

APMS100C105UD LED Drivers

Replacement BU 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: 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

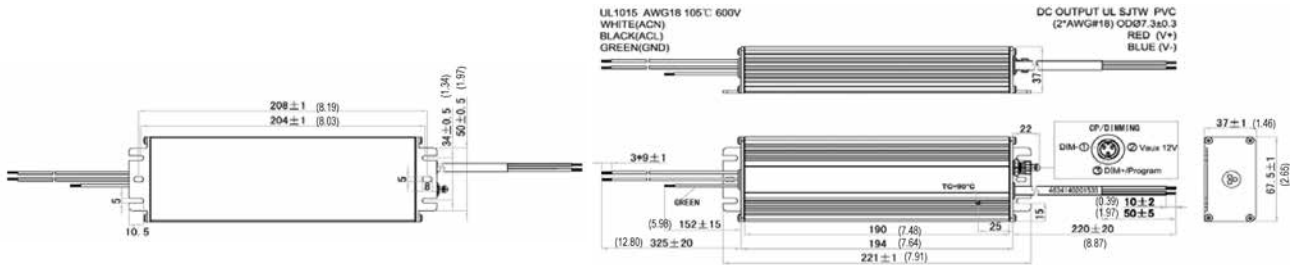
NEC/CEC Compliances

- 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
370 mA	90-305 Vac / 125-300 Vdc	100 W	90%	0.98	CMLD17	APMS100C105UD37
410 mA	90-305 Vac / 125-300 Vdc	100 W	90%	0.98	AMLGL6C, AMLGL6N, AMLGL6W, BLLL6C / BLLPL6C, BLLL6N / BLLPL6N, BLLL6W / BLLPL6W	APMS100C105UD41
480 mA	90-305 Vac / 125-300 Vdc	100 W	90%	0.98	MLGL9, MLGH9 CMLD25	APMS100C105UD48
530 mA	90-305 Vac / 125-300 Vdc	100 W	90%	0.98	AMLHL1C, AMLHL1N, AMLHL1W, BHLL1C / BHLPL1C, BHLL1N / BHLPL1N, BHLL1W / BHLPL1W	APMS100C105UD53
570 mA	90-305 Vac / 125-300 Vdc	100 W	90%	0.98	CMLD35	APMS100C105UD57
595 mA	90-305 Vac / 125-300 Vdc	100 W	90%	0.98	MLGH1	APMS100C105UD59

Dimensions in Millimeters (Inches)

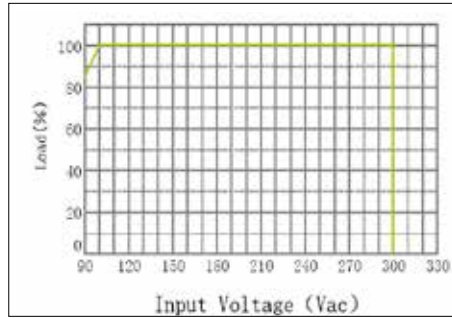


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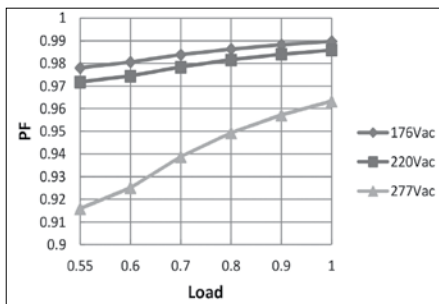
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Diagrams

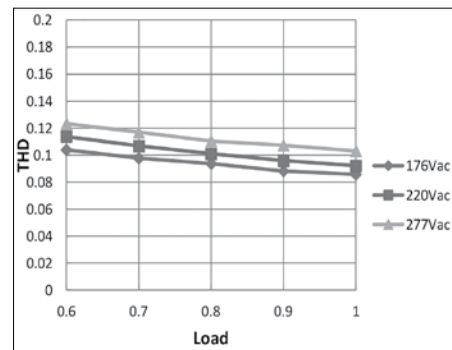
Derating Curve



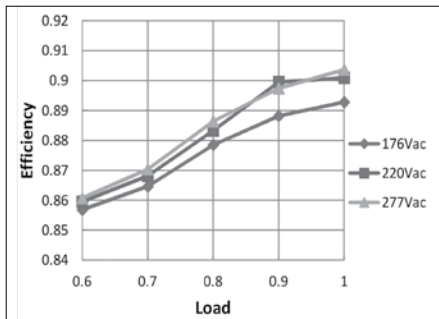
Power Factor vs. Load Curve



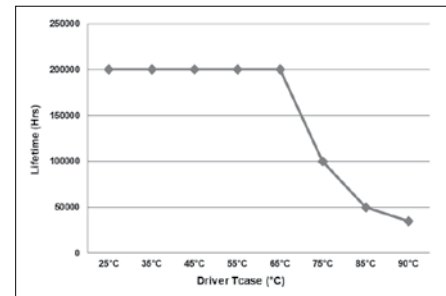
THD Curve



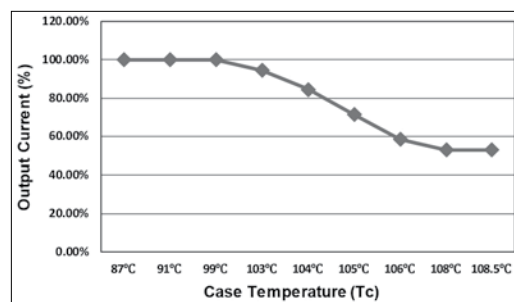
Efficiency vs. Load Curve



Lifetime vs. Driver Tcase



OTP



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Specifications (at [+25 °C (+77 °F)] 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.)	1.35A max. at 110 Vac	
	Inrush Current (Max.)	65A at 230 Vac input +25 °C (+77 °F) Cold Start (time wide=500uS, measured at 50% Ipeak)	
	Leakage Current (Max.)	0.75mA 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.)		
Dimming Control	12Vdc Output Voltage (Vdc)	10.8Vmin.~12Vtyp.~13.2V max.	
	12Vdc Output Current (mA)	0mA~20mA max.	
	0~10V / DMI+ Voltage	Absolute maximum voltage - 10V min.~20V max.	
	0~10V / DMI+ Short Current	280uA~450uA (DIM(+)=0)	
	Dimming Function	0~10V / 10%lo~100%lo ref.	
Protection	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 ° (+212 °F +/- 10 °), the output current decrease to approximate 50% of rated value. (See OTP plot.)	
	Lightning Surge Protection	Per IEEE C62.41.2202 (6 kV, 1.2/50ms, 8/20ms combination wave with 2 ohms source impedance, L-N, L-PE, N-PE)	

① All parameters NOT specially mentioned are measured at 230 Vac input, rated load and +25 °C (+77 °F) of ambient temperature.

② Measured at full load and steady-state temperature in +25 °C (+77 °F) ambient (Efficiency will be about 2% lower if measured immediately after startup).

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Specifications (at [+25 °C (+77 °F)] ambient unless specified otherwise) ①		
Environment	Maximum Case Temperature	+90 °C (+194 °F)
	Minimum Case Temperature	-40 °C (-40 °F)
	Operating Humidity	20~95% RH non-condensing
	Storage Temp., Humidity	-40 ~ +85 °C (-40 ~ +185 °F), 10-95% RH
	Vibration	10~500Hz,5G 12 min/cycle, period for 72 min. each along X, Y, Z axes
Safety & EMC	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 kVac I / P-FG:1.875 kV O / P-FG:1.5 kV
	Isolation Resistance	I / P-O / P:100M 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.
Others	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	183 x 67.5 x 37 mm (7.20 x 2.66 x 1.46 inches) (L x W x H)
	Weight (Typ.)	820 g (1.8 lbs)

① All parameters NOT specially mentioned are measured at 230 Vac input, rated load and +25 °C (+77 °F) of ambient temperature.