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MOSO X6 Series LED Driver Programming Software Instruction Manual

Contents

MOSO X6 Series LED Driver Programming Software

Product Information: MOSO LED Driver Programming Software (X6 series)

The MOSO LED Driver Programming Software is a software package designed to program and control the MOSO LED driver. It includes various features such as setting LED driver current, selecting dimming mode, setting signal dimming, setting timer dimming, and more. The software can be installed on Windows XP, Win7, Win10 or above operating systems with Microsoft.NET Framework 4.0 or above version.

Contents

- Software operating environment
- Install USB dongle (Programmer) drivers
- Software operating instructions

Software Operating Environment

The MOSO LED Driver Programming Software requires the following hardware and software environment:

- CPU: 2GHz and above
- 32-bit or more RAM: 2GB and above
- Hard Disk: 20GB and above
- I/O: mouse, keyboard
- Operating System: Windows XP, Win7, Win10 or above
- Component: Microsoft.NET Framework 4.0 or above version

Install USB Dongle (Programmer) Drivers

The MOSO LED Driver Programming Software requires a USB dongle (programmer) to connect to the LED driver. To install the USB dongle driver software package, follow the below steps:

1. Open the MOSO LED Driver Programming Software package and locate the USB Dongle Driver folder.
2. Open the Driver folder and select the appropriate driver file based on your operating system bits (32-bit or 64-bit).
3. Install CDM20824_Setup (driver for Windows XP) .exe on Windows XP system and CDM21228_Setup (driver for Win7 Win10).exe on Win7 and above.

Note: If you cannot open the software after installation, you may need to install the software dependencies, which can be found in the Driver folder.

Software Operating Instructions

Follow the below instructions to use the MOSO LED Driver Programming Software:

1. Start the software
2. Connect to the LED driver via the USB dongle
3. Read LED driver parameters
4. Set LED driver current
5. Select dimming mode
6. Use the function button description to access various features such as setting signal dimming, timer dimming, and more
7. Read data record

Software operating environment

Hardware environment

- CPU 2GHz and above 32-bit or more
- RAM 2GB and above
- HD 20GB and above
- I/O mouse, keyboard

Software environment

- Operating system Windows XP, Win7, Win10 or above.
- Component Microsoft.NET Framework 4.0 or above version.

Install USB dongle (Programmer) drivers

名称	日期	类型	大小	标记
USB Dongle Driver	2022/12/29 10:34	文件夹		
LED_programming_Utility	2022/9/29 14:14	应用程序	3,691 KB	
MOSO_H	2022/4/12 16:57	BMP 文件	29 KB	
wrie_0003	2022/4/12 16:57	图标	67 KB	

Figure 1: the list of applications

The MOSO LED Driver programming software includes the above files, in which the USB Dongle Driver folder is the programmer driver software package.

Open Driver folder, Shown as following figure:

Name	Date modified	Type	Size
● CDM20824_Setup (XP).exe	2018-11-21 17:16	Application	1,703 KB
● CDM21228_Setup.exe	2017-09-19 17:04	Application	2,393 KB

Figure 2: driver files

Install CDM20824_Setup (driver for Windows XP) .exe on Windows XP system and CDM21228_Setup (driver for Win7 Win10).exe on Win7 and above.
The driver file needs to be selected according to the number of operating system bits (32-bit or 64-bit).

The reference method is as follows
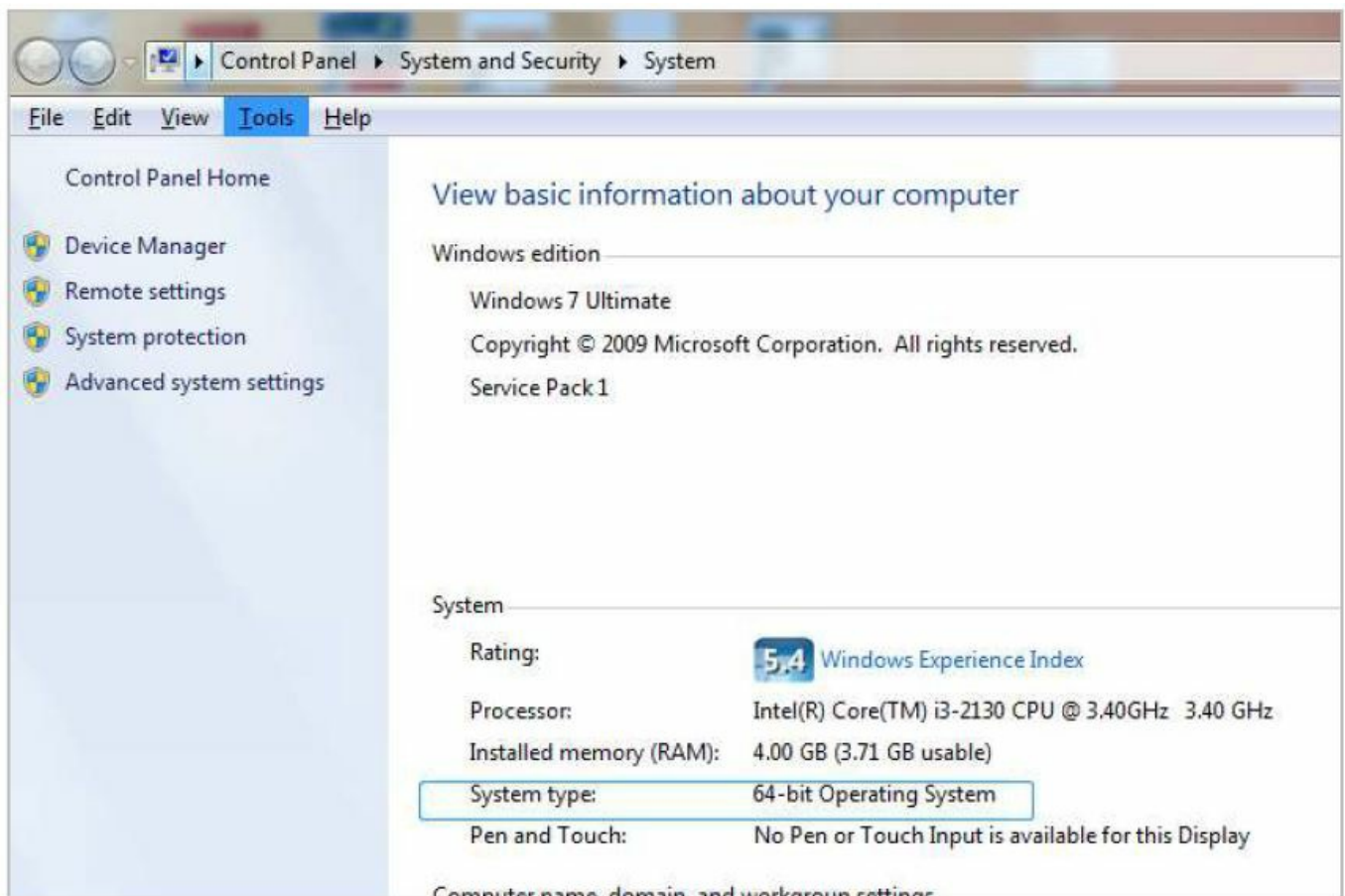
1. Install software dependencies (optional)

   Dependency package, as the name implies, the software needs to rely on external software components. See "Figure 7: Driver folder" file list.

   It is not necessary to install under normal circumstances (it may be installed when installing the operating system), if you cannot open the software shown in Figure 1, you need to install.

2. Software operating instructions

名称	日期	类型	大小	标记
📁 USB Dongle Driver	2022/12/29 10:34	文件夹		
LED_programming_Utility	2022/9/29 14:14	应用程序	3,691 KB	
📄 MOSO_H	2022/4/12 16:57	BMP 文件	29 KB	
wrie_0003	2022/4/12 16:57	图标	67 KB	

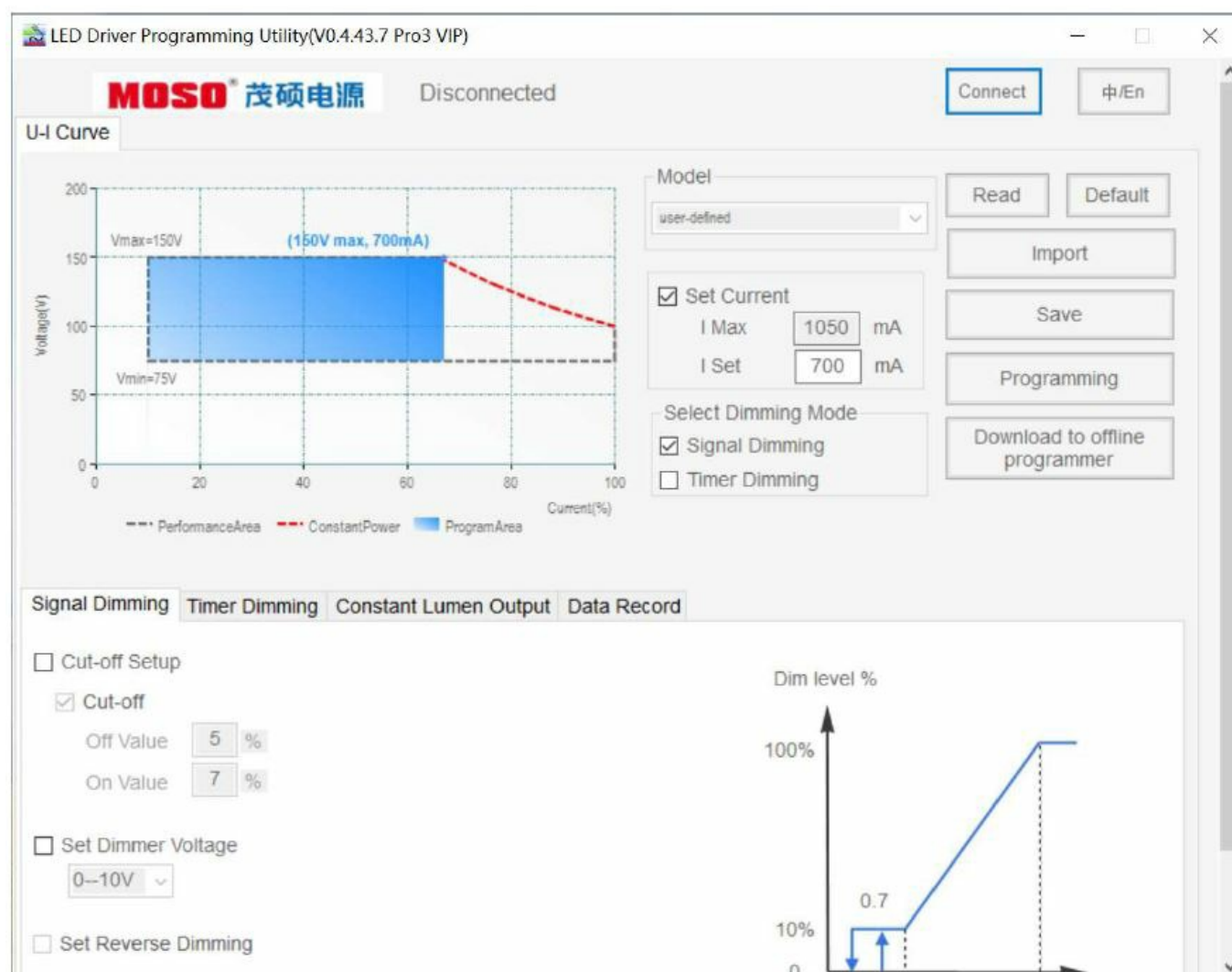Double click shortcut icon to start software. As shown below,

Figure 4.1: Programmer User interface

Connect to LED driver

First insert the "USB programmer" into the USB port of the computer, and connect the other end to the dimming wire of LED driver. Click "Connect" to connect the software to the LED driver, as shown in the figure below.
If the connection is successful, the prompt "Succeed" will be displayed at the top of the interface. If the power supply has been configured with a model before, it will automatically switch to the corresponding model,otherwise it will be the default model (User-defined).
At the same time, the U-I curve of the corresponding model is displayed on the left. The curve display allows the

working area (gray dotted box), programming working area (blue area), constant power curve (red dotted line),output voltage range (Vmin ~ Vmax), full power voltage range and other information. The programming work area changes according to the set current.

Read LED driver parameters
Click "Read" to read the power parameter. This function can check the power parameter configuration.

Readable parameters include:

1. Set the current and dimming modes;

2. Whether to turn off, dimming voltage, and whether to reverse logic dimming;

3. Time-controlled dimming parameters;
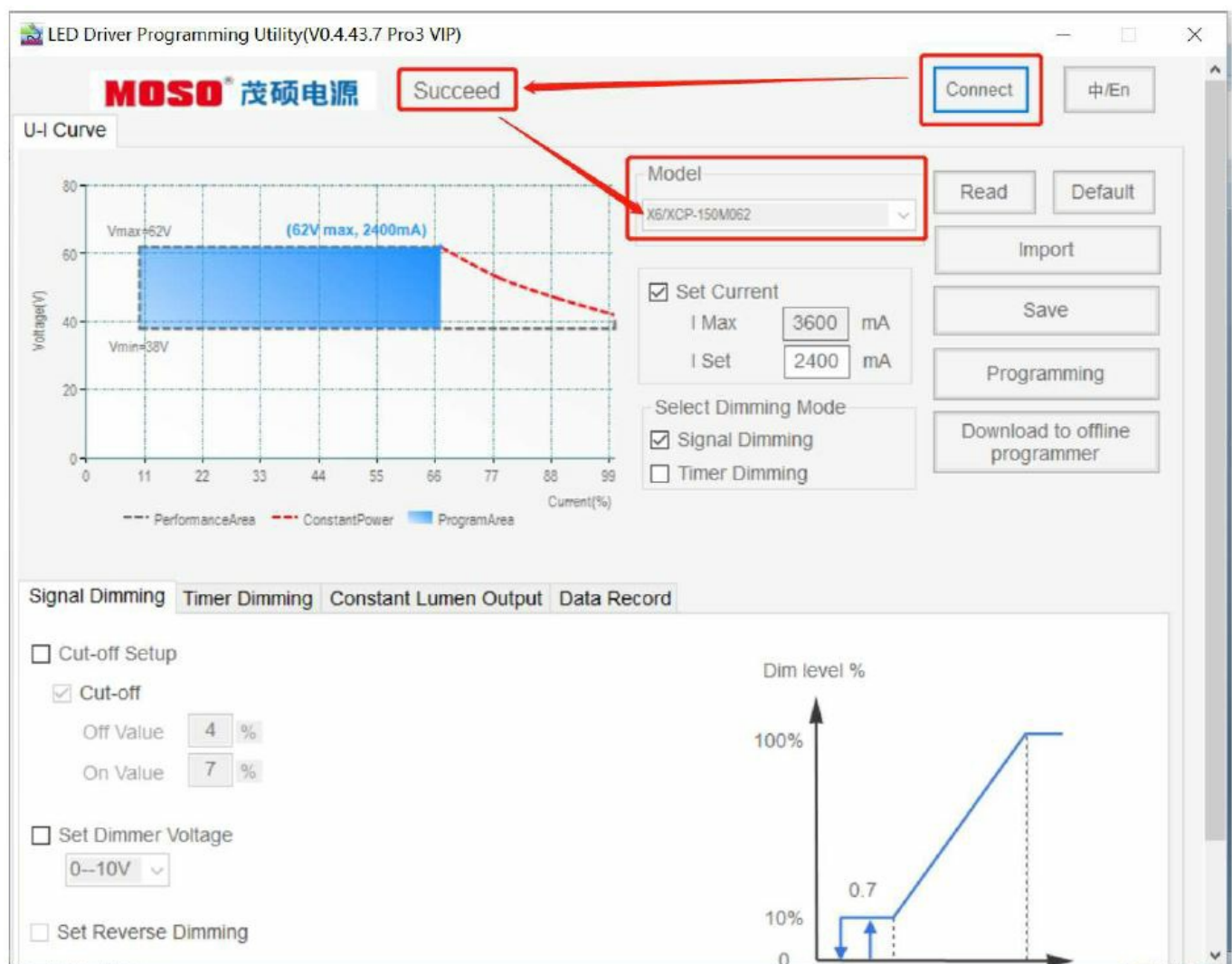
4. CLO parameters.

Figure 4.2: Connect to LED driver UI

Set LED driver current
The output current of the power supply can be set according to actual needs. As shown below. When different currents are configured, the U-I curve programming work area changes according to the set current change.
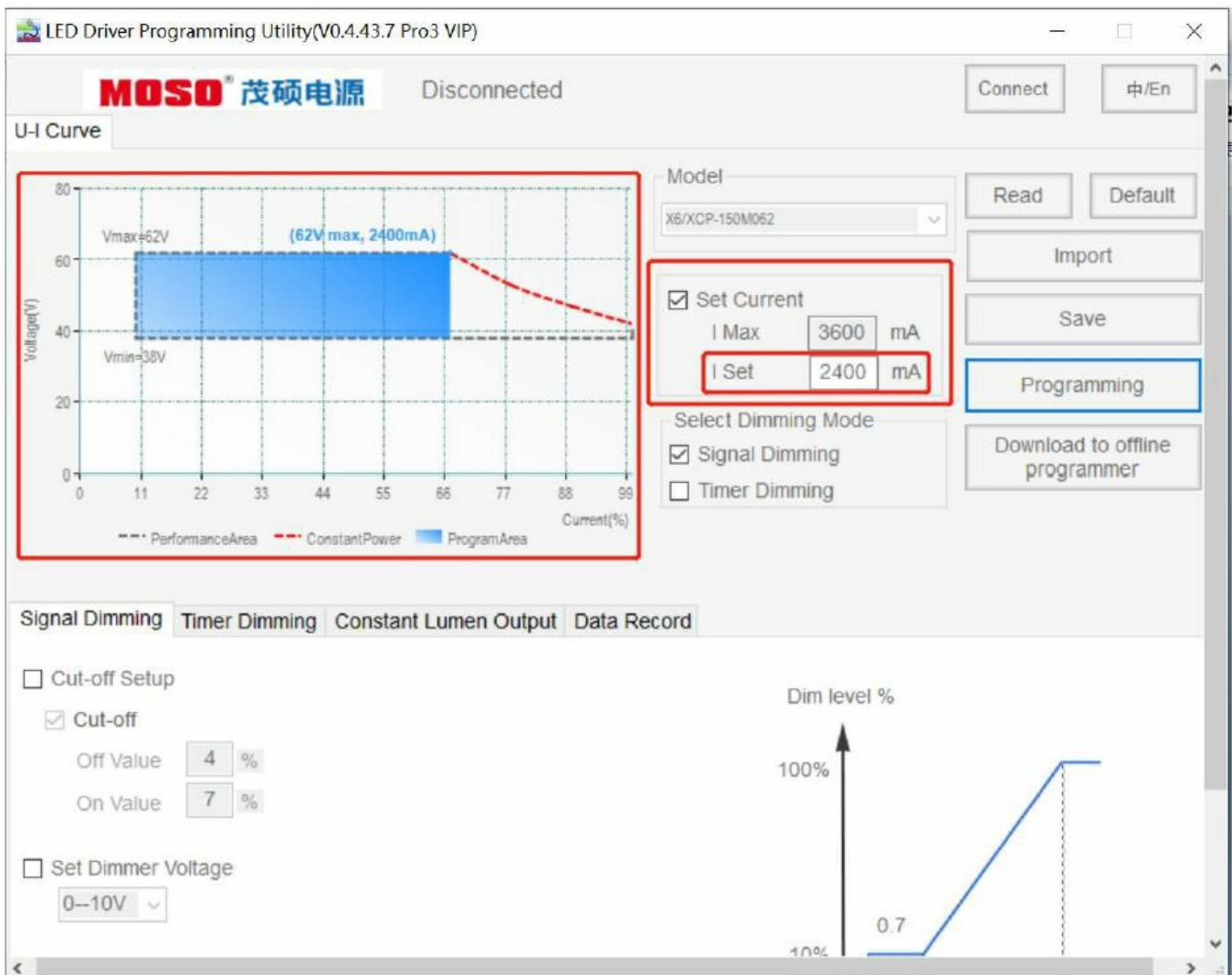
Figure 4.4: set current

Select dimming mode

This software supports two optional dimming modes: "Signal Dimming" and "Timer Dimming".

Signal dimming includes "0-10V", "0-9V", "0-5V", "0-3.3V" analog voltage dimming and corresponding voltage PWM dimming.

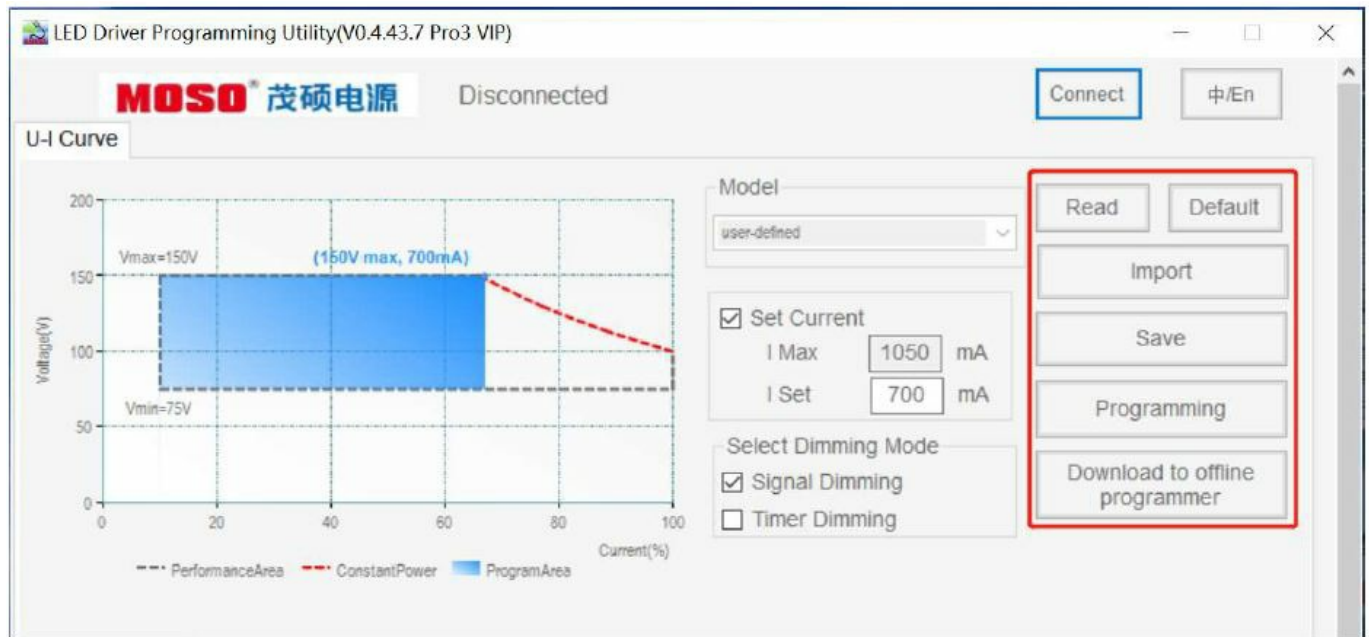Figure 4.5

Function button description

Figure 4.6

- **Read:** read driver configuration parameters and display to the UI;
- **Default:** restore the UI parameters to the factory default values;
- **Import:** import the saved parameter values from a file and display them on the UI;
- **Save:** save the interface display parameter values to a file;
- **Programming:** write the configured parameters to the driver;
- **Download to offline programmer:** Write the configured driver parameters to the offline programmer.

Note: The offline programmer is a programming tool kit developed by MOSO that can complete driver programming without relying on a computer. The kit is easy to use and quick to program. For detailed information about this product, please consult sales staff.

Set Signal Dimming
Select the "Signal Dimming" page to set related parameters.

1. Set the Cut-off function

   If the Cut-off function is activated, check "Cut-off Setup" and " Cut-off ". If the Cut-off function is not

   enabled,check " Cut-off Setup " and uncheck " Cut-off ".
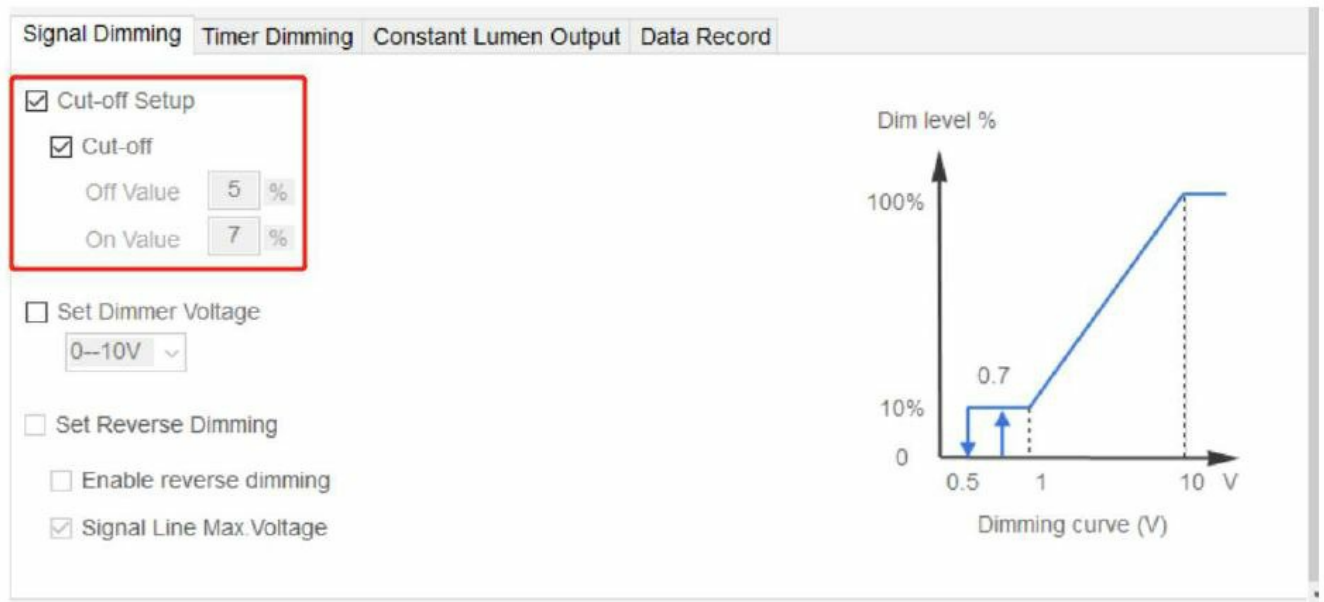
When you switch drive models, the shutdown setting will load the default settings for that model.

If "Turn on and off function" is checked, the product will turn off the output current (current is 0) when the dimming voltage is less than the "turn off value"; At this time, only when the dimming voltage recovers to more than "recovery value", the output current will be turned on again, and greater than or equal to the "minimum value".

When the "Turn on/off function" is not checked, the output current will not turn off and will remain at the "minimum value" or above.

Note: If the hardware of the power supply of a certain model does not support power off, please do not check "On/Off Function". Shutdown and recovery use default values, which cannot be modified.

2. **Set the Dimming Voltage**

   4 types of Dimmer Voltage can be selected: 0-10V, 0-9V, 0-5V, 0-3.3V. It can be selected according to the actual dimming output voltage matching situation.
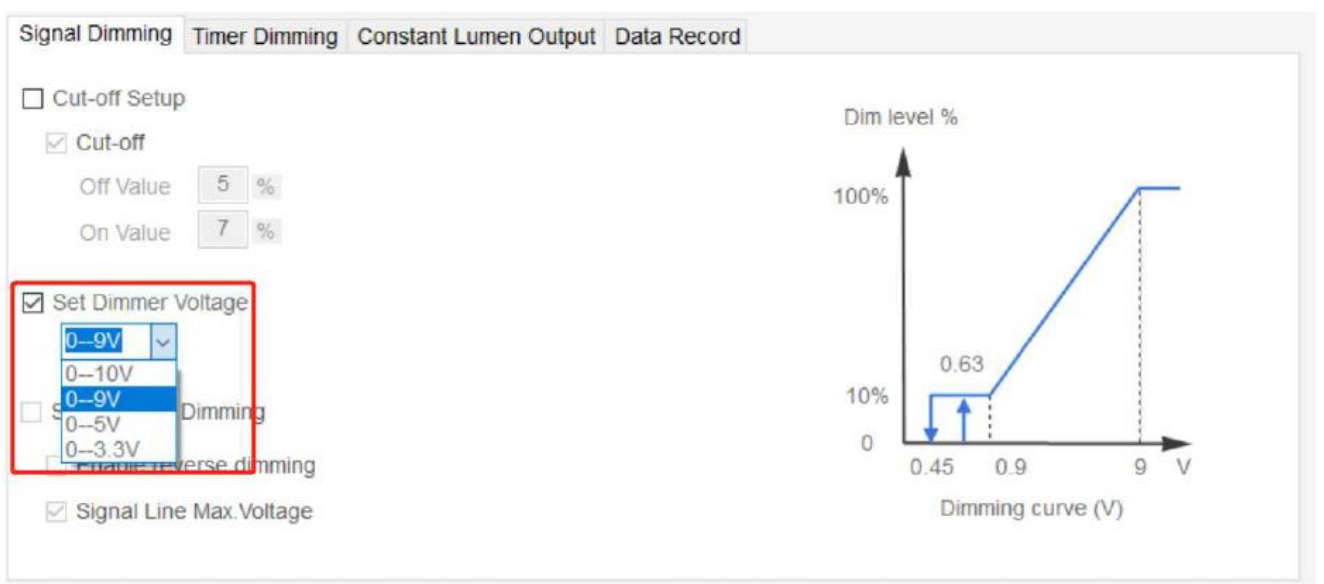
3. **Set Reverse Dimming**

   Reverse dimming: namely, reverse logic dimming. The higher input voltage of dimming wire, the lower output current of driver, and the lower input voltage of dimming wire, the higher output current of driver.

   To enable the reverse dimming function, check "Update reverse dimming settings" and "Reverse dimming". If "Reverse Dimming" is not checked, it is positive dimming.

Signal Line Max. Voltage output: it takes effect when the option "Signal Line Max. Voltage" is checked. At this time,the dimming wires will generate output voltage, which is about 10-12V for "0-10V" and "0-9V"options, and about 5V for "0-5V" and "0-3.3V" options.

Setting the Timer Dimming
After selecting "Timer Dimming", you can set the related parameters of timing dimming. This software supports three types of timing dimming settings.

1. **Traditional Timing**

   After the LED driver is powered on, it works according to the set "work step" time and output power. In this

mode, the number of steps, time of every step and output power are always fixed. Users can configure the related parameters of steps marked in the red box as below according to their need.
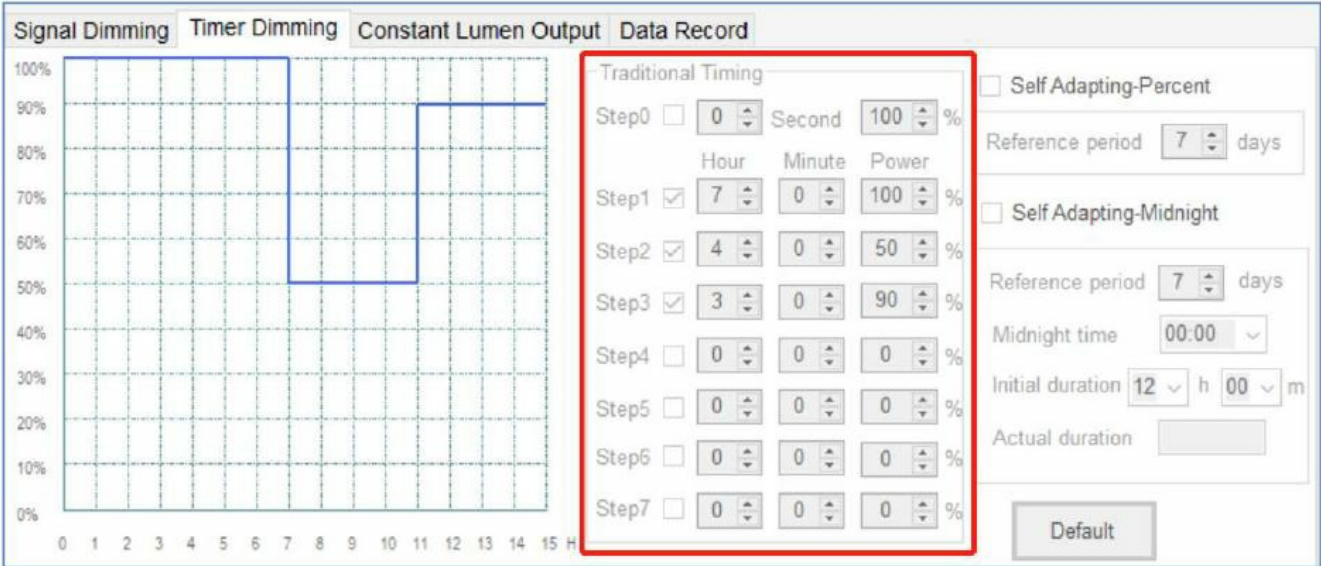

Figure 4.8.1

2. Self-Adaption Percent

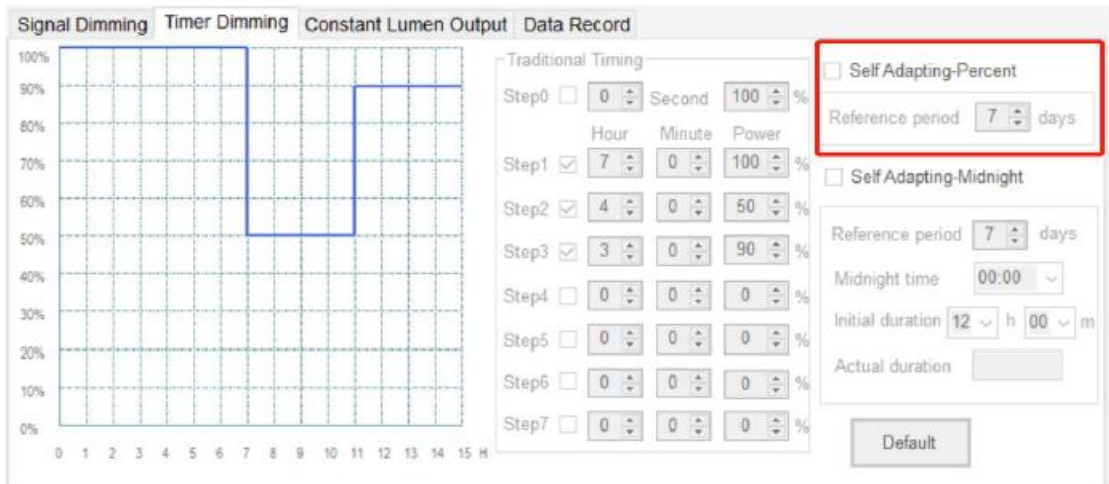Check "Self Adapting-Percent" option, and select the reference period.

Figure 4.8.2

Self Adapting-Percent
This function is to adapt to the case that the night time also changes with the season, and the time length parameter of the timing dimming also changes accordingly. To use this function, you need to set the parameters in "Set time" first. The software will calculate the night time of today tonight according to the night time (reference days) of the previous days. Assuming "reference days" is set to 7 days, the average of the night time for the first 7 days is taken as the night time for tonight. Then automatically adjust (according to the proportion of steps) the working time of each step (except step 0) according to the night time of this evening. Example: Assume that the parameters of each step are: Step 1 is 2 hours and 30 minutes and the power is 100%; Step 2 is 3 hours and 30 minutes and the power is 80%; Step 3 is 2 hours and 0 minutes and the power is 50%. The total length of the three steps is 8 hours. According to the average of the night time in the previous 7 days, the night time is 10 hours. Then the duration of step 1 will be automatically adjusted to (2 hours and 30 minutes) × 10 ÷ 8 = 150 minutes× 10 ÷ 8 = 3 hours and 7.5 minutes; similar to this calculation, the duration of step 2 will be automatically adjusted to 4 hours
22.5 minutes, the duration of step 3 is automatically adjusted to 2 hours and 30 minutes. The initial night time is the traditional timed programming time.

Self Adapting-Midnight
Check "Self Adapting-Midnight" and set the reference days, midpoint, and initial time.
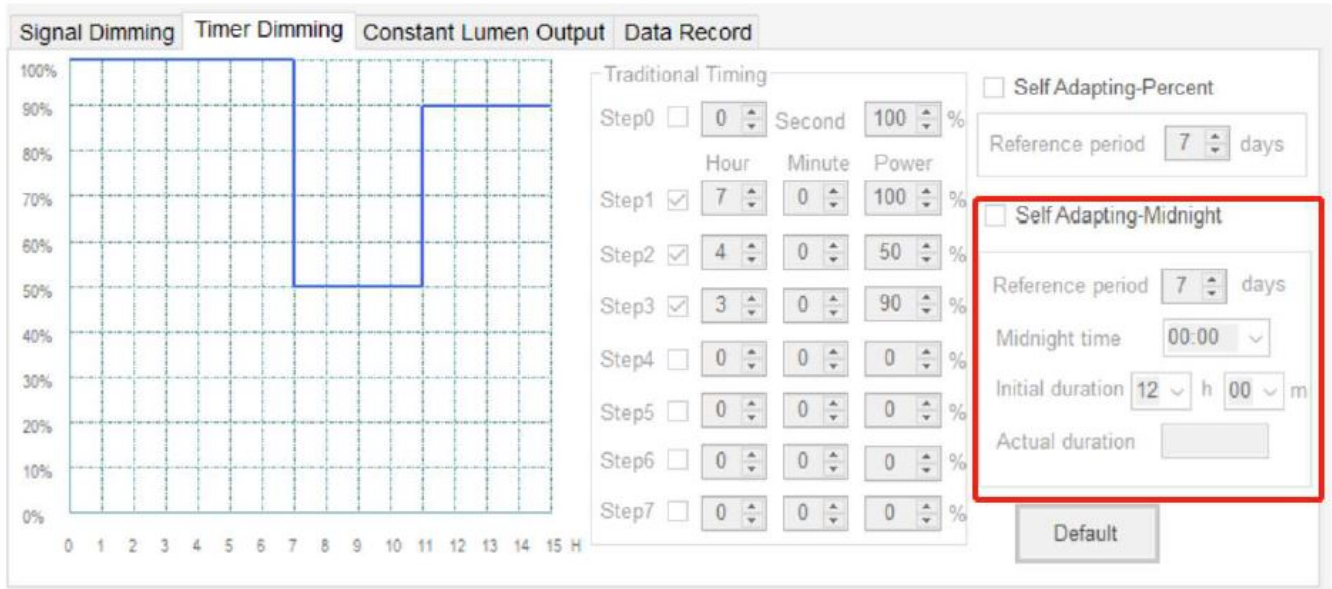

Figure 4.8.3

Self Adapting-Midnight According to the estimated lighting time, the curve are extended from the midpoint to the left and right respectively.

- "Reference days": Same as "Self Adapting-Percent", the night time of the previous few days.
- "Midnight" is the aligned time point, with a red vertical line.
- "Initial time(duration)" is the preset lighting duration, and the red horizontal line in the time axis.
- "Actual time(duration)": The estimated lighting duration based on the reference days, the blue horizontal line in the time axis.

After the LED driver is turned on, it works according to the adaptive (actual time) step and time and output power. The area step curve shown in yellow in the figure below.
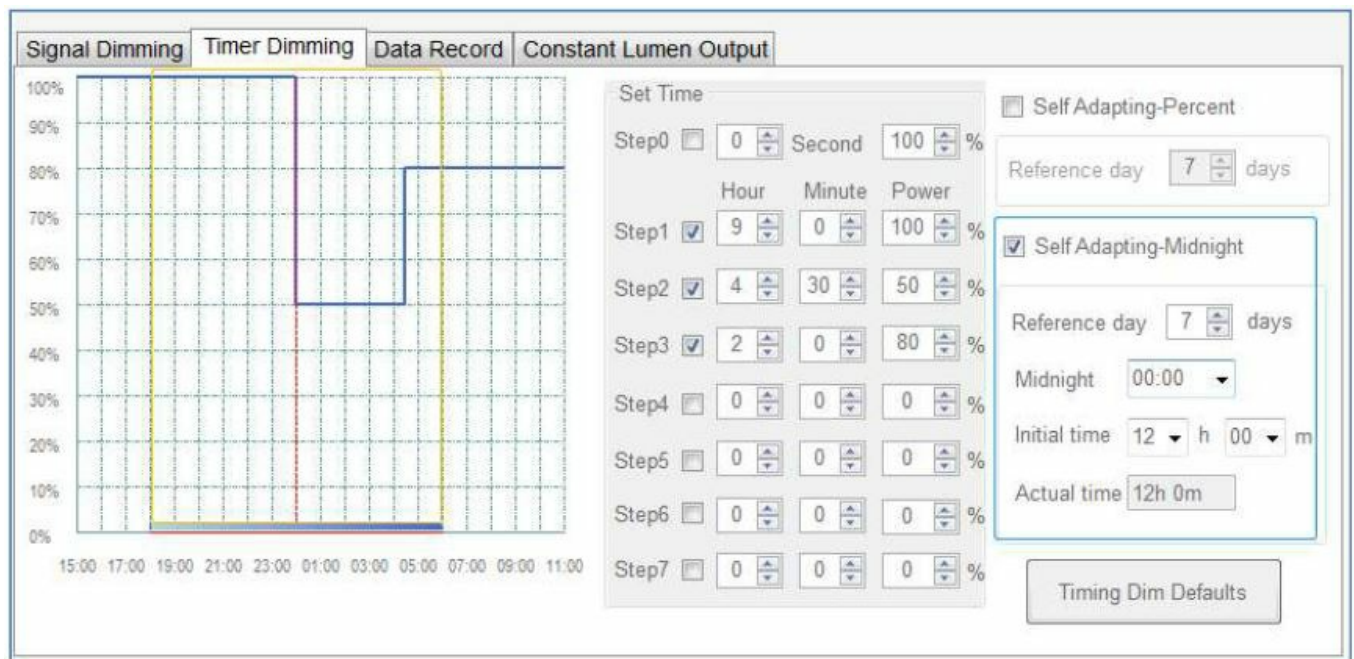
Figure 4.8.4

Note: Unlike the other two timing modes, the midpoint alignment steps use relative time settings. The start time of step1 is 15:00, and the other steps are arranged in order.

Read data record

Click "Read" to read the driver work log.

Power work log, including:
The current temperature, the historical maximum temperature, the last maximum temperature, the current maximum temperature, and the total operating time of the driver.

You can also check the driver firmware version.

- "1.Current temp: Current drive temperature."
- "2.Historical T_ Max: The highest temperature recorded in history."

- "3.Previous time T_ Max: Record the highest temperature during the previous use."

- "4.This time T_ Max: Record the highest temperature during this use."

- "5.Total working time: Record the total working time."

- "6.Firmware Ver.: Driver firmware version."

Set CLO
Select "Start CLO (Constant Lumen Output)", configure the working time and the corresponding compensation current percentage, and click "Programming".
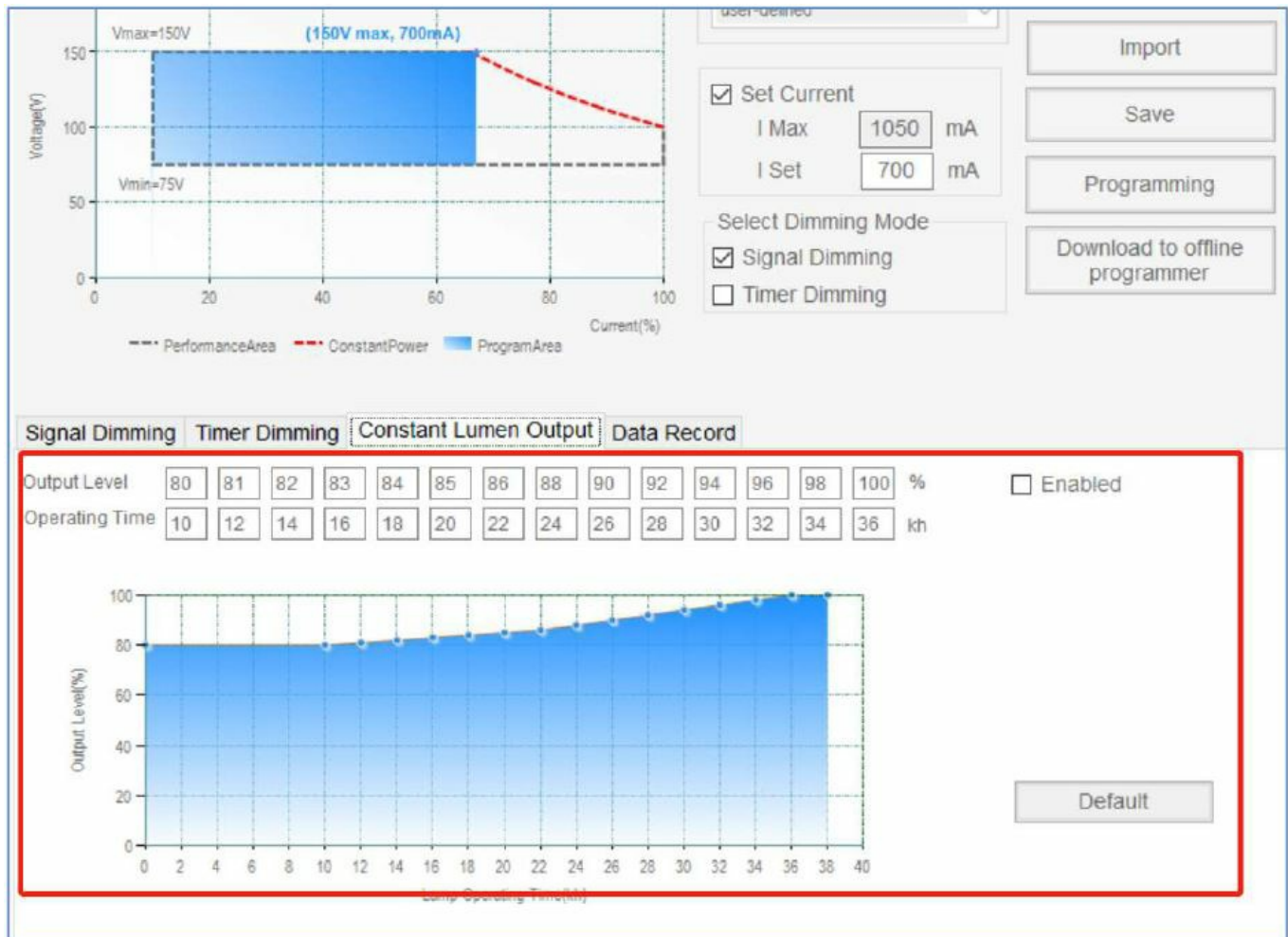

Figure 4.9

The compensation current percentage is the set current percentage. The maximum compensation percentage changes according to the change of the set current, and the maximum cannot exceed 20% of the set current.

- **Output voltage:** Allowable working voltage range after compensating current.

- **Output power:** The output power range within the allowable working voltage range under the current setting current. The maximum value is the power after compensating the current.

Documents / Resources

MOSO LED Driver Programming software use instructions (X6 series) XXX www.xxx.hmoso.com	**MOSO X6 Series LED Driver Programming Software** [pdf] Instruction Manual X6 Series, X6 Series LED Driver Programming Software, LED Driver Programming Software, Driver Programming Software, Programming Software, Software

References

- ◼ **Microsoft – Cloud, Computers, Apps & Gaming**

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