

# APMS100C105UD LED Drivers

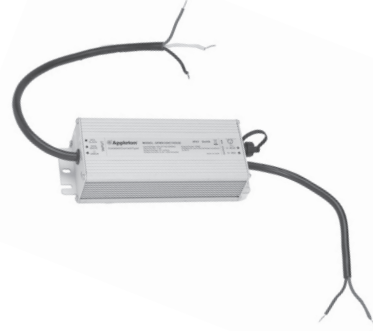
Replacement BU Voltage driver for use on Appleton™ 7500, 9,500, and 11,500 Lumen Mercmaster™ LED Generation 3, and 7500, 9,500, and 11,500 Lumen Industrial Mercmaster™ LED Generation 3, 9K Lumen Areamaster™ Generation 2 LED, 9K Lumen Industrial Areamaster™ Generation 2 LED, 24K Lumen Areamaster™ Generation 2 HL LED, 24K Lumen Industrial Areamaster™ Generation 2 HL LED, 9K Lumen Baymaster™ LED and 9K Lumen Industrial Baymaster™ LED, 24K Lumen Baymaster™ HL LED and 24K Lumen Industrial Baymaster™ HL LED

## Features

- Input voltage: 90–305 Vac
- Built-in active PFC function: 0.98Typ.
- Built-in lightning protection
- High efficiency: 90% Typ.
- Waterproof (IP67)
- Constant Current / 0–10V Dimming
- Protection: OVP, SCP, OTP
- Type HL

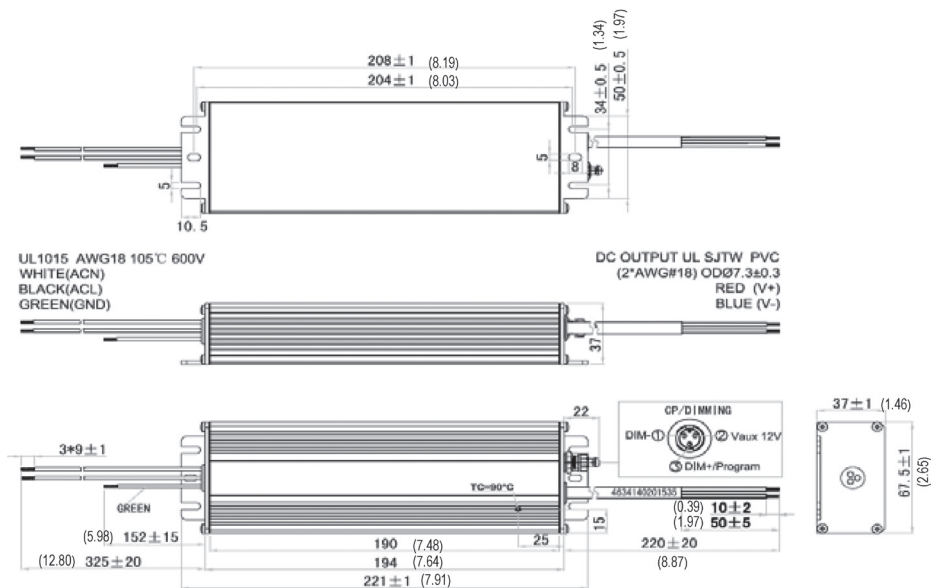
## NEC/CEC Compliances

- UL8750; UL1012; CAN/CSA-C22.2 No.107-01
- IEC/EN61347-1; IEC/EN61347-2-13



Output Current	Input Voltage	Max. Output Power	Typical Efficiency	Typical Power Factor	Used in BU Luminaire Models	Part Number
360 mA	90-305 Vac 125-300 Vdc	100 W	90%	0.98	MLGL7	APMS100C105UD36
410 mA	90-305 Vac 125-300 Vdc	100 W	90%	0.98	AMLGL6C and AMLGL6W BLLL6C/BLLPL6C BLLL6W/BLLPL6W	APMS100C105UD41
480 mA	90-305 Vac 125-300 Vdc	100 W	90%	0.98	MLGL9 and MLGH9	APMS100C105UD48
530 mA	90-305 Vac 125-300 Vdc	100 W	90%	0.98	AMLHL1C and AMLHL1W BHLL1C/BHLPL1C BHLL1W/BHLPL1W	APMS100C105UD53
595 mA	90-305 Vac 125-300 Vdc	100 W	90%	0.98	MLGH1	APMS100C105UD59

## Dimensions in Millimeters (Inches)

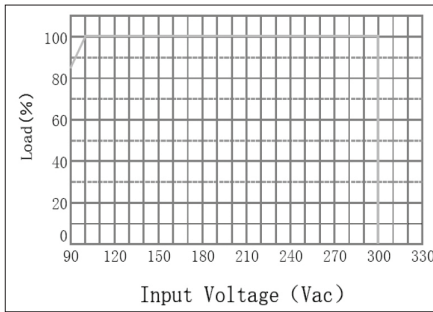


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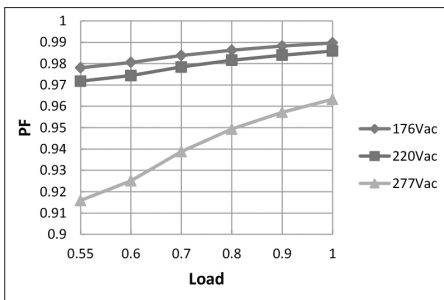
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## Diagrams

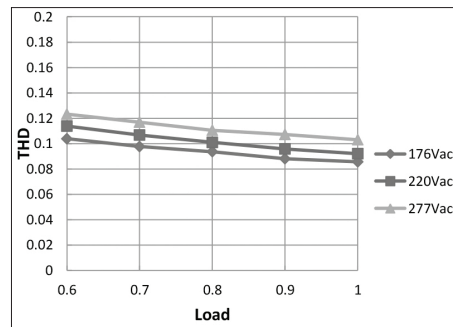
Derating Curve



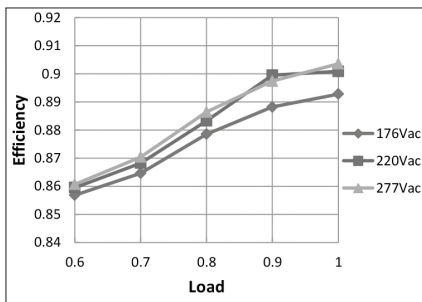
Power Factor vs. Load Curve



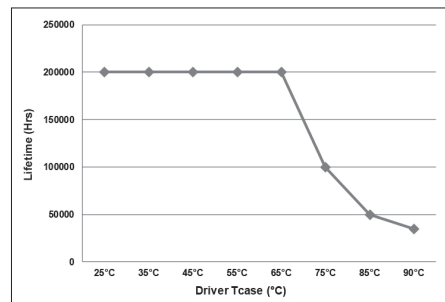
THD Curve



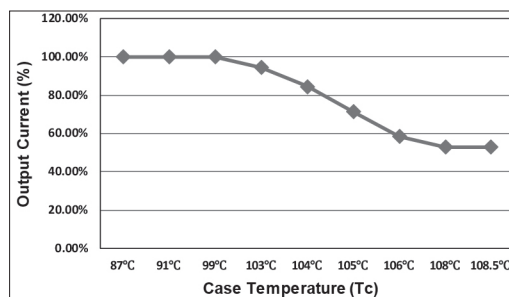
Efficiency vs. Load Curve



Lifetime vs. Driver Tcase



OTP



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## Specifications (at +25 °C ambient unless specified otherwise) ①

Input	Efficiency (120 Vac) ②	88% (Typical), >86% at full load	
	Efficiency (230 Vac) ②	90% (Typical), >88% at full load	
	Voltage Range (V)	90–305 Vac	
	Voltage Rated (V)	100–277 Vac, or 125–300 Vdc (min.–max.)	
	Frequency Range (Hz)	47 ~ 63	
	Power Factor	0.98 (typical) at 220 Vac >0.9 @120–277 Vac, 80–100% load	
	THD		<15% with 80% ~ 100% load, at 100–277 Vac
			<20% with 50% ~ 100% load, at 100–277 Vac
	AC Current (Max.)	1.35 A max. at 110 Vac	
	Inrush Current (Max.)	65 A at 230 Vac input +25 °C Cold Start (time wide=500 uS, measured at 50% I <sub>peak</sub> )	
Leakage Current (Max.)	0.75 mA at 277 Vac/60 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.)	
	Ripple Current	<10% [(PK-AV)/AV] full load	
	Current Tolerance	5%	
	Line Regulation	1%	
	Load Regulation	3%	
	Turn On Delay Time	0.5s (typ.)	
	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.		
Dimming Control	0 ~ 10V/DIM+ Voltage	Absolute maximum voltage - 10 V min. ~ 20 V max.	
	0 ~ 10V/DIM+ Short Current	280 uA ~ 450 uA (DIM(+)=0)	
	Dimming Function	0 ~ 10 V/10% I <sub>o</sub> ~ 100% I <sub>o</sub> ref.	

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Specifications (at +25 °C ambient unless specified otherwise) ①		
<b>Protection</b>	Over Voltage (V)	<200 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.)
	Lightning Surge Protection	Per IEEE C62.41.2202 (6 kV, 1.2/50 ms, 8/20 ms combination wave with 2 ohms source impedance, L-N, L-PE, N-PE)
<b>Environment</b>	Maximum Case Temperature	+90 °C
	Minimum Case Temperature	-40 °C
	Operating Humidity	20 ~ 95% RH non-condensing
	Storage Temp., Humidity	-40 °C ~ +85 °C 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>	Agency Approbations	UL8750; UL1012; CAN/CSA-C22.2 No.107-01; IEC/EN61347-1; IEC/EN61347-2-13
	Withstand Voltage	I/P-O/P:3.75 K Vac I/P-FG:1.875 KV O/P-FG:1.5 KV
	Isolation Resistance	I/P-O/P:100 M Ohms (500VDC/25°C/70%RH)
	EMC Emission	FCC PART15 Class B, EN55015, EN61000-3-2 Class C, EN61000-3-3
	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.
<b>Others</b>	MTBF	300,000 hours, measured at full load, +25 °C ambient temperature, MIL-HDBK-217F (+25 °C)
	Lifetime	Refer to plot
	Dimension	183 x 67.5 x 37 mm (L x W x H); (7.20 x 2.66 x 1.46 inches)
	Weight (Typ.)	820 g (1.8 lbs)

① All parameters NOT specially mentioned are measured at 230 Vac input, rated load and 25°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)