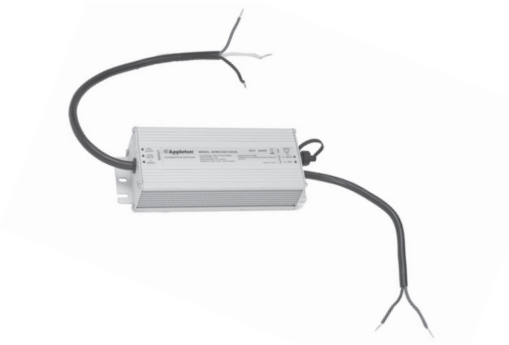
APMS100C105HD LED Drivers

Replacement BH Voltage driver for use on the following Appleton™ LED Luminaires: 7500, 9,500, and 11,500 Lumen Mercmaster™ LED Generation 3 and Industrial Mercmaster LED Generation 3; 9500 Lumen Areamaster™ Generation 2 LED and Industrial Areamaster Generation 2 LED; 2400 Lumen Areamaster Generation 2 HL LED and Industrial Areamaster™ Generation 2 HL LED; 9500 Lumen Baymaster™ LED and Industrial Baymaster LED; 2400 Lumen Baymaster HL LED and Industrial Baymaster HL LED; 7900, 10,000, 11,600 Lumen Code•Master™ LED

Features

- Input voltage: 347-480 Vac
- Built-in active PFC function: 0.98 Typ.
- Built-in Lightning protection.
- High efficiency: 87% Typ.
- Waterproof (IP66)
- Constant Current / 0-10V Dimming
- Clock Dimming (CLK)/PWM Dimming
- Protection: OVP, SCP, OTP
- Full Power at 65% Io max ~ 100% Io max (Constant Power)
- UL Type HL

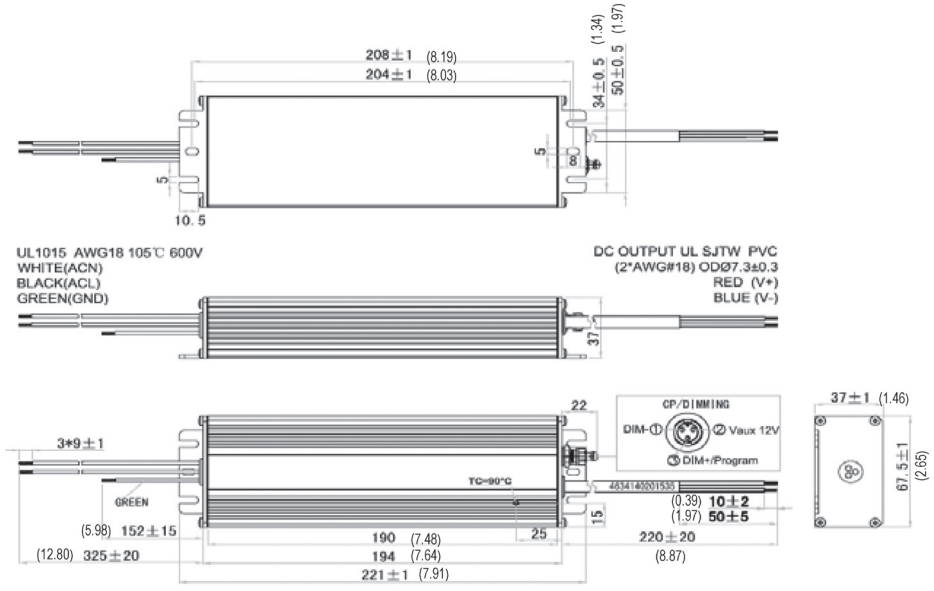


NEC/CEC Compliances

- UL8750, UL1310
- CSA 250.13

Output Current	Input Voltage	Max. Output Power	Typical Efficiency	Typical Power Factor	Used in BH Luminaire Models	Part Number
360 mA	347-480 Vac	100 W	90%	0.98	MLGL7	APMS100C105HD36
370 mA	347-480 Vac	100 W	90%	0.98	CMLED17	APMS100C105HD37
410 mA	347-480 Vac	100 W	90%	0.98	AMLGL6C and AMLGL6W BLLL6C/BLLPL6C BLLL6W/BLLPL6W	APMS100C105HD41
480 mA	347-480 Vac	100 W	90%	0.98	MLGL9 and MLGH9 CMLED25	APMS100C105HD48
530 mA	347-480 Vac	100 W	90%	0.98	AMLHL1C and AMLHL1W BHLL1C/BHLPL1C BHLL1W/BHLPL1W	APMS100C105HD53
570 mA	347-480 Vac	100 W	90%	0.98	CMLED35	APMS100C105HD57
595 mA	347-480 Vac	100 W	90%	0.98	MLGH1	APMS100C105HD59

Dimensions in Millimeters (Inches)



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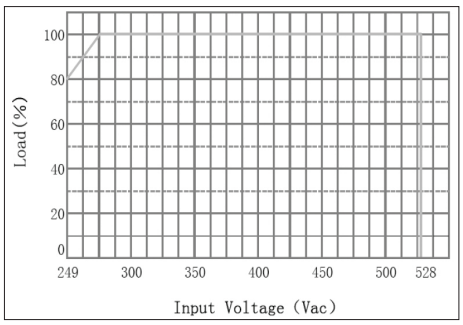
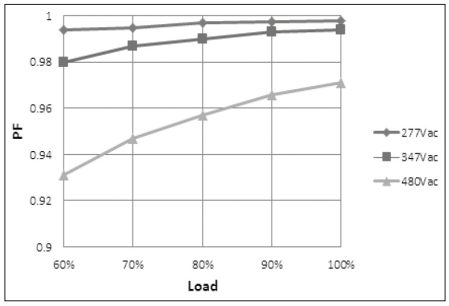
Diagrams

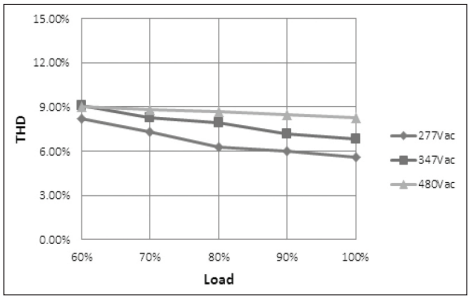
Derating Curve



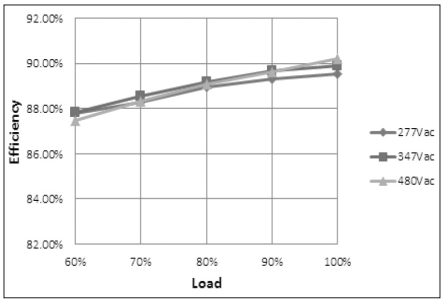
Power Factor vs. Load Curve



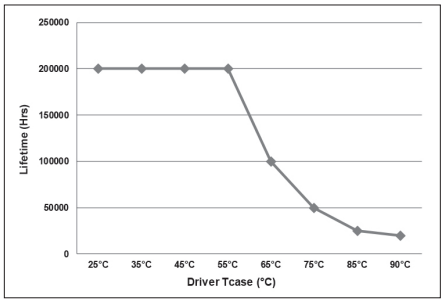
THD Curve



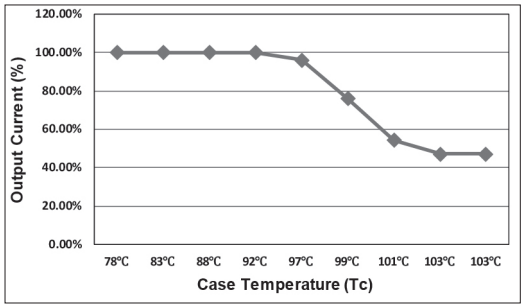
Efficiency vs. Load Curve



Lifetime vs. Driver Tcase



OTP



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APMS100C105HD LED Drivers

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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), ①	249–528 Vac
	Frequency Range (Hz)	47 ~ 63
	Power Factor	0.96 (Typical), 0.94 (minimum) at 480 Vac >0.9 with 50% ~ 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.)	0.5 A max. at 277 Vac
	Inrush Current (Max.)	65 A at 480 Vac input +25 °C 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)	150–57
	Output Current Range (mA)	70–1050
	Output Current Settable Range	0.45-1.05 A dc
	Rated Power (W)	100 (max.)
	Constant Power Output Set Range	65% Io_max ~ 100% Io_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 (Vdc)	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% Io ~ 100% Io

① All parameters NOT specially mentioned are measured at 480 Vac input, rated load and +125 °C of ambient temperature.
② Measured at full load and steady-state temperature in +25 °C ambient (Efficiency will be about 2% lower if measured immediately after startup)

APMS100C105HD LED Drivers

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Specifications ①

Protection	Over Voltage (V)	<250 V 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 Tc reaches +100 °C +/- +10 °C, the output current decrease to approximate 50% of rated value. (See OTP plot.)
Environment	Operating Humidity	20 ~ 95% RH non-condensing
	Storage Temp., Humidity	-40 °C ~ +85 °C, 10-95% RH
	Tc	-40 °C to +90 °C max.
	Vibration	10-500 Hz,5G 12 min/cycle, period for 72 min. each along X, Y, Z axes
Environment	Operating Humidity	20 ~ 95% RH non-condensing
	Storage Temp., Humidity	-40 °C ~ +85 °C, 10-95% RH
	Tc	-40 °C to +90 °C max.
	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 (500Vdc/25°C/70%RH)
	EMC Emission	Conducted Emission: FCC PART 15 Class A Radiated Emission: FCC PART 15 Class A
	EMC Immunity	EN61000-4-2,3,4,5,6,8,11, EN61000-4-5: Line to Neutral: ±6kV ; Line to GND: ±6kV ; Neutral to GND: ±6kV. IEEE / ANSI C62.41.2 Transient Surge Requirements, combi wave 2 ohm source impedance.
Others	MTBF	300,000 hours, measured at full load, +25 °C TC ambient temperature MIL-HDBK-217F (+25 °C)
	Lifetime	Refer to plot.
	Dimension	221 x 67.5 x 37 mm (L x W x H); (8.70 x 2.66 x 1.46 inches)
	Weight (Typ.)	940 g (2.07 lb)

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