

# A-51™ LED and CodeMaster™ Jr LED Series LED Driver

120–277V driver for use on Appleton™ AL, AAL and CJL 1500 & 3000 Lumen Jelly Jars.

## Features

- Input voltage: 100–277 Vac, 100–300 Vdc
- Built-in active PFC function: 0.99 Typ.
- High efficiency

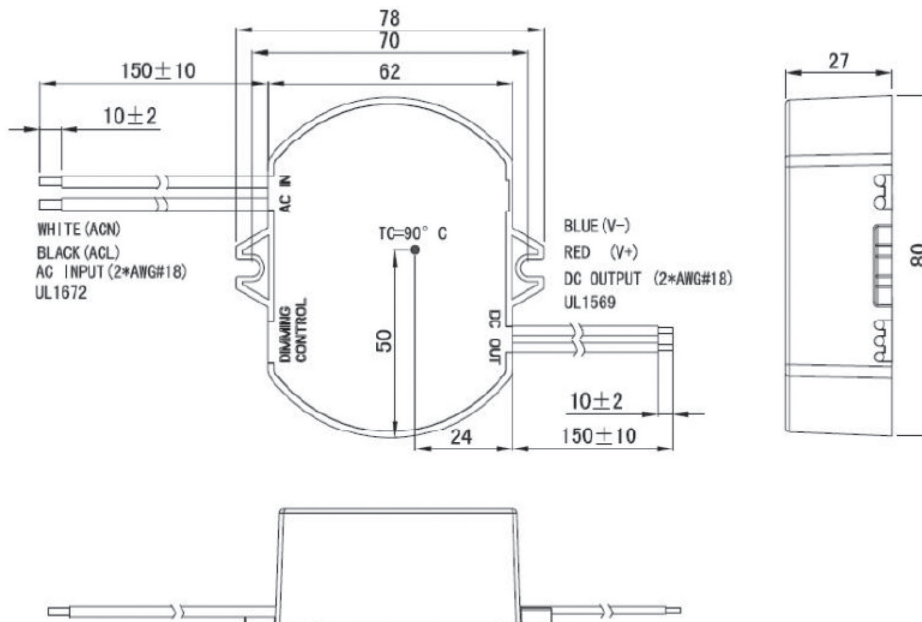
## NEC/CEC Compliances

- UL8750, UL1310
- EN61347-1, EN61347-2-13



Output Current	Input Voltage	Max. Output Power	Typical Efficiency	Typical Power Factor	Used in Luminaire Models
350 mA	277-480 Vac / 100-300 Vdc	15 W	83%	0.99	ALL1CBU, ALL1WBU AALL1CBU, AALL1WBU, CJLL1CBU, CJLL1WBU
700 mA	277-480 Vac / 100-300 Vdc	25 W	86%	0.99	ALL2CBU, ALL2WBU AALL2CBU, AALL2WBU, CJLL2CBU, CJLL2WBU

## Dimensions in Millimeters (Inches)

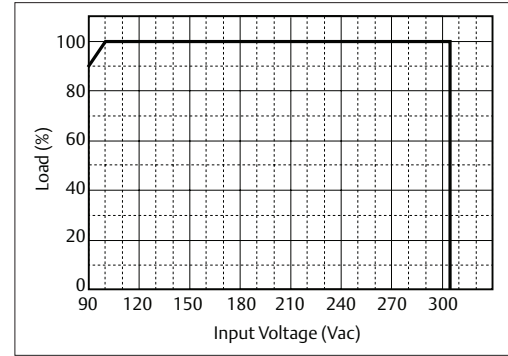
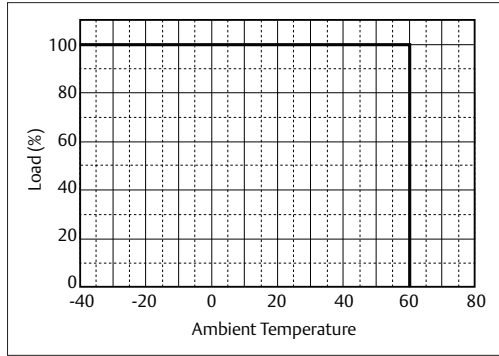


# A-51™ LED and CodeMaster™ Jr LED Series LED Driver

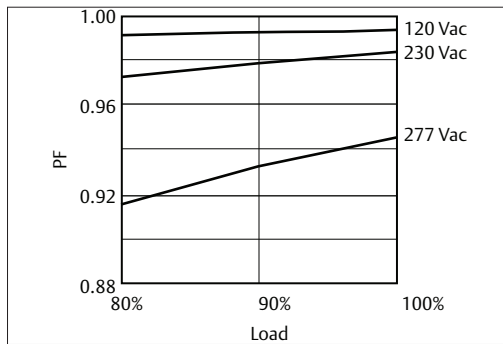
120–277V driver for use on Appleton™ AL, AAL and CJL 1500 Lumen Jelly Jars.

## Diagrams

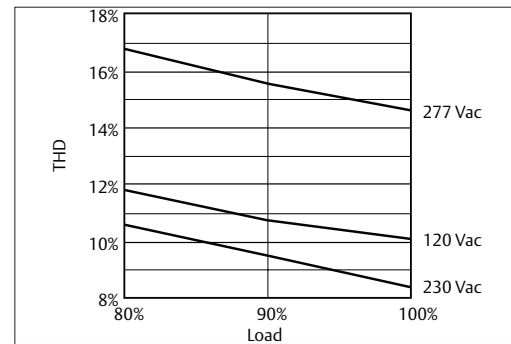
### Derating Curve



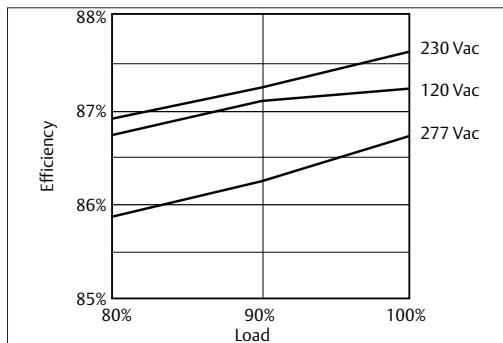
### Power Factor vs. Load Curve



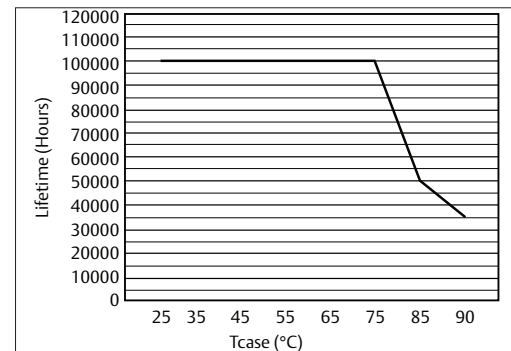
### THD Curve



### Efficiency vs. Load Curve



### Lifetime vs. Driver Tcase

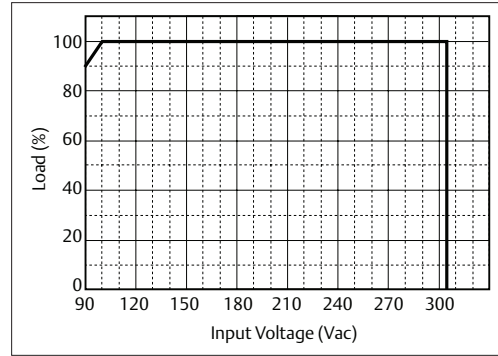
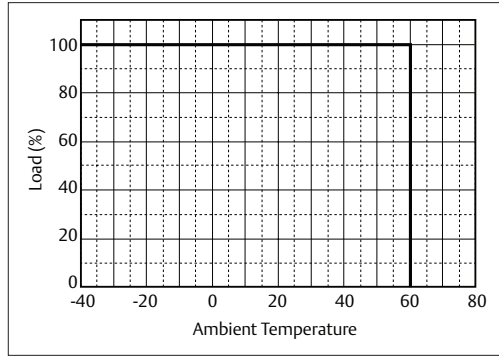


# A-51™ LED and CodeMaster™ Jr LED Series LED Driver

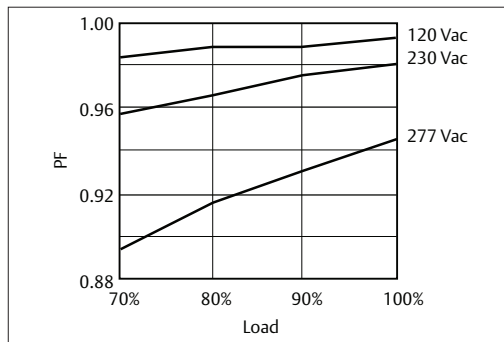
120–277V driver for use on Appleton™ AL, AAL and CJL 3000 Lumen Jelly Jars.

## Diagrams

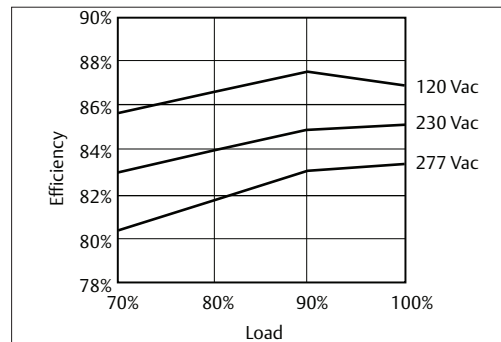
### Derating Curve



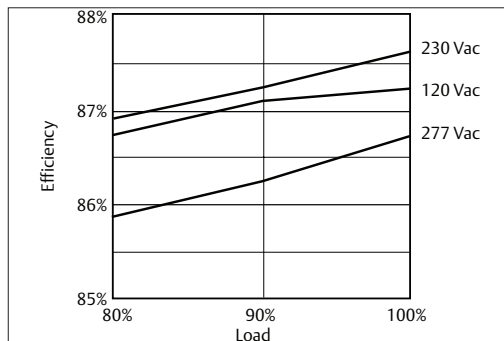
### Power Factor vs. Load Curve



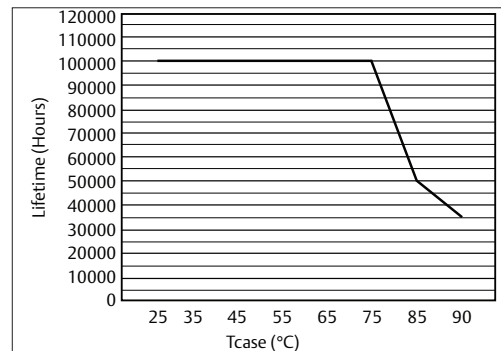
### THD Curve



### Efficiency vs. Load Curve



### Lifetime vs. Driver Tcase



# A-51™ LED and CodeMaster™ Jr LED Series LED Driver

120–277V driver for use on Appleton™ AL, AAL and CJL 1500 & 3000 Lumen Jelly Jars.

## Specifications ①

Input	Efficiency (120 Vac) ②	84% (Typical)
	Efficiency (230 Vac) ②	83% (Typical)
	Voltage Range (V)	90 ~ 305 Vac, 100–300 Vdc
	Voltage Rated (V)	120 ~ 277 Vac, or 100-300 Vdc (min.-max.)
	Frequency Range (Hz)	47 ~ 63
	Power Factor	0.99 (Typ.) at 120 ~ 230 Vac, with 90% load; 0.97 (Typ.) at 220 Vac, 90% load; > 0.9 at 120–277 Vac, 90% load
	THD	<20% at 120 Vac ~ 277 Vac, with 80% ~100% load; 15% (Typ.) at 220 Vac, 80–100% load
	AC Current (Max.)	0.4 A at 100 Vac input, 0.2 A at 230 Vac
	Inrush Current (Max.)	15 A at 230 Vac input, +25 °C (+77 °F), Cold Start (time wide=500 uS, measured at 50% Ipeak). NOT APPLICABLE FOR THE INRUSH CURRENT TO NOISE FILTER FOR LESS THAN 0.2 ms.
	Leakage Current (Max.)	0.5 mA at 277 Vac, 60 Hz
Output	Output Voltage Range (V)	30–42
	Rated Current Range (mA)	350
	Rated Power (W)	15
	Ripple Current	<30% ((PK-AV) / AV], full load)
	Current Tolerance	5%
	Line Regulation	5%
	Load Regulation	5%
	Turn On Delay Time	<1.2s, at 120 Vac; <1s, at 230 Vac
Protection	Over Voltage (V)	<60, 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
	Operating Humidity	20 ~ 95% RH NON-CONDENSING
Environment	Operating Temperature	-40° ~ +60 °C (-40 ~ +140 °F) (Refer to derating curve.)
	Tc	-40 to +90 °C (-40 to +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, UL1310, CAN/CSA–C22.2 No. 223-M91, EN61347-1, EN61347-2-13
	Withstand Voltage	I / P-O / P:3.75k Vac
	Isolation Resistance	I / P-O / P:100M Ohms (500 Vdc / +25 °C [+77 °F] / 70%RH)
	EMC Emission	FCC Part 15 Class A, EN55015, EN61000-3-2 Class A, EN61000-3-3
	EMC Immunity	EN61000-4-2,3,4,5,6,8,11, EN61547, Surge Immunity Test: Level 4 (Line to Neutral: ±2 kV)
Others	MTBF	300,000 hours, measured at full load, +25 °C (+77 °F) ambient temperature
	Lifetime	50,000 Hours at Tc +85°C (Refer to "Life Time VS. Tcase (Ref.)")
	Dimension	80 x 78 x 27 mm (L x W x H); (3.15 x 3.08 x 1.06 inches)
	Weight (Typ.)	180 g (0.4 lb)

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).