

# AC-50CD1.4APPD Constant Current LED Driver

Programmable | Digital  
Wide-Range Adjustable Current & Dimming

Input Voltage: 120-277V  
Input Frequency: 50/60Hz  
Side Leads  
≤ 1 Sec. Start time

## Decade™

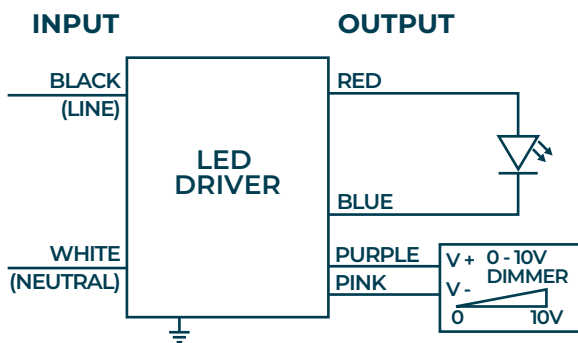
LED Driver with 10-Year USA-Backed Warranty

### ELECTRICAL SPECIFICATIONS:

Output Power Max	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	KV Rating	IP Rating	Dimming Protocol	Dimming Range
50W	59W	500mA @ 120V 210mA @ 277V	0.9	20%	15 - 55V	400 - 1400mA	90°C	0°C	85%	2KV	64	1 to 10V	100% to 1% to OFF

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

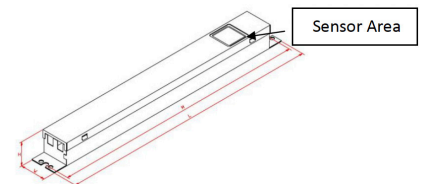
### WIRING:



#### Lead Lengths

Black	6"	Blue	6"	Purple	7.1"
White	6"	Red	6"	Pink	7.1"

### PHYSICAL:



#### Dimensions

Dimensions	Length	Width	Height	Mounting
AC-50CD1.4APPD	12.8"	1.34"	1.15"	12.5"

### SAFETY:

- Class A sound rating
- Overload Protection
- Open/Short Circuit Protection
- Input/Output Isolation
- Class 2
- \*Warranty: 10 yrs based on max case temp of ≤75°C, 5 yrs based on max case temp of ≤90°C
- FCC Title 47 CFR Part 15
- Surge Protection (2 KV)

### INSTALLATION:

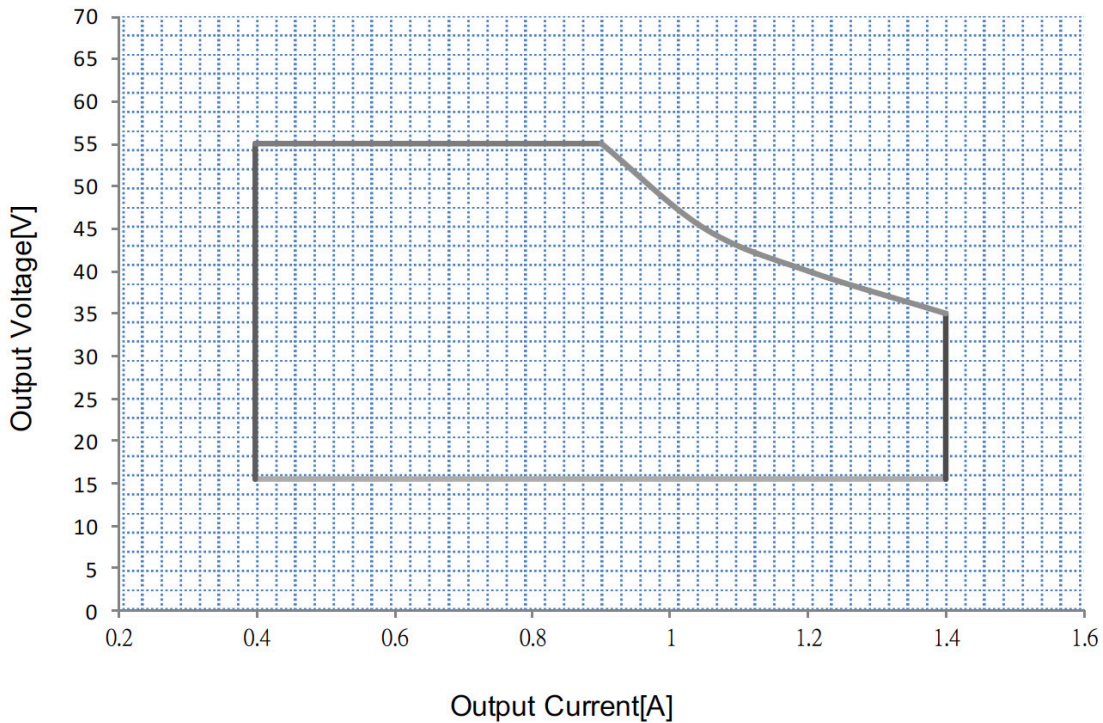
- Max Remote installation distance is 18 ft
- LED driver cases should be grounded
- LED drivers shall be installed inside electrical enclosures
- 18 AWG 600V/105C tinned stranded copper lead-wires are required for installation



\*AC Electronics/ACE LEDS warrants to the purchaser that each LED Driver will be free from defects in material or workmanship for a period of 10 years when operated at max case temp of up to ≤75°C; 5 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](http://aceleds.com) for complete warranty policy.

For questions or to place an order contact us at [oemsales@aceleds.com](mailto:oemsales@aceleds.com) or 800-375-6355 or your local WPG American Sales representative at [inquiry@wpgamericas.com](mailto:inquiry@wpgamericas.com) or 888-WPG8881

### IOUT/VOUT CURVE



### OUTPUT CURRENT CODE LIST

Current Value (mA)	Correspond Iout Code				Current Value (mA)	Correspond Iout Code			
	Location					Location			
	0	1	2	3		0	1	2	3
400	01	90	00	06	950	03	B6	00	06
450	01	C2	00	06	1000	03	E8	00	06
500	01	F4	00	06	1050	04	1A	00	06
550	02	26	00	06	1100	04	4C	00	06
600	02	58	00	06	1150	04	7E	00	06
650	02	82	00	06	1200	04	B0	00	06
700	02	BC	00	06	1250	04	E2	00	06
750	02	EE	00	06	1300	05	14	00	06
800	03	20	00	06	1350	05	46	00	06
850	03	52	00	06	1400	05	78	00	06
900	03	84	00	06	1400 OFF	05	78	01	06

**Note: Factory default current is set to the maximum current unless otherwise specified.**  
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 by programming the location 2.

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## PROGRAMMABLE DRIVER OPTIONS (APP NOTE)

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

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



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 04 1A 00 06 = 1050 mA for AC-50CD1.4APPD).

Location | 0 | 1 | **2** | 3 |

Value | 00 | 00 | **00** | 00 |

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 2 values are defined as:

### Linear Dimming:

- **00** => Dim to 1%, Speed  $\leq$  1.0 sec
- **01** => Dim-To-OFF, Speed  $\leq$  1.0 sec
- **02** => Dim to 10%, Speed  $\leq$  1.0 sec

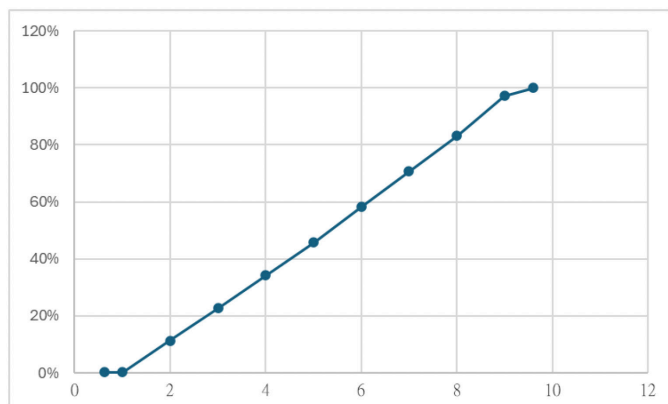
### Logarithmic Dimming:

- **10** => Dim to 1%, Speed  $\leq$  1.0 sec
- **11** => Dim-To-OFF, Speed  $\leq$  1.0 sec
- **12** => Dim to 10%, Speed  $\leq$  1.0 sec

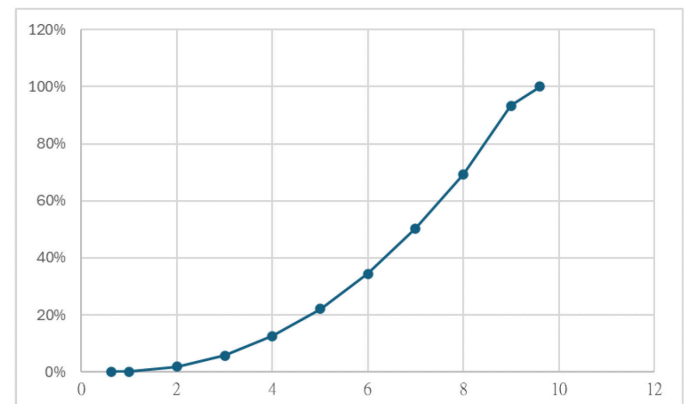
As an example, if the programming code value of 04 1A 00 06 is programmed, the output current will be 1050 mA, and the driver will dim to 1% and the dimming speed will be  $\leq$  1.0 sec. If the programming code of 04 1A 01 06 is programmed, the output current will be 1050 mA, and the driver will dim to off and the dimming speed will be  $\leq$  1.0 sec.

## DIMMING CURVE

LINEAR DIMMING



LOGARITHMIC DIMMING



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