ACE LEDS

Input Voltage 120-277 Vac, 50/60 Hz
Output Power 12 W (max)

AC12CD350APT7L Pencil™ Programmable LED Driver

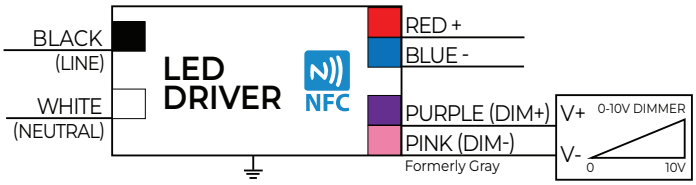
PRIMARY SPECIFICATIONS:

Output Power	Input Power	Input Current	Min PF (full load)	Max THD (full load)	Output Voltage	Output Current	T Case Max	Min Starting Temp	IP Rating	Efficiency Up To	Dimming Protocol	Dimming Range
12 W	14 W	0.15 A @ 120 V 0.06 A @ 277 V	>0.95	<20%	9-32 V	140-350 mA, ±5%	90˚C	-35˚C	64	84%	0 to 10 V	0.5-100% to off

PHYSICAL:

Dimensions	Length	Width	Height
AC12CD350APT7L	5.5"	0.75"	0.75"

WIRING:



Lead Lengths					
Black	5.9"	Blue	5.9"	Purple	5.9"
White	5.9"	Red	5.9"	Pink	5.9"

SAFETY, RATINGS AND PROTECTION:

- UL and CUL listed
- Class 2 output
- Over current protection: 95-108%
- Open circuit and short circuit protection
- Working ambient temperature range: -35-45°C
- Working relative humidity: 5-100%
- Storage temperature: -40-85 °C
- Storage relative humidity: 5-100%
- Damp location: Use only within an enclosure
- Inrush current: 25 A @ 230 Vac cold start ± 25˚C
- MTBF: >200 khrs to MIL-HDBK-217 @ 25˚C, GB
- Vibration: 10-500 Hz, 5G 12 min./cycle, period for 72 minutes each along X, Y, and Z axis

INSTALLATION:

- IP64
- Mounting: 5.1"
- LED driver cases should be grounded
- LED drivers shall be installed inside electrical enclosures
- Use 18 AWG 600 V, 105 ˚C tinned stranded copper wires
- Max ambient temp if mounted on metal surface to achieve 50,000 hour lifetime (case @ 75 °C) : 62 °C.
- Max ambient temp if not mounted on metal surface to achieve 50,000 hour lifetime (case @ 75 °C) : 51 °C.

WARRANTY:

- 5 Year Limited Warranty, 3 Years @ T case max 90˚C

APPROVALS:

- UL 8750
- EMC: EN55015, EN61000-4-2,3,4,5,6,8,11
- EN61000-3-2 Class C
- Class P listed

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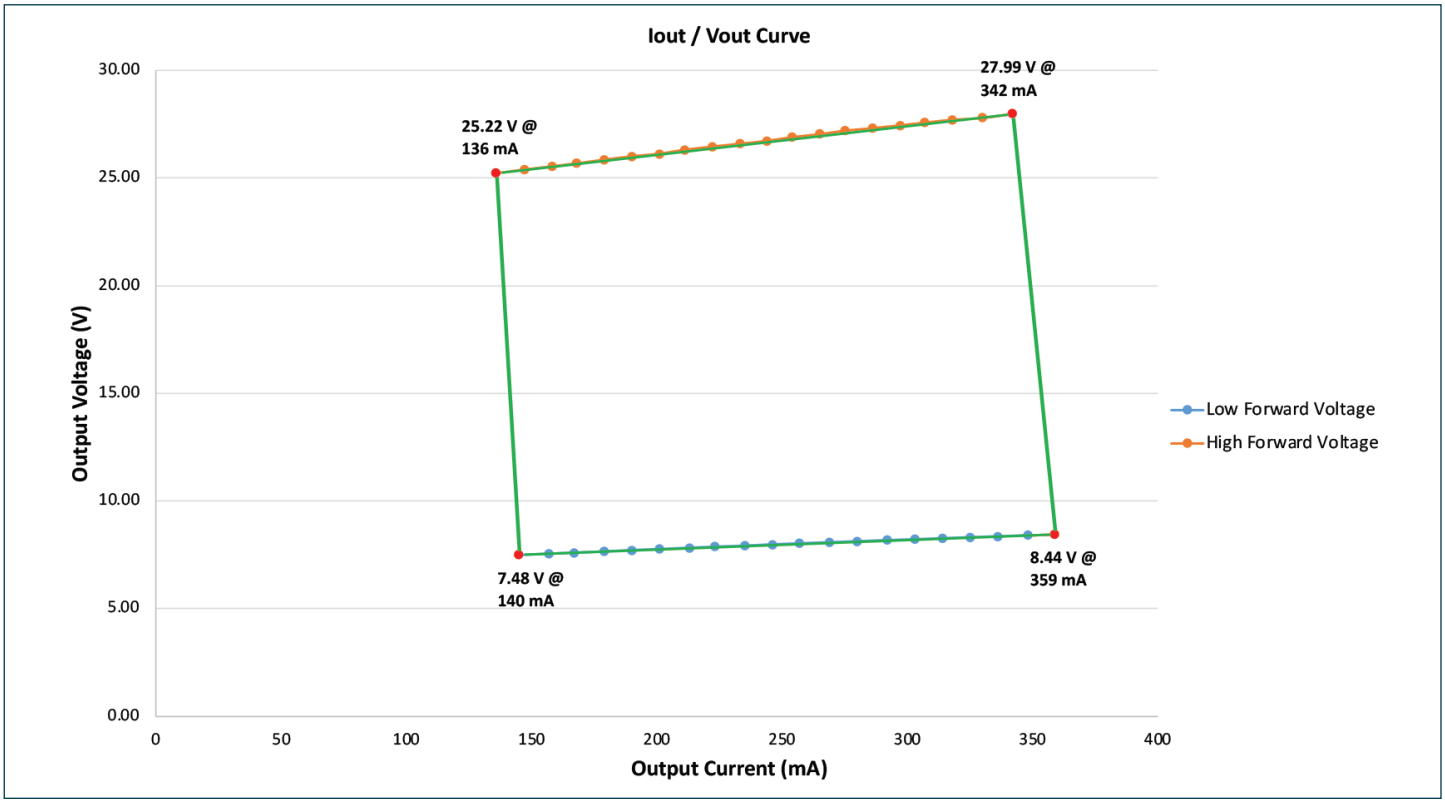

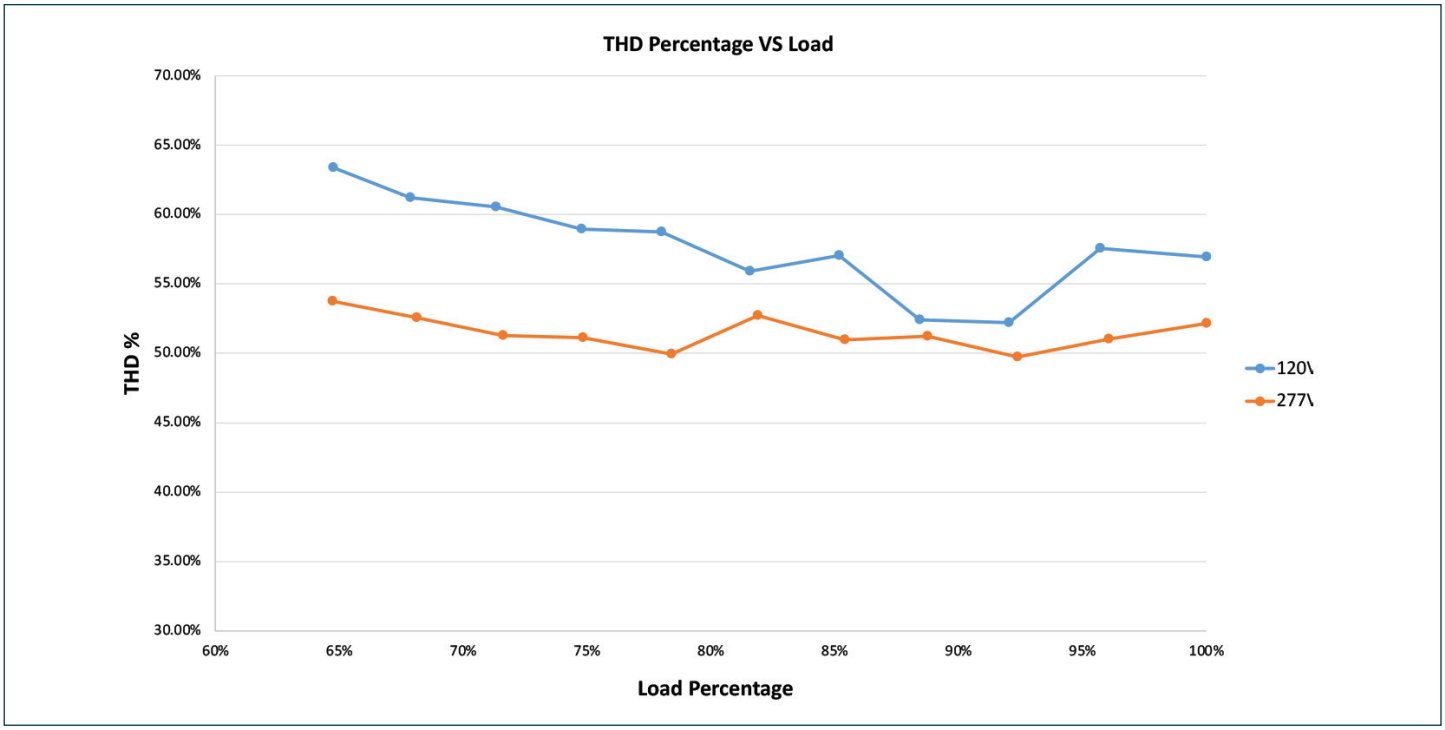

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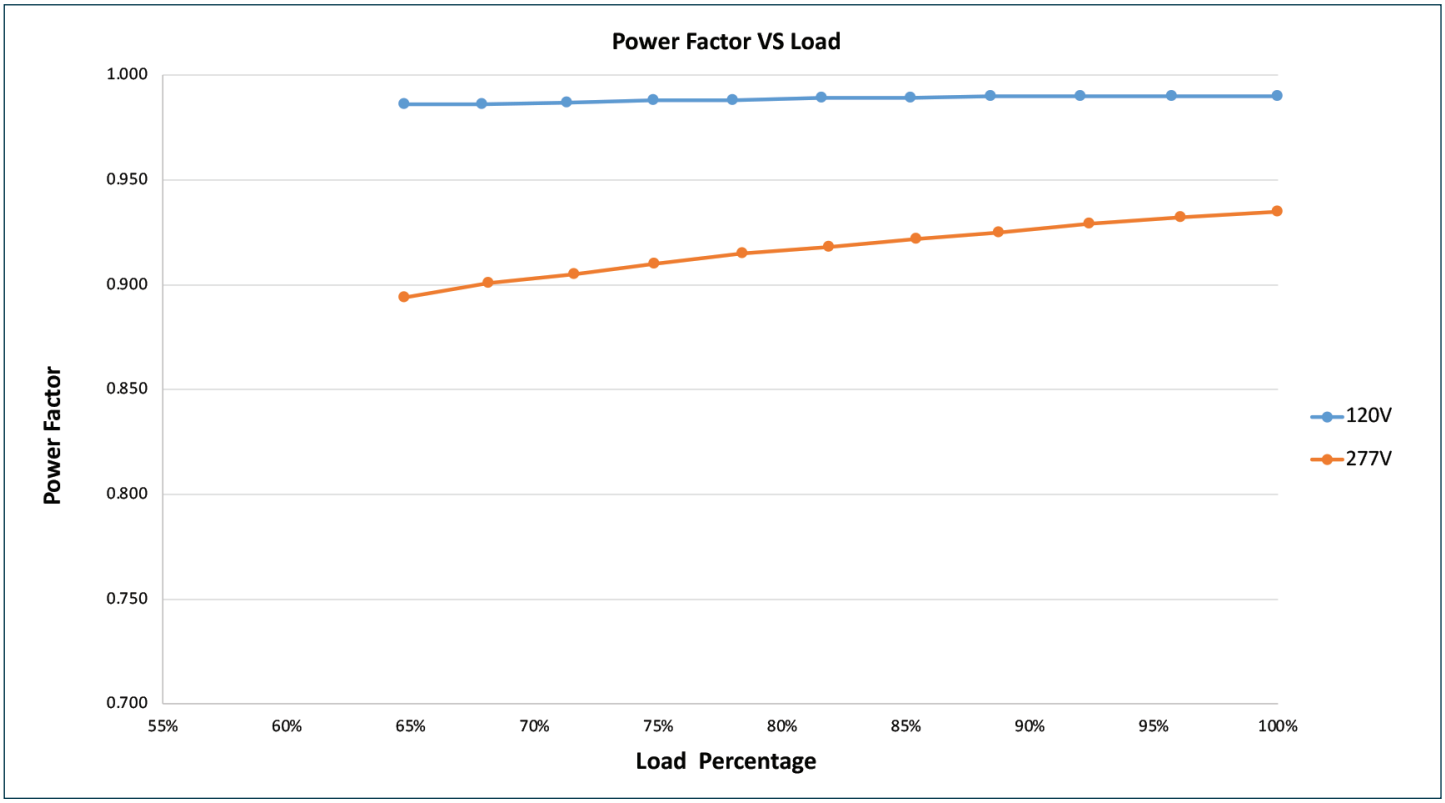

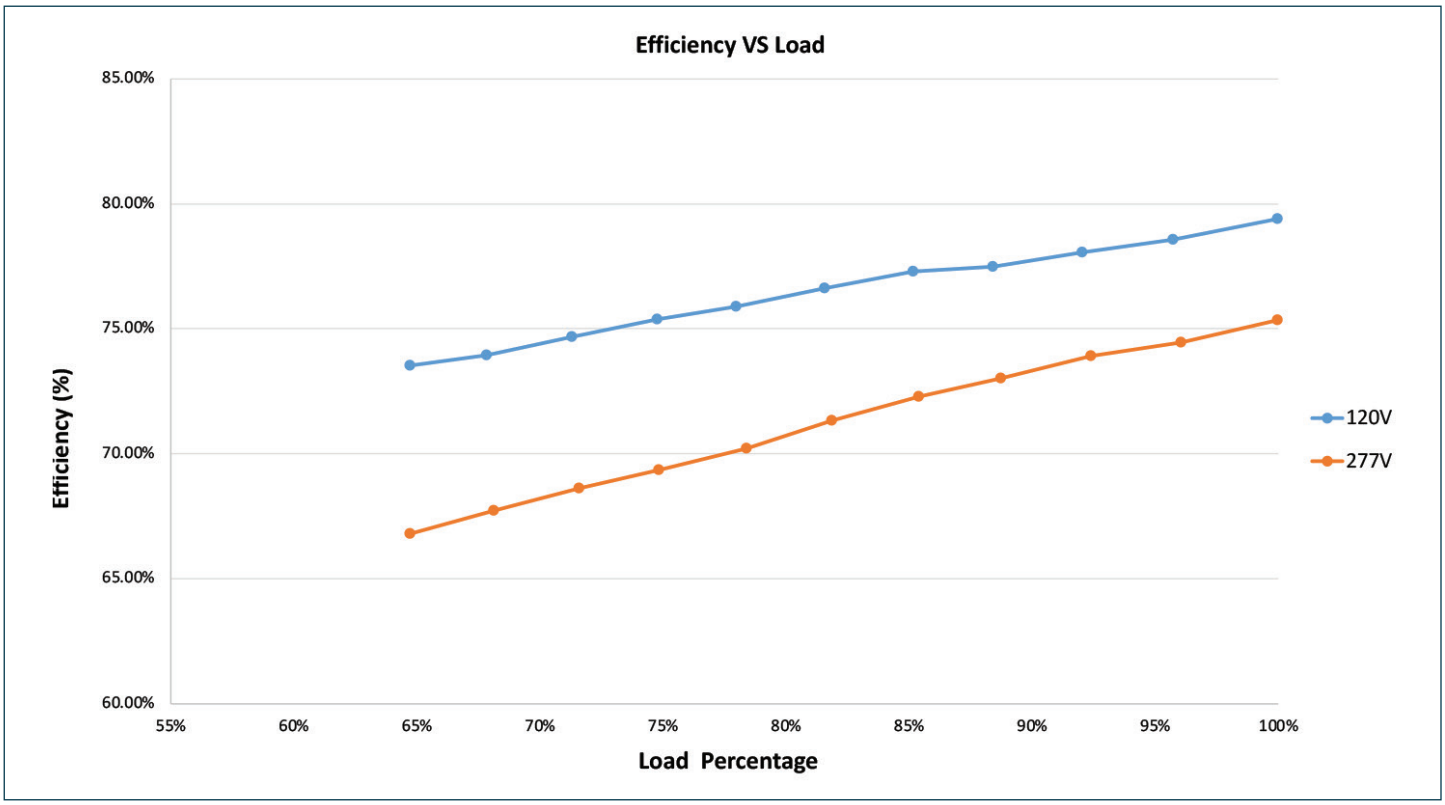

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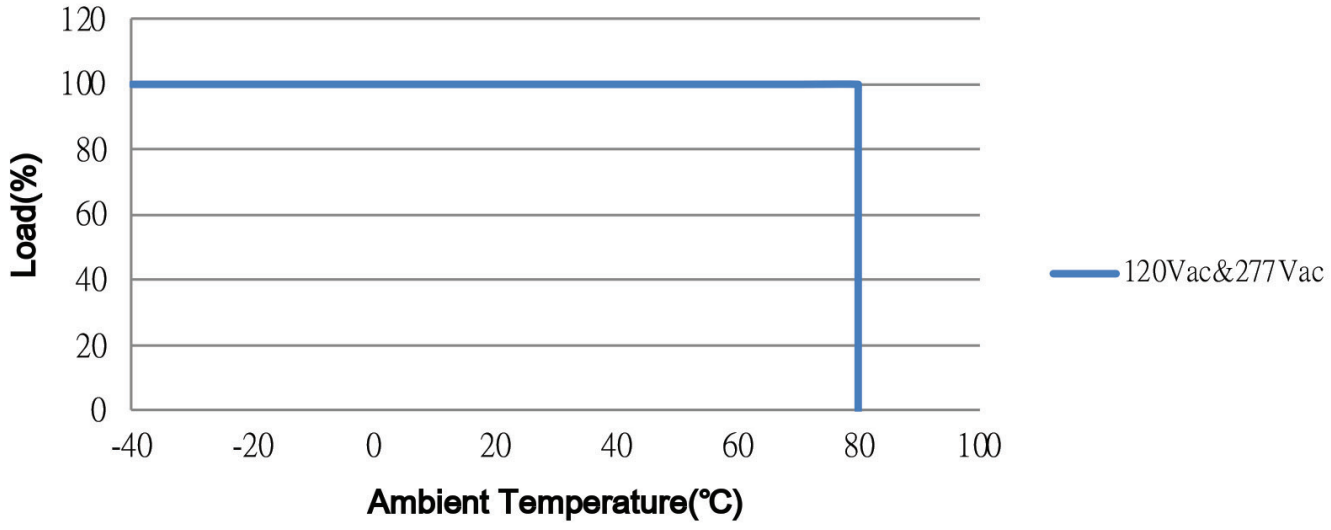
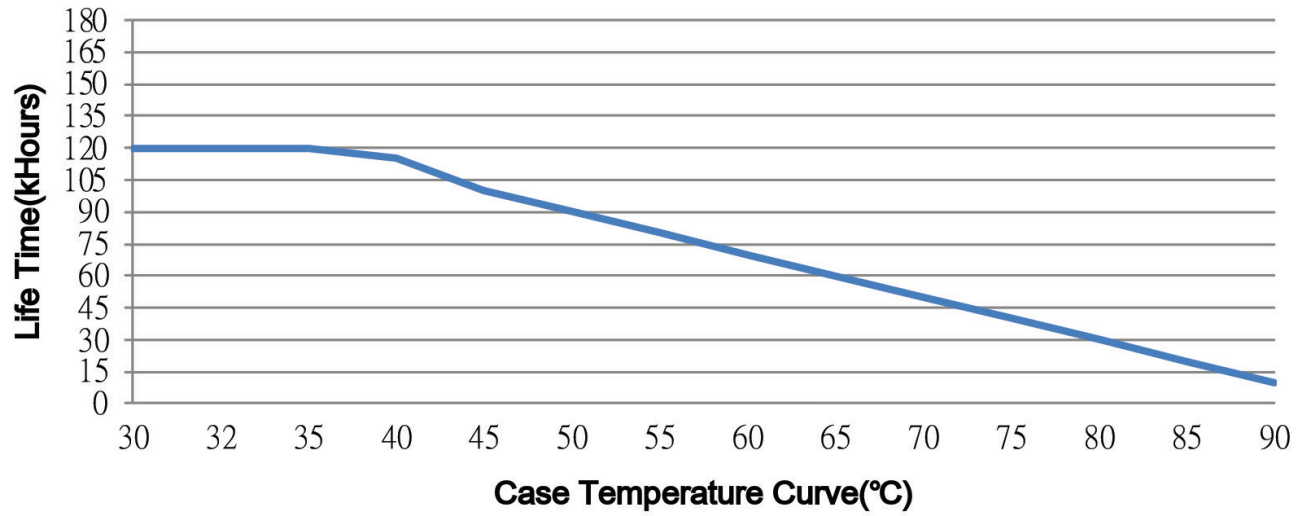
Derating Curve



Life Time v.s Case Temperature Curve



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NFCPRO3 PROGRAMMER INSTRUCTION MANUAL

QUICK REFERENCE GUIDE:

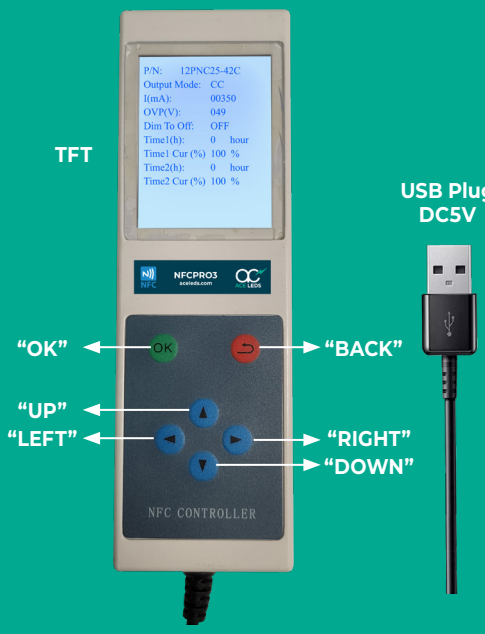
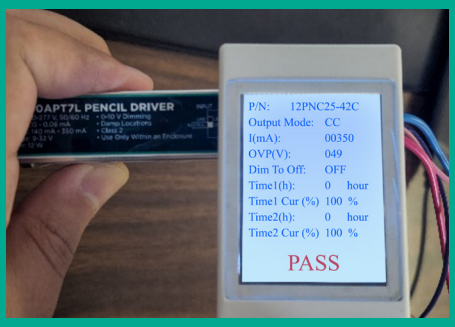


Figure 1. *NFCPRO3 and button layout*

How to Read Driver:

1. Use the red **"Back"** button to switch back and forth between the **"Summary"** and **"Configuration"** screens.
2. Place the NFCPRO3 Programmer directly on top of the NFC area and press the blue **"Up"** arrow. The device will beep once and display a summary of the currently programmed settings.

How to Program Driver:



1. In the **"Configuration"** Screen you can choose your driver type and driver settings using the blue arrow keys and green **'OK'** button.

2. Once finished, tap the red **"Back"** button to return to the **"Summary"** screen.

3. Place the NFCPRO3 Programmer directly on top of the NFC area of the driver and press the green **"OK"** button. If successful, the device will beep once and will display a red **"PASS"**. Otherwise, it will beep 3 times and display a red **"FAIL"**.

NOTES:

- You might also see a red "Mismatched!" message, which indicates that the current program selected is not compatible with that driver model. Please ensure you are using the correct program for that particular LED driver model.
- If the driver's output current is higher than the intended setting, simply program the driver to a lesser setting until it matches the intended value. ***Example: if it is set to 700 mA but output is 730 mA, set it to 670 mA.***

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STEP 1: Power Up the Programmer

The NFCPRO3 Programmer requires 5V DC power source to turn on. Simply connect the programmer into any USB power receptacle, and it will turn on immediately after. During and after start-up, the 2 following screens should appear:

Figure 2.
This screen shows which version of the programmer is being used, as well as its release date.

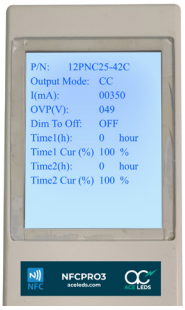

Figure 3.
This is the default screen used for programming. This screen shows all of the current settings and parameters that can be programmed onto a driver.

The second screen will show all of the parameters and settings, as well as which driver model the programmer is set to program.

STEP 2: Setting the Parameters

Pressing the red **"Back"** button will bring you to a new screen, which is the configuration screen.

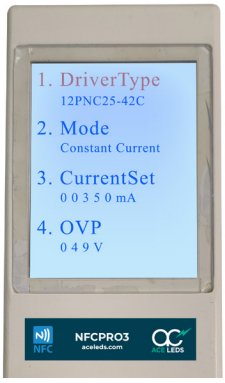

Figure 4.
This is the configuration screen, which allows you to set multiple driver settings.

From here, you can navigate using the blue **"▲"** and **"▼"** buttons which will allow you see all of the available settings. Although there are a total of 10 parameters available, for the sake of simplicity, we will only focus on parameters #1 and #3, which are the only parameters necessary for programming a constant current LED driver with this programmer.

#1 – Driver Type:
The selected setting will be highlighted in red. To change it, press the green **"OK"** button. From here, you can use the blue **"▲"** and **"▼"** buttons to change the setting. To change the driver type, highlight the first parameter, press the green **"OK"** button, and then simply navigate up or down until you find the correct driver model number. To exit this parameter setting, simply press the red **"Back"** button.

#2 – Current Setting:
Following the same procedure, press the blue**"▼"** button to navigate down to the third parameter, which determines the output current setting. Once highlighted in red, press the green **"OK"** button. From here, you can use the blue **"◄"** and **"►"** buttons to change individual values for the current setting. Moving left and right will highlight the individual values in red. For example, you can shift all the way to the left to change the setting by only 1 mA. You can move to the tens place to change the setting by multiples of 10 mA, the hundreds to change by 100 mA, and so on. Depending on the driver model, you will only be able to program the driver to a current setting that falls between its min and max output settings. Therefore, if the driver has a max output of 700 mA and if you try to program it any higher than this, the programmer will automatically default to 700 mA. The same is true if you try to program the driver a setting lower than its minimum output. The programmer will simply default to its lowest setting for that driver model. Once your desired current setting is correct, press the green **"OK"** button to confirm the setting and also exit the current setting parameter, simultaneously.

STEP 3: Programming / Reading the Driver

Once all the settings are correct, press the red **"Back"** button to return to the default programming screen. From here, if you press the green **"OK"** button, the programmer will **"BEEP"** 3 times and you should see a red **"FAIL"** message on the bottom of the screen. This means that the programmer couldn't detect or program the NFC chip successfully. Look for the **ACE LEDs logo**, which is placed directly above the NFC chip of the driver and should be in the bottom right hand corner. Place the top part of the programmer against the label, and press the green **"OK"** button. If the driver is programmed correctly, the device will **"BEEP"** once and you will see a red **"PASS"** message on the bottom. The driver will then be programmed to the newest settings. To read the driver, place the programmer above the **ACE LEDs logo**, and press the blue **"▲"** on the default programming screen and the programmer will display all of the currently programmed settings.

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