

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

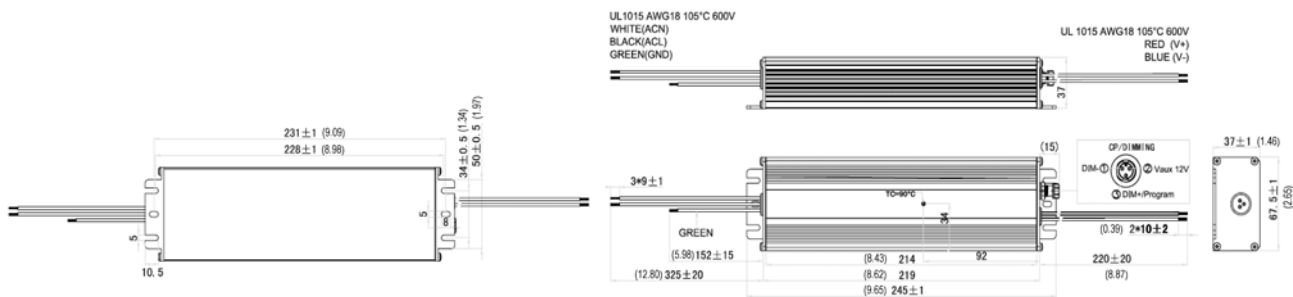


NEC/CEC Compliances

- 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)

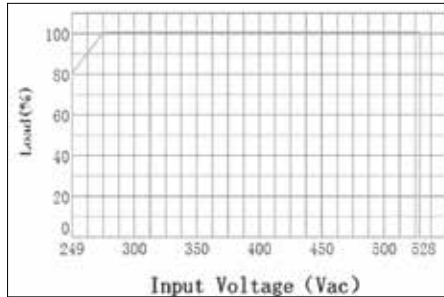


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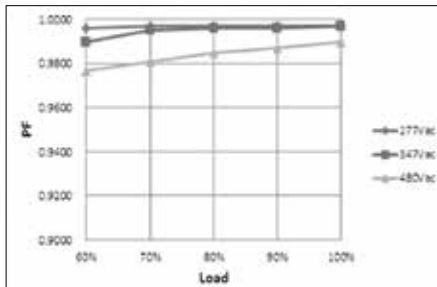
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Diagrams

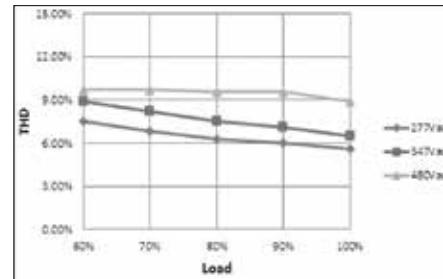
Derating Curve



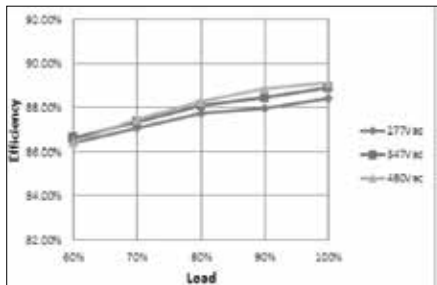
Power Factor vs. Load Curve



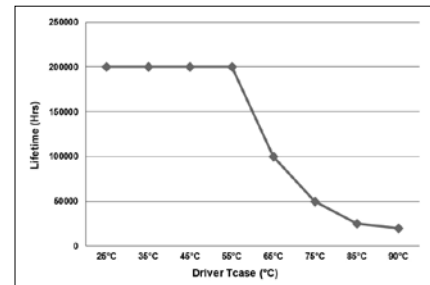
THD Curve



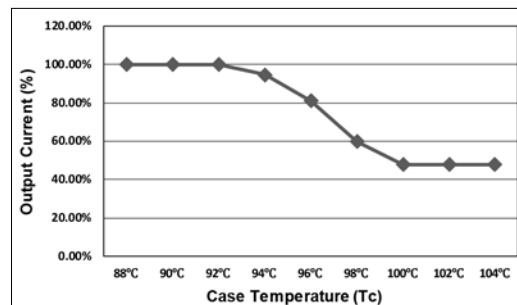
Efficiency vs. Load Curve



Lifetime vs. Driver Tcase



OTP



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Specifications ①

Input	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	
Output	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 _{o_max} ~ 100% I _{o_max}
	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
Dimming Control	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 _o ~ 100% I _o
Protection	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 _c 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

Environment	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
Safety & EMC	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
Others	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

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