OT Programmer-X OPTOTRONIC®
P7 Series Software Configuration
User Manual

Light is OSRAM

OSRAM

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1 System requirements

1.1 Hardware environment

- CPU: 2GHz and above (32-bit or more)
- RAM: 2GB and above
- HD: 20GB and above

1.2 Software environment

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

2 Installing software

2.1 Software packages

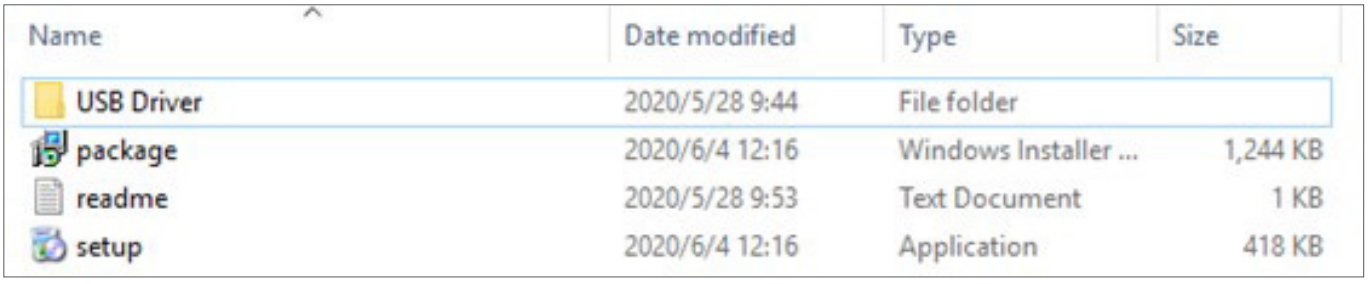

Figure 1: List of files

2.2 Installation

Double click setup.exe to install software

1. Welcome

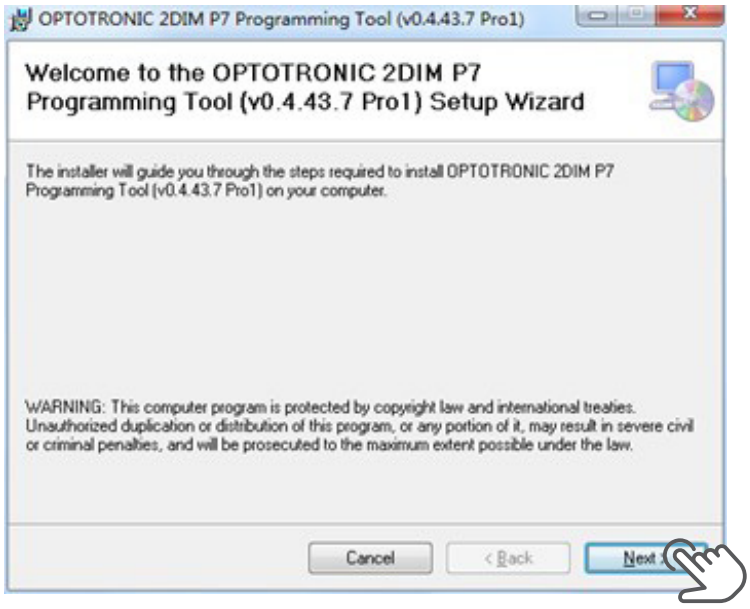

Figure 2: Welcome page

Click "Next" button

2. Select installation folder

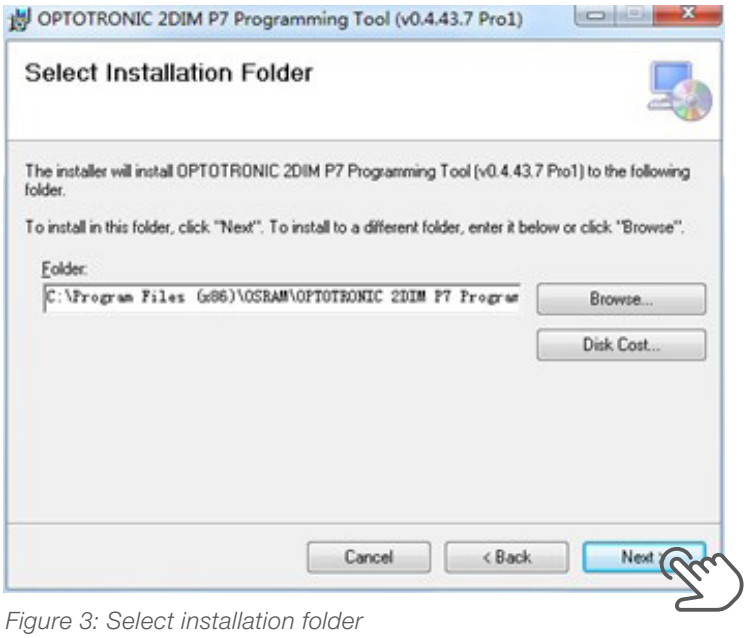

Figure 3: Select installation folder

After installation folder is selected, click "Next" button

3. Confirm and complete installation

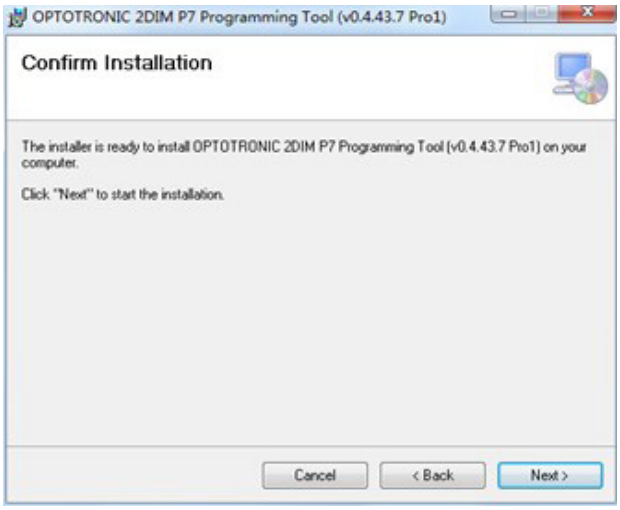

Figure 4: Confirm installation

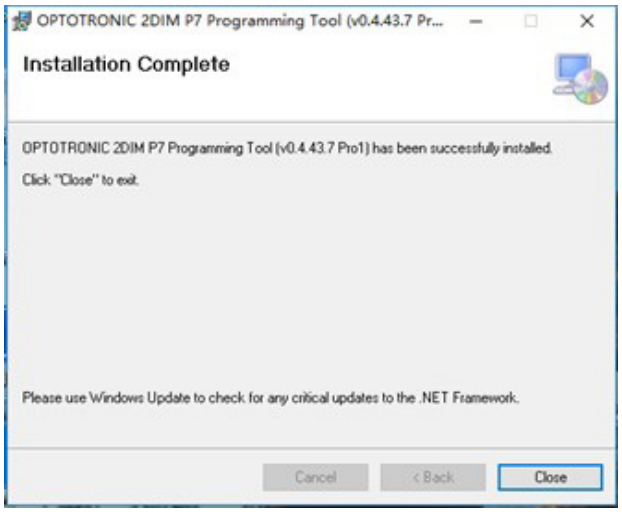

Figure 5: Complete Installation

After installation is completed, the shortcut icon will appear on the desktop.

3 Installing USB drivers

Figure 6: USB Driver files

Please install CDM20824_Setup (XP).exe if operating system is Windows XP or install CDM21228_Setup.exe if it is Win7 and above.

4 Connection to LED driver

First insert the OT Programmer-X into the USB port of the computer, and connect the other end to the LED driver DIM+/- (PURPLE and GRAY).

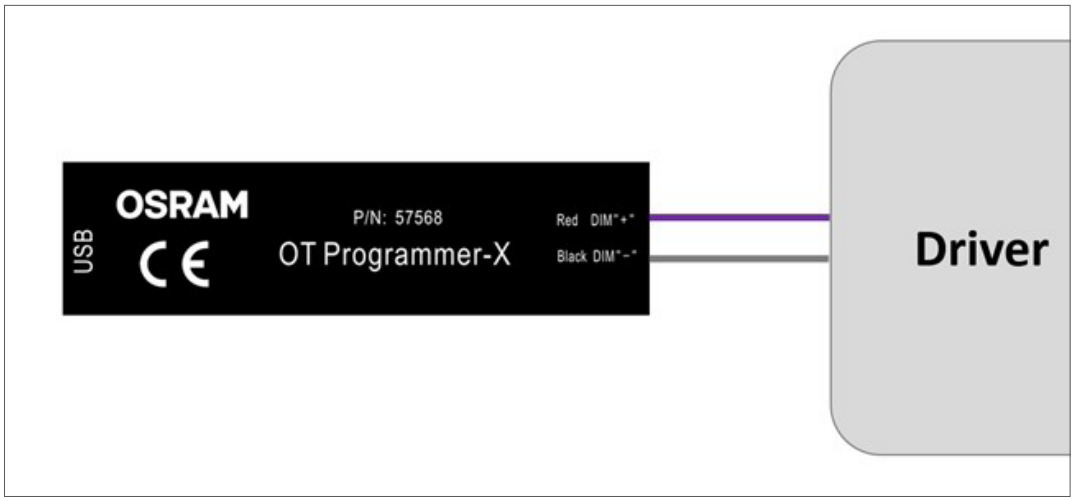

Figure 7: Connection diagram

Open the software and click “Connect” to connect the software to the LED driver.

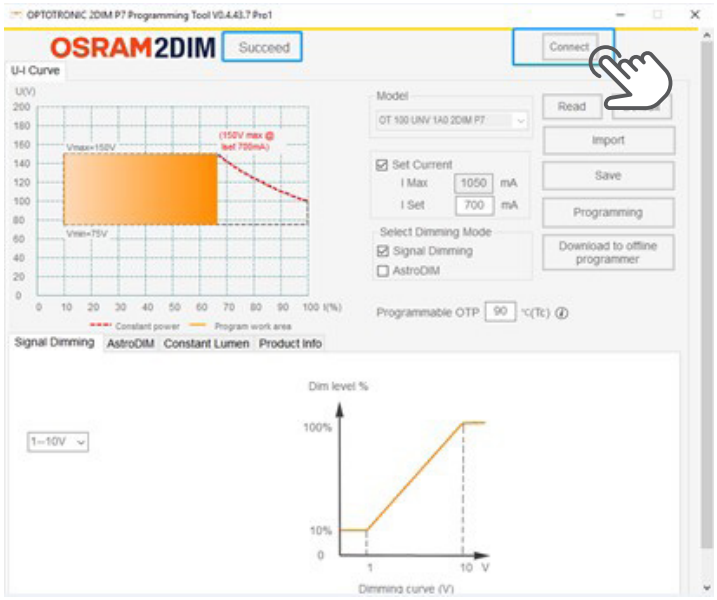

Figure 8: Connect to LED driver UI

If the connection is successful, the prompt “Succeed” will be displayed at the top of the interface. Product Model and corresponding default setting will be automatically read by software. At the same time, the U-I curve of the corresponding model is displayed on the left. The curve shows the working area (gray dotted box), programmed working area (orange area), constant power curve (red dotted line), output voltage range (Vmin ~ Vmax), full power voltage range and other information. The programmed working area changes according to the set current.

4.1 Button functions

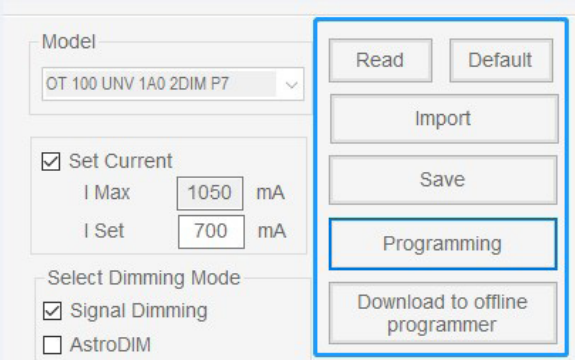

Figure 9: Button functions

Read: Reading driver configuration parameters and display to the UI
Default: Restoring the UI parameters to the factory default values
Import: Importing the saved parameter values from a file and display them on the UI
Save: Saving the interface display parameter values to a file
Programming: Writing 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 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 your account manager.

5 Programming instructions

5.1 Output current

I Max is fixed and depends on the driver design.
I Set can be defined based on customer's needs. To change the Iout, just input the value and click "Programming".

The blue operation range changes after the Iset is successfully done. The Vout max is shown at the right corner in red.

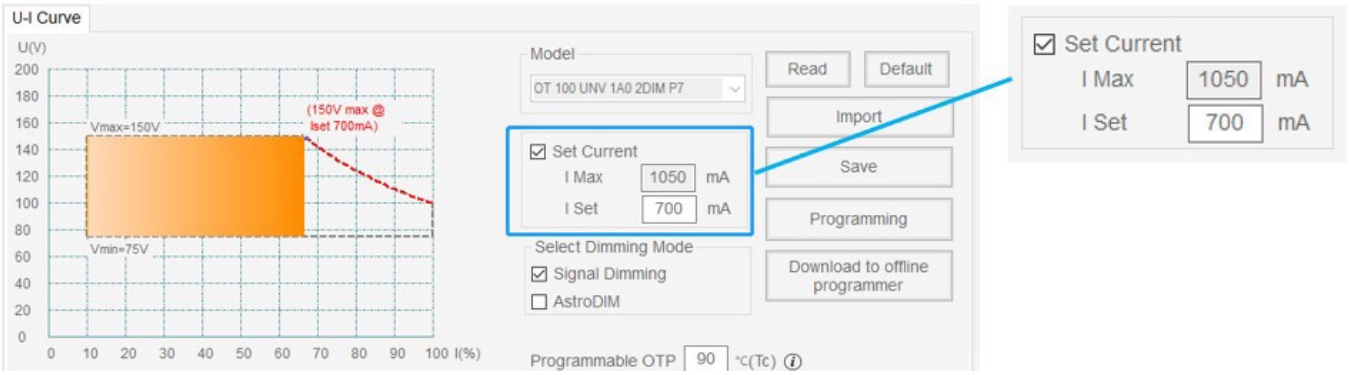

Figure 10: Output current setting

5.2 Signal dimming mode

Signal dimming is Analog 1-10V or 0-10.

Figure 11: Signal Dimming

5.3 AstroDIM mode

AstroDIM is a timer based dimming mode that allows the user to configure a custom dimming schedule.

5.3.1 Traditional timing

In **Traditional Timing** mode, after the power supply is powered on, it works according to the set "work step" time and output power. In this mode, the number of steps, steps time, and output power are always the same. When in use, configure the steps in the orange box as shown below.

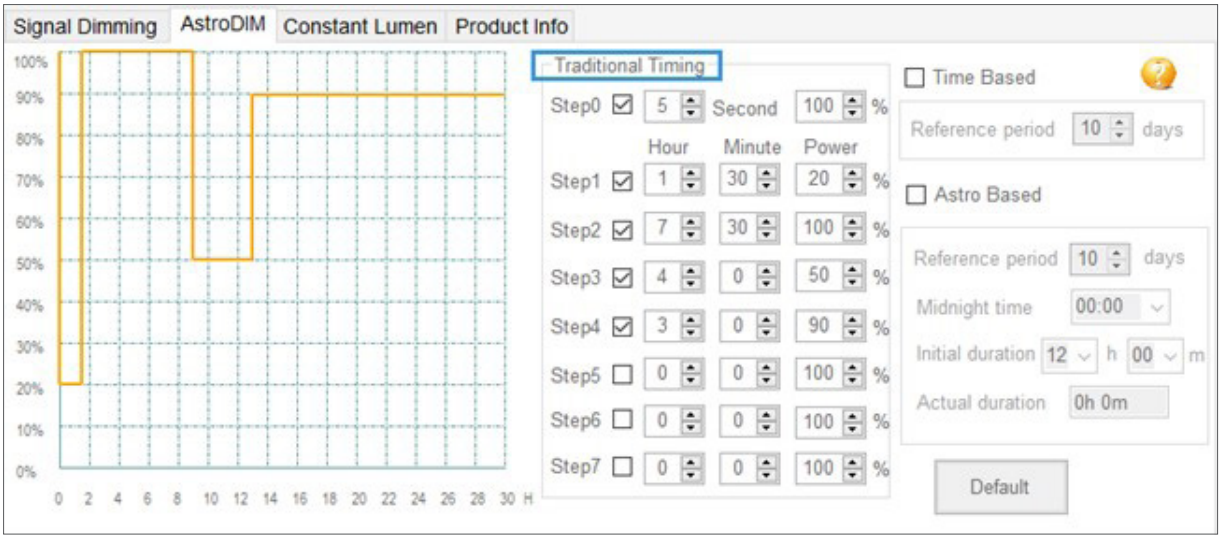

Figure 12: Traditional timing

5.3.2 Time based

Click “Time Based” and select the reference period.

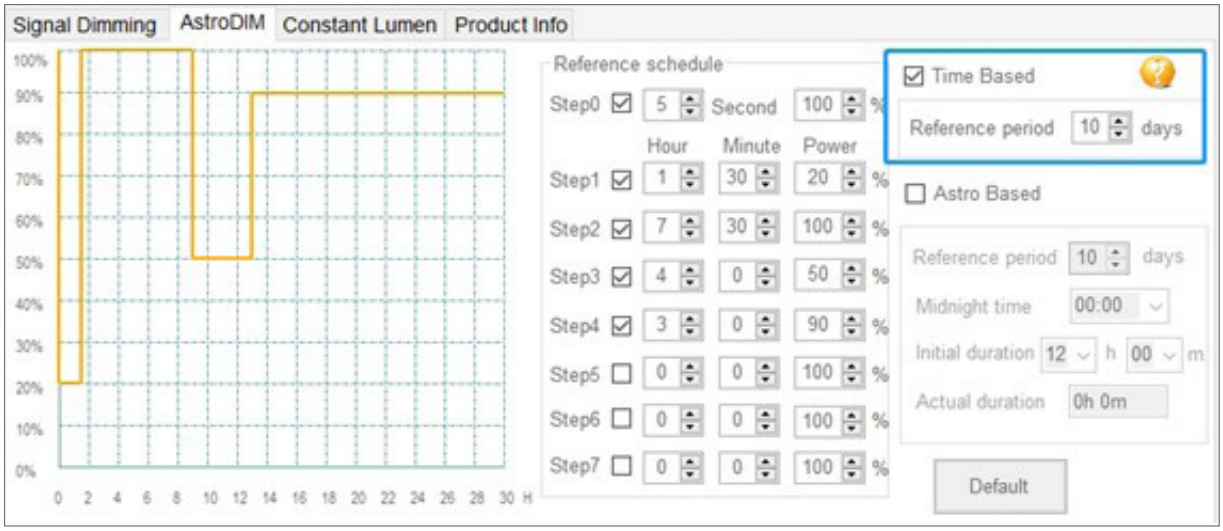

Figure 13: Time based

The **Time Based** function is used to adapt to changes in night time length due to seasonal changes. To use this function, you need to set the parameters in "Reference period" first. The software will calculate the length of the current day’s night time according to the length of the previous day’s night time. Assuming "reference days" is set to 7 days, the average of the night time for the first 7 days is taken and applied as the night time for tonight. Then it will automatically adjust according to the proportion of steps.

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.

5.3.3 Astro based

Click "Astro Based" and set the reference period, midnight point, and initial duration.

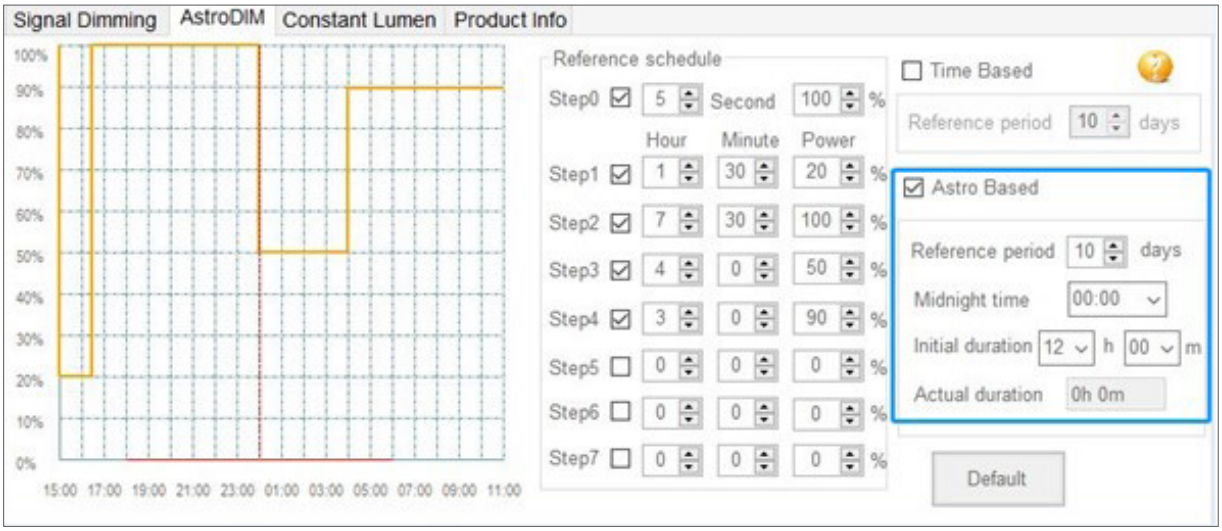

Figure 14: Astro based

Astro Based dimming profile is referenced to the average middle of the night, calculated based on the average operation time over the defined Reference period.

Reference period is a self-adapting percentage of the night time of the previous days.

Midnight time is the actual calculated center point in the operating period. It is aligned with the time point depicted by the vertical red line.

Initial duration is the preset lighting duration, and is shown as the red horizontal line on the time axis.

Actual duration is the actual calculated lighting operation time, which is shown as the orange horizontal line on the time axis

After the LED driver is turned on, it works according to the adaptive (actual time) step and time and output power. Unlike the other two timing modes, the midpoint alignment steps use relative time settings. The start time of Step 1 is 15:00, and the other steps are arranged in order.

5.4 Constant lumen

The **Constant Lumen** feature accounts for LED depreciation over time. Select “Enable”, configure the operation time and the corresponding output level, and click “Programming”.

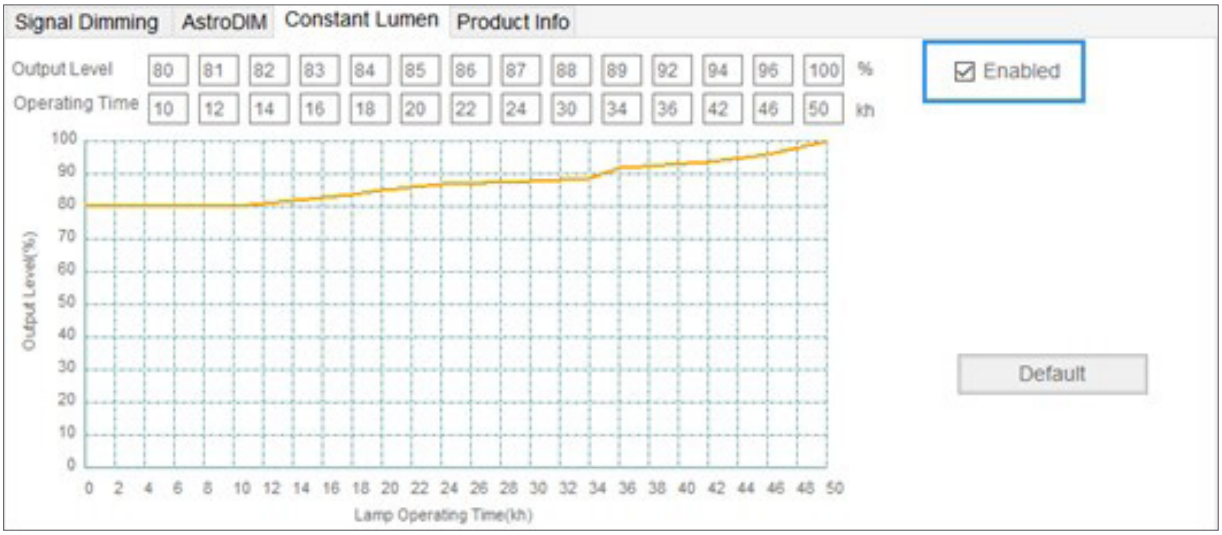

Figure 15: Constant lumen

Output level is the set current percentage, maximum 100%.

The time unit is 1K hours and the maximum is 100kh, which must be arranged in ascending order.

5.5 OTP point

If the Over-Temperature Protection (**OTP Point**) is triggered, the output power will be decreased to lower the temperature and protect the driver. 85°C is the default OTP setting, the user is able to set the temperature value lower to limit the maximum Tc.

Figure 16: OTP setting

5.6 Read function

When the **Read** function is performed, the driver log will be displayed.

Current Tc: Current driver Tc temperature.

Historical Tc_Max: The highest Tc temperature recorded during the driver's operating lifetime.

Previous time Tc_Max: Record of the highest Tc since last Read function was performed.

This Time Tc_Max: Record of the highest Tc during this use.

Total working time: Record the total working time (operating hours).

OTP times: Record of the OTP triggered times.

Firmware Version: Driver firmware version.

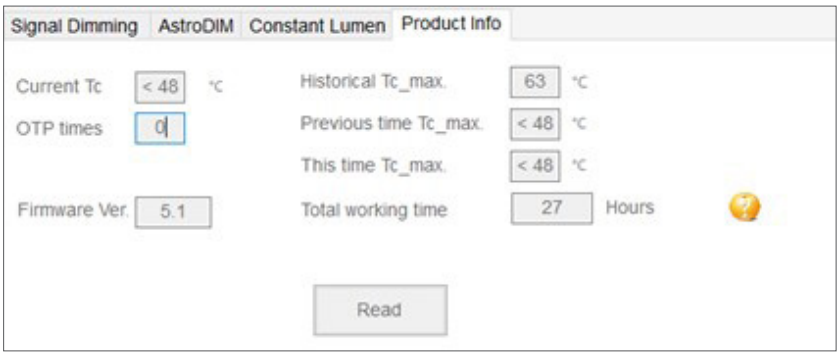

Figure 17: Read function

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