ACE LEDS

Constant Current LED Driver

Model Number:
AC-50CD1.4APUQ

Input Voltage: 120-277V
Input Frequency: 50/60Hz
Side Mount/Leads OPTIONS
< 1 Sec. Start time
Surge Protection
Dim-to 0% & 1--100% (by NFC Setting)

EPA POLLUTION PREVENTER

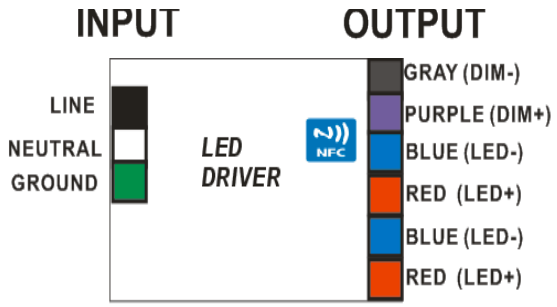
Programmable, Digital,
Wide-Range Adjustable Current & Dimming

Electrical Specifications:

Output Power	Input Power	Input Current	Min PF (full load)	Max THD (full load)	Output Voltage	Output Current	T case Max	Min, Starting Temp**	Efficiency Up To	IP Rating	Dimming Protocol	Dimming Range
50 W	60 W	0.5 A @ 120 V, 0.22 A @ 277 V	>0.90	<20%	15-55 V	400 mA - 1400 mA	90˚C	-40˚C	85%	30	0-10 V	0-100%

** This driver can operate down to -40˚C in a non-dimming condition. Below 0˚C some flicker may be observed.

WIRING:



PHYSICAL:

Hot Spot

Dimensions	Length	Width	Height	Mounting
AC-50CD1.4APUQ	12.4"	1.3"	1.08"	11.8"

PROTECTION:

Over Voltage	Short Circuit	Over Temp
Output Current decade mode, recovers automatically after fault condition is removed	Hiccup mode, recovers automatically after fault condition is removed	Shut down o/p voltage, re-power on to recover

SAFETY & EMC ENVIRONMENT:

Operation Temp.	Working Humidity	Storage Temp., Humidity	Maximum T-Case Temp	EMI/EMS
0˚C - 50˚C	10% - 90%	-40˚C - 80˚C	90˚C	FCC Part 15 class A, CSA C22.2 No. 13-14

c UL us LISTED E332747

*AC Electronics/AC LED Power Designs warrants to the purchaser that each LED Driver will be free from defects in material or workmanship for a period of 5 years when operated at max case temp of up to <75°C; 3 years from date of manufacture when operated at a max case temp of up to 90°C when properly installed and under normal conditions of use. See aceleds.com for complete warranty policy.

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Data is based upon tests performed by AC Electronics in a controlled environment and representative performance. Actual performance can vary depending on operating conditions. Specifications are subject to change without notice. All specifications are nominal unless otherwise noted.

RoHS COMPLIANT LEAD-FREE

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SAFETY:

- Class P
- Class 2
- Class A sound rating
- Overload Protection
- Open/Short Circuit Protection
- LED driver has a life expectancy of 50,000 hours at Tcase of ≤75°C
- LED driver has a life expectancy of 100,000 hours at Tcase of ≤65°C
- Warranty: 5 yrs based on max case temp of 75°C; 3 yrs based on max case temp of 90°C*
- Input/Output Isolation
- FCC Title 47 CFR Part 15
- Surge Protection (2 KV)

INSTALLATION:

- Max Remote installation distance is 18 ft
- LED driver cases should be grounded
- LED drivers shall be installed inside electrical enclosures
- 18 AWG 600V/105C tinned stranded copper lead-wires are required for installation

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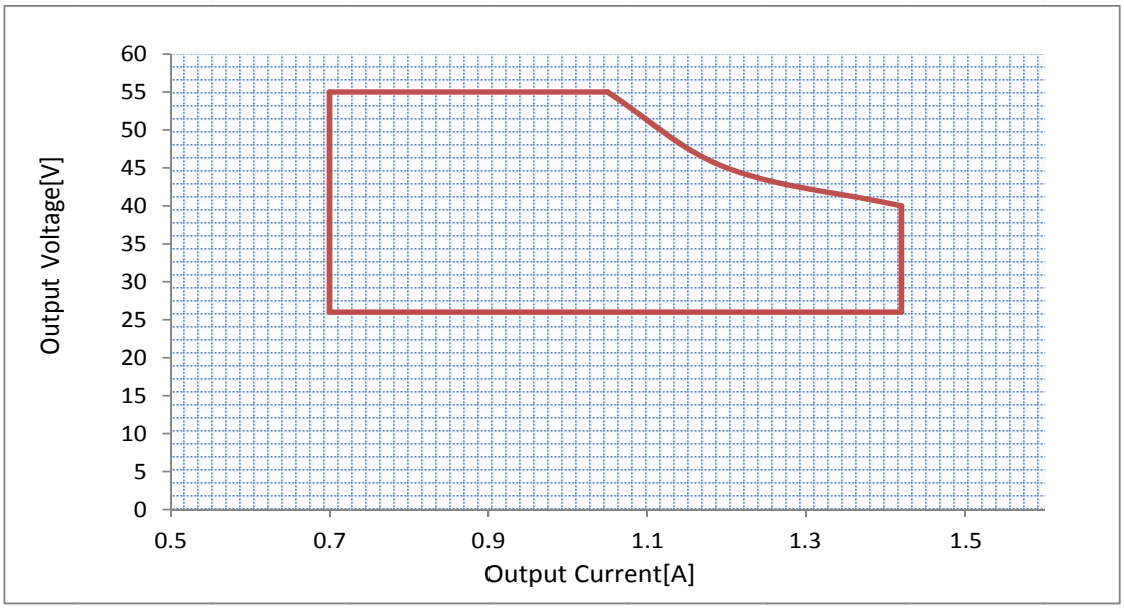
GENERAL INFORMATION:

WARRANTY	5 Years TC≤75° C, 3 Years 75° C ≤TC ≤90° C
Inrush Current	35 A
MTBF	10,000 Hrs Type
Protection	Overload/Over temperature/Short circuit protection

APPROVALS:

UL Class 2, FCC Class A, RoHs, Type HL

IOUT/VOUT CURVE



CONTROL THE IOUT WITH THE PROGRAMMING WAND. DOWNLOAD SOFTWARE FROM http://www.aceleds.com/programmable.php

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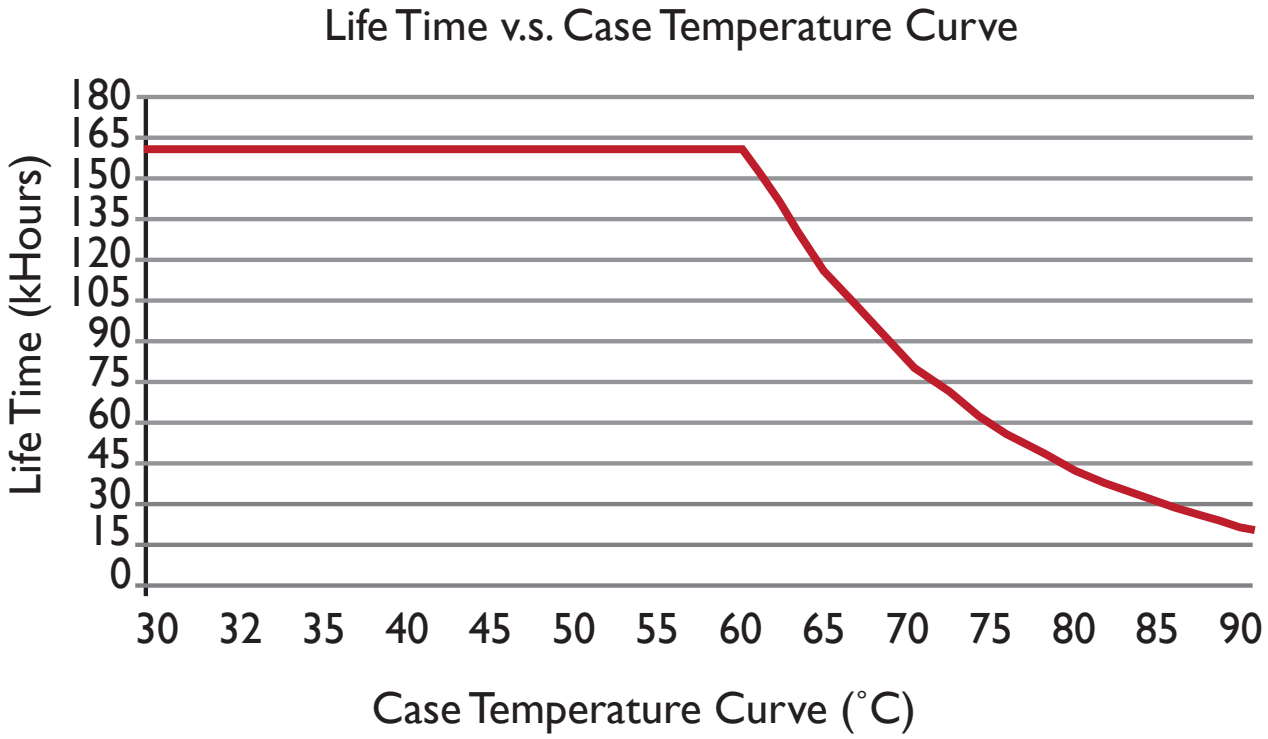
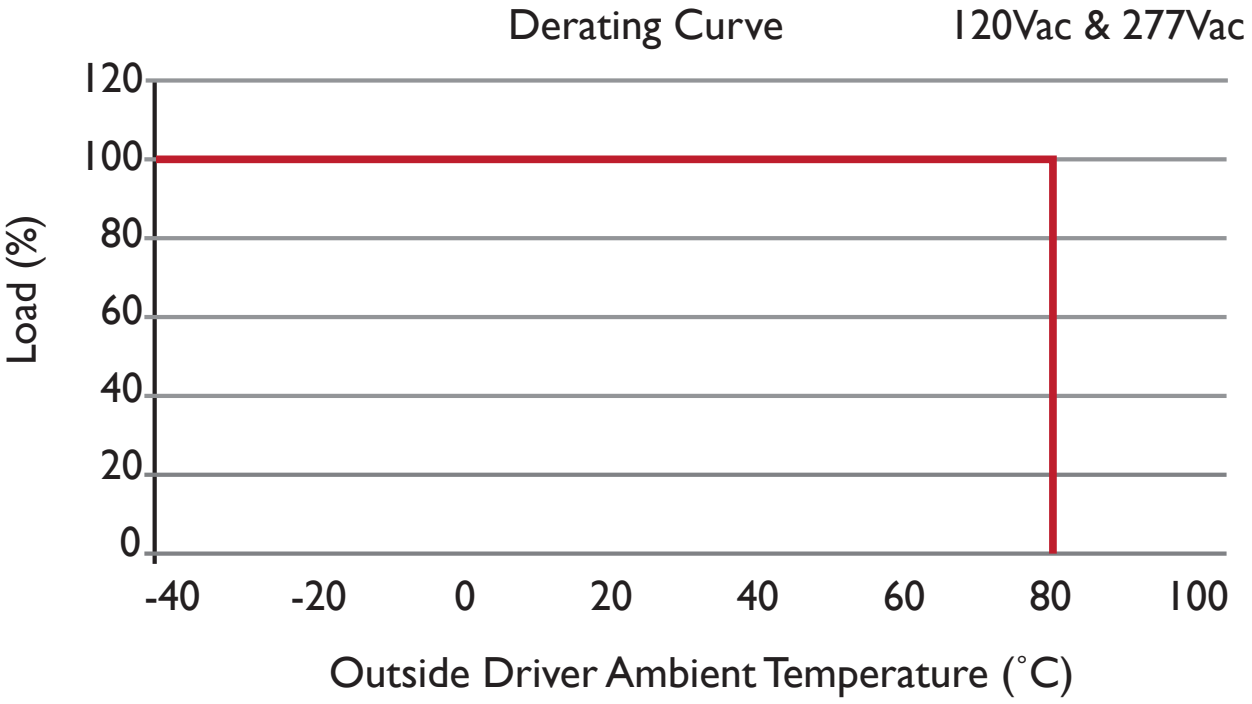
PERFORMANCE CHARACTERISTICS





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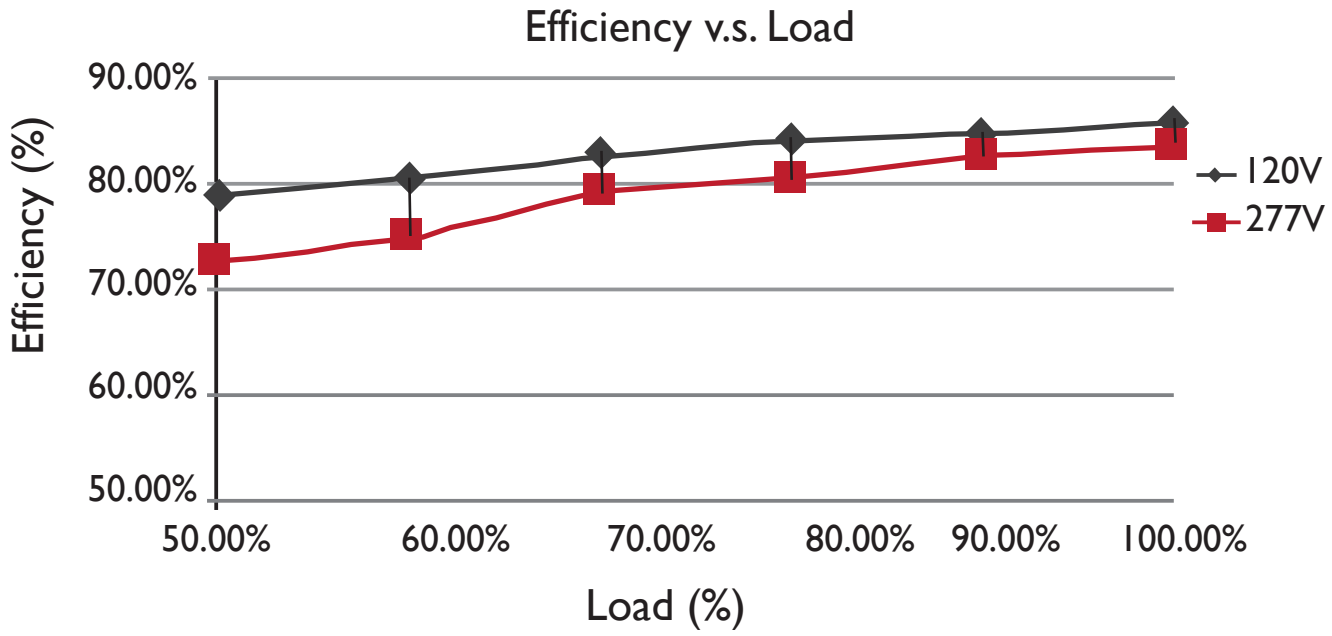

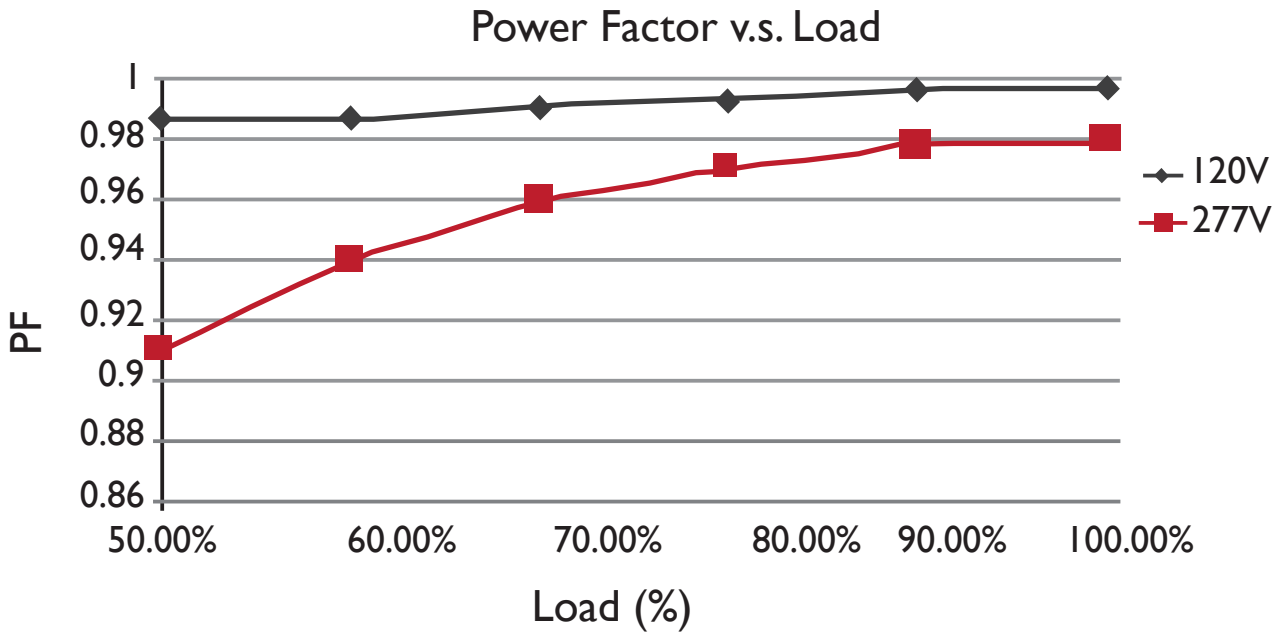

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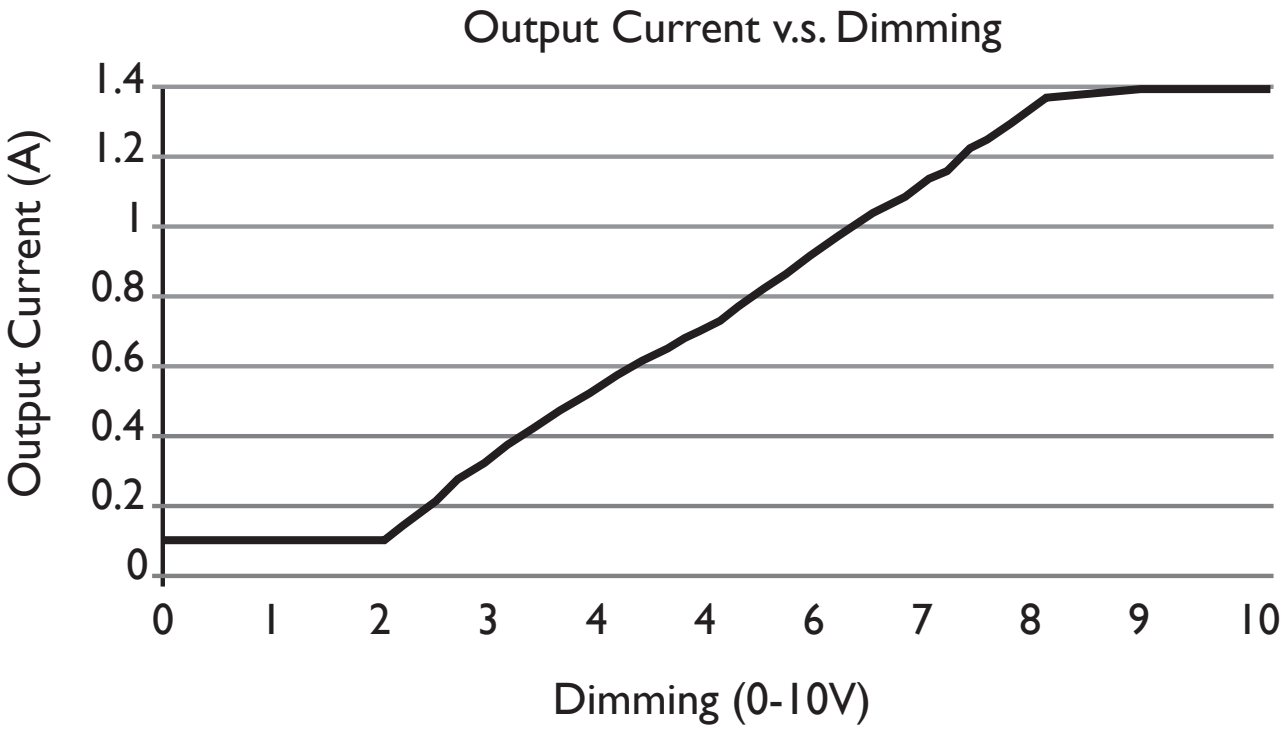

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PERFORMANCE CHARACTERISTICS

Put the programmable wand above the NFC mark of the driver to start programming

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Programmable Driver Options (App Note)
All programmable drivers accept a 16-bit hexadecimal code to program the output current (Iout) of the driver. The Iout programming codes are documented in the computer based-programming software (ST-TOOLS.exe) or from the driver's IOUTCODE.pdf file. The Locations below 0, 1, 2, 3 contain the basic code for a specific output current value (example 84 03 **00** 01 = 1050 mA for AC-50CD1.4APNZ).

Location	0	1	**2**	3
Value	00	00	**00**	00

For drivers containing Revision C of their firmware (contact factory for date code of implementation), it is also possible to adjust the minimum dimming level and the dimming speed. This adjustment is made by modifying location **2** of the programming code while keeping the other locations set for the desired output current. Specifically, the location 3 values are defined as:

- **00** => Dim to 1%, Speed ≤ 1.0 sec
- **01** => Dim-To-OFF, Speed ≤ 1.0 sec
- **02** => Dim to 10%, Speed ≤ 1.0 sec
- **03** => Dim to 1%, Speed ≥ 2.5 sec
- **04** => Dim-To-Off, Speed ≥ 2.5 sec
- **05** => Dim to 10%, Speed ≥ 2.5 sec

As an example, if the programming code value of 84 03 00 01 is programmed, the output current will be 1050 mA, and the driver will dim to 1% and the dimming speed will be ≤ 1.0 sec. If the programming code of 84 03 04 01 is programmed, the output current will be 1050 mA, and the driver will dim to off and the dimming speed will be ≥ 2.5 sec.