

## APMS150C105HD LED Drivers

Replacement BH Voltage driver for use on the following Appleton™ LED Luminaires: 13,500 and 17,500 Lumen Mercmaster™ LED Generation 3 and Industrial Mercmaster LED Generation 3; , 15,000 and 19,500 Lumen Areamaster™ Generation 2 LED and Industrial Areamaster Generation 2 LED; 30,000 and 38,000 Lumen Areamaster Generation 2 HL LED and Industrial Areamaster Generation 2 HL LED; 15,000 and 19,500 Lumen Baymaster™ LED and Industrial Baymaster™ LED; 30,000 and 38,000 Lumen Baymaster HL LED Industrial Baymaster HL LED; 13,600, 16,700 and 19,300 Lumen Code•Master™ LED

### Features

- Input voltage: 347–480 Vac
- Built-in active PFC function: 0.98 typ.
- Built-in lightning protection
- High efficiency: 90% typ.
- Waterproof (IP67)
- Constant current / 0–10V dimming / clock dimming (CLK) / PWM dimming
- Protection: OVP, SCP, OTP
- UL Type TL, Type HL

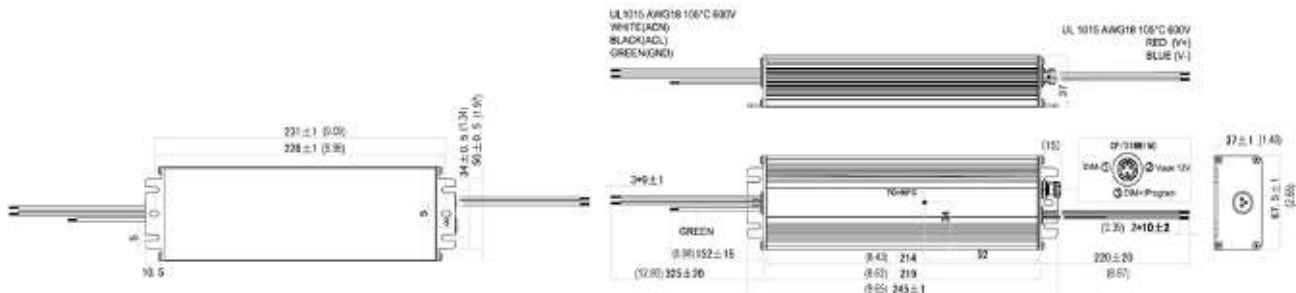


### NEC/CEC Compliances

- UL8750, UL1012, CSA 250.13

Output Current	Input Voltage	Max. Output Power	Typical Efficiency	Typical Power Factor	Used in BH Luminaire Models	Part Number
650 mA	347-480 Vac	150 W	90%	0.98	AMLGL7W, AMLHL2W, BLLL7W, BLLPL7W, BHLL2W, BHLPL2W, CMLED40	APMS150C105HD65
680 mA	347-480 Vac	150 W	90%	0.98	AMLGL7C, AMLGL7N, AMLHL2C, AMLHL2N, BLLL7C / BLLPL7C, BLLL7N / BLLPL7N, BHLL2C / BHLPL2C, BHLL2N / BHLPL2N	APMS150C105HD68
720 mA	347-480 Vac	150 W	90%	0.98	MLGH3	APMS150C105HD72
820 mA	347-480 Vac	150 W	90%	0.98	CMLED75	APMS150C105HD82
890 mA	347-480 Vac	150 W	90%	0.98	AMLGL8W, AMLHL3W, BLLL8W, BLLPL8W, BHLL3W, BHLPL3W	APMS150C105HD89
900 mA	347-480 Vac	150 W	90%	0.98	MLGH6	APMS150C105HD90
915 mA	347-480 Vac	150 W	90%	0.98	AMLHL3C, AMLHL3N, BHLL3C / BHLPL3C, BHLL3N / BHLPL3N	APMS150C105HD91
930 mA	347-480 Vac	150 W	90%	0.98	AMLGL8C, AMLGL8N, BLLL8C / BLLPL8C, BLLL8N / BLLPL8N	APMS150C105HD93
980 mA	347-480 Vac	150 W	90%	0.98	CMLED90	APMS150C105HD98

### Dimensions in Millimeters (Inches)

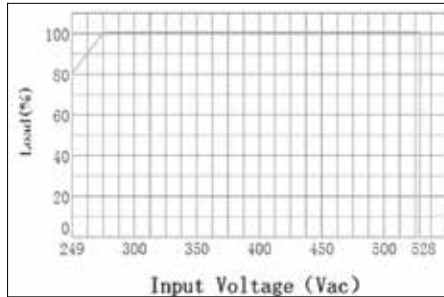


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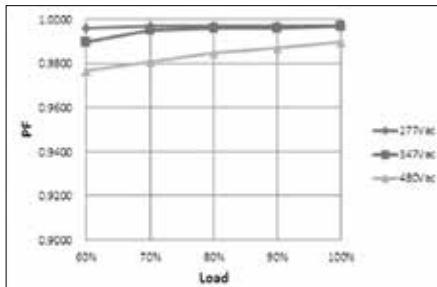
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## Diagrams

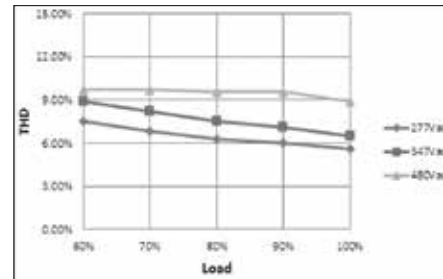
Derating Curve



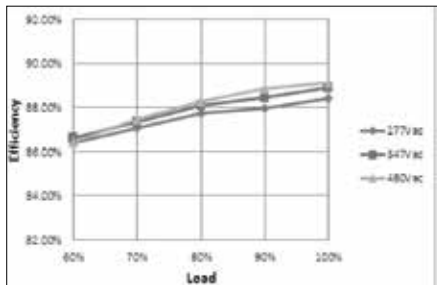
Power Factor vs. Load Curve



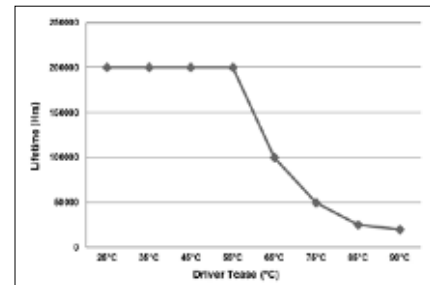
THD Curve



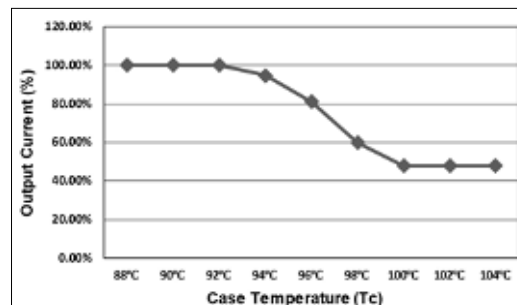
Efficiency vs. Load Curve



Lifetime vs. Driver Tcase



OTP



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### Specifications ①

<b>Input</b>	Efficiency (277 Vac) ②	88% (Typical), >86% at full load
	Efficiency (480 Vac) ②	90% (Typical), >88% at full load
	Voltage Range (V)	249–528 Vac
	Frequency Range (Hz)	47 ~ 63
	Power Factor	0.96 (Typical), 0.94 (minimum) at 480 Vac
		>0.9 with 60% ~ 100% load, at 277 ~ 480 Vac
	THD	<15% with 80% ~ 100% load, at 277 ~ 480 Vac
		<20% with 60% ~ 100% load, at 277 ~ 480 Vac
	AC Current (Max.)	0.72 A max. at 277 Vac
	Inrush Current (Max.)	65 A at 480 Vac input +25 °C (+77 °F) Cold Start (time wide=500 uS, measured at 50% Ipeak)
Leakage Current (Max.)	0.75 mA at 480 Vac, 50 Hz	
<b>Output</b>	Output Voltage Range (V)	214–86
	Output Current Range (mA)	70–1050
	Rated Power (W)	150 (max.)
	Output Current Settable Range	0.45 to 1.05 A dc
	Constant Power Output Set Range	65% I <sub>o_max</sub> ~ 100% I <sub>o_max</sub>
	Ripple Current	<10% [(PK-AV) / AV], full load
	Current Tolerance	5%
	Line Regulation	3%
	Load Regulation	5%
	Turn on Delay Time	2s (typ.), measured at 277 Vac input
<b>Dimming Control</b>	12 Vdc Output Voltage ( Vdc)	10.8 V min. ~ 12 V typ. ~ 13.2 V max.
	12 Vdc Output Current (mA)	0 mA ~ 20 mA max.
	0 ~ 10V / DMI+ Voltage	Absolute maximum voltage -10 V min ~ 20 V max
	0 ~ 10V / DMI+ Short Current	280 uA ~ 450 uA (DIM(+)=0)
	Dimming Function	0 ~ 10 V / 10% I <sub>o</sub> ~ 100% I <sub>o</sub>
<b>Protection</b>	Over Voltage (V)	<280V Protection type: Voltage limiting output will not exceed the upper limit voltage, recovers automatically after fault condition is removed.
	Short Circuit	Protection type: Hiccup mode; recovers automatically after short is removed.
	Over Temperature	Protection type: Decrease output current. When T <sub>c</sub> reaches +100 °C + / - 10 °(+212 °F + / - 10 °), the output current decrease to approximate 50% of rated value. (See OTP plot.)

① All parameters NOT specially mentioned are measured at 480 Vac input, rated load and 25 °C of ambient

② Measured at full load and steady-state temperature in 25 °C ambient (Efficiency will be about 2% lower if measured immediately after startup).

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## Specifications ①

<b>Environment</b>	Operating Humidity	20 ~ 95% RH non-condensing
	Tc	-40 ~ +90 °C (-40 ~ +194 °F) max.
	Storage Temp., Humidity	-40 ~ +85 °C (-40 ~ +185 °F), 10-95% RH
	Vibration	10-500 Hz, 5G 12 min./cycle, period for 72 min. each along X, Y, Z axes
<b>Safety &amp; EMC</b>	Safety Standard	UL8750, UL1012, CSA 250.13
	Withstand Voltage	I / P-O / P:3.75K Vac I / P-FG:1.875KV O / P-FG:1.5KV
	Isolation Resistance	I / P-O / P:100M Ohms (500 Vdc / +25 °C [+77 °F] / 70%RH)
	EMC Emission	Conducted Emission: FCC PART 15 Class A, Radiated Emission: FCC PART 15 Class A
<b>Others</b>	EMC Immunity	EN61000-4-2,3,4,5,6,8,11; EN61000-4-5: Line to Neutral: ±6 kV; Line to GND: ±6 kV ; Neutral to GND: ±6 kV. IEEE/ANSI C62.41.2 Transient surge requirements, combi wave 2 ohm source impedance
	MTBF	300,000 hours, measured at full load, +25 °C (+77 °F) ambient temperature MIL-HDBK-217F (+25 °C [+77 °F])
	Lifetime	Refer to plot
	Dimension	245 x 67.5 x 37 mm (L x W x H); (9.65 x 2.66 x 1.46 inches)
	Weight (Typ.)	1050 g (2.31 lb)

① All parameters NOT specially mentioned are measured at 480 Vac input, rated load and 25 °C of ambient

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