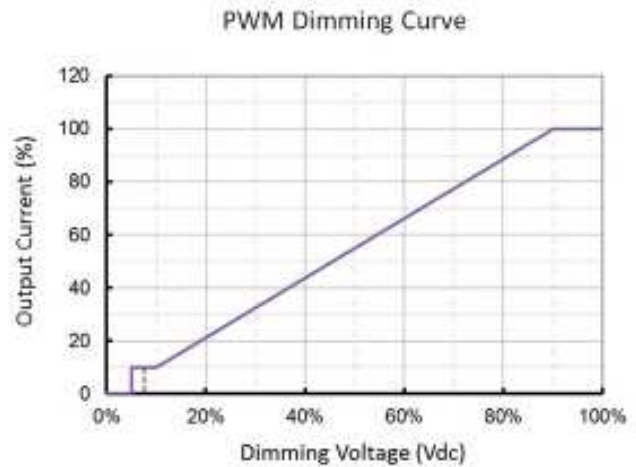
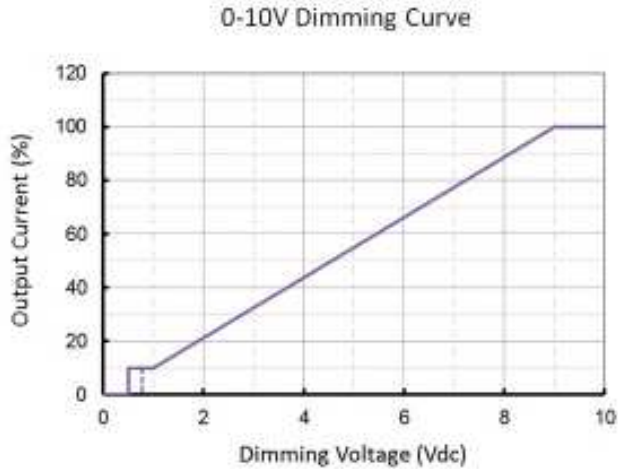
## ■ Dimming

| 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                 |

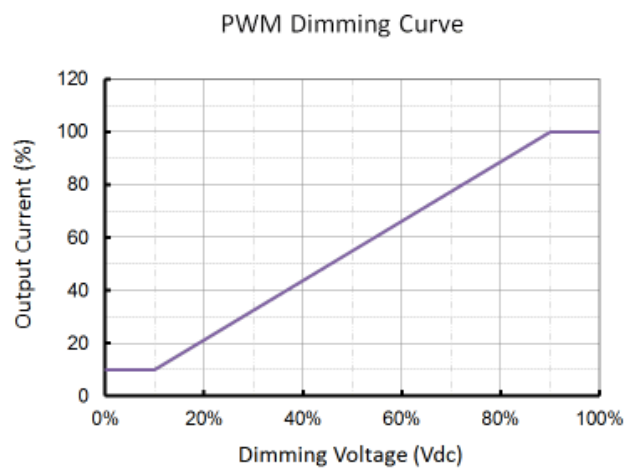
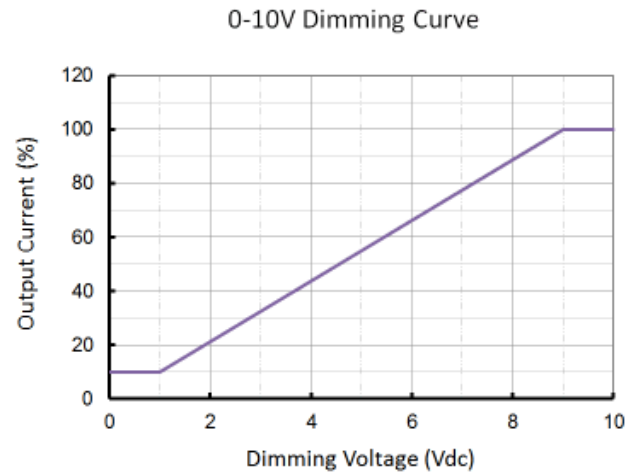
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**Dimming Curve**

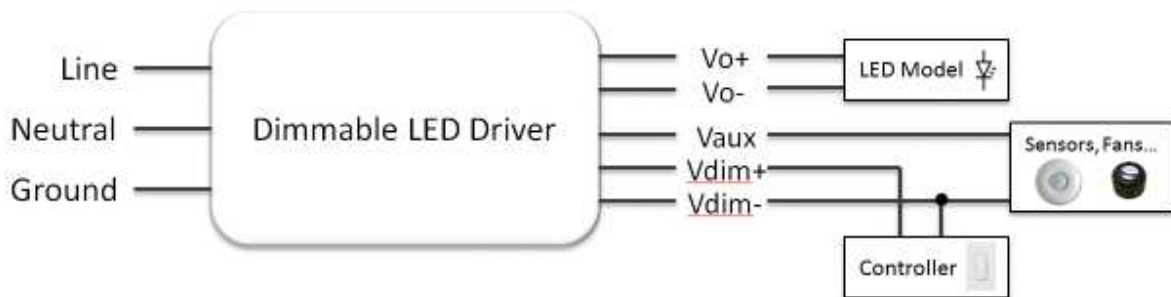
**a. With dim-off (default)**



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



**- Dimming Wiring**



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■ Lifetime vs. Case Temperature

