Programming Procedure for MOSO X6 & PHC LED Drivers

2019.08.01

Profile of X6 LED Drivers

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Designed to Meet Market Requirements

- Compact structure to fit in control gear chambers
- High reliability and long life time for longer warranty
- Universal input voltage for unstable grid
- Low ripple and THD
- Stable output
- Built-in active PFC to reduce energy loss
- High surge protection for lightening & surge damages
- IP67 protection

03 Product Feature and Advantage

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Product Features

- **Constant power** and programmable output
- **Offline programmable**
- 3 in 1 dimming: 0-10V, PWM, Timing control, Dim to off
- Universal input: 90-305Vac
- High efficiency: Up to 93%
- Multiple protection: SCP, OVP, OTP
- Surge immunity: DM-5KV, CM-10KV
- Work log function (**BLACK BOX**)
- **CLO function**
- Operation temperature: -40°C ~ 60°C
- Global certification: CCC,CE,CB,SAA,ENEC,UL listed, Class P
- 5 years warranty, extended to 7~10 years warranty on conditions

Application

Roadway lighting

Horticulture lighting

Industrial lighting

Architecture lighting

Stadium lighting

Area lighting

Street lighting

… …

Programming Setup

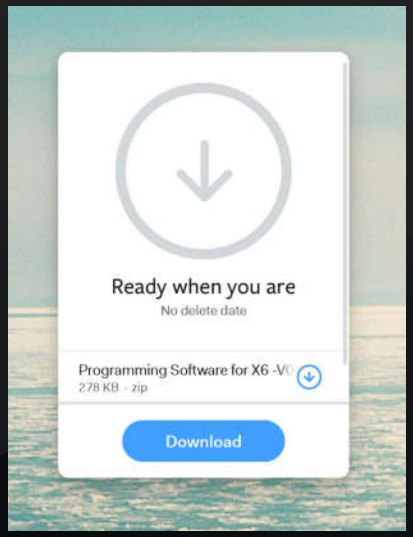
X6 & PHC drivers use dimming wire + MOSO dedicated software + programmer to program outputs and multi-functions.

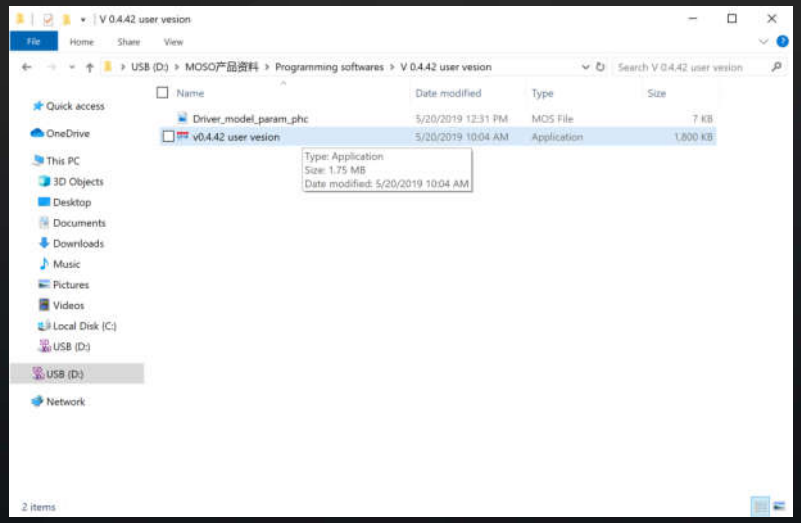
Please prepare:

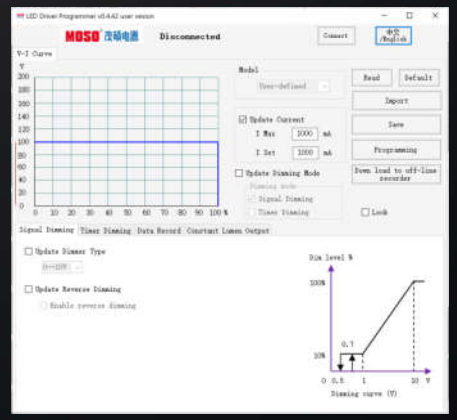
- Computer with Windows system, 32bit or 64 bits are both ok.
- One of the driver that you want to program.
- Dimming Wire Programmer from MOSO, model number is MS-PRG-W1 V01
- Connect the dimming wires “purple & grey” of the driver, to connector of the USB programmer
- Connect the programmer to USB port of the computer.

Programming Setup

Visit WETANSFER link : https://we.tl/t-AhsfwfJMmo
Download programming software for X6 PHC drivers to your computer.
Unzip the software file, click and run.







Notice:

- If the driver is not connected with computer, when you click and run the software, it pop up a notice " can not find the port". It reminds you to connect the driver to start program.

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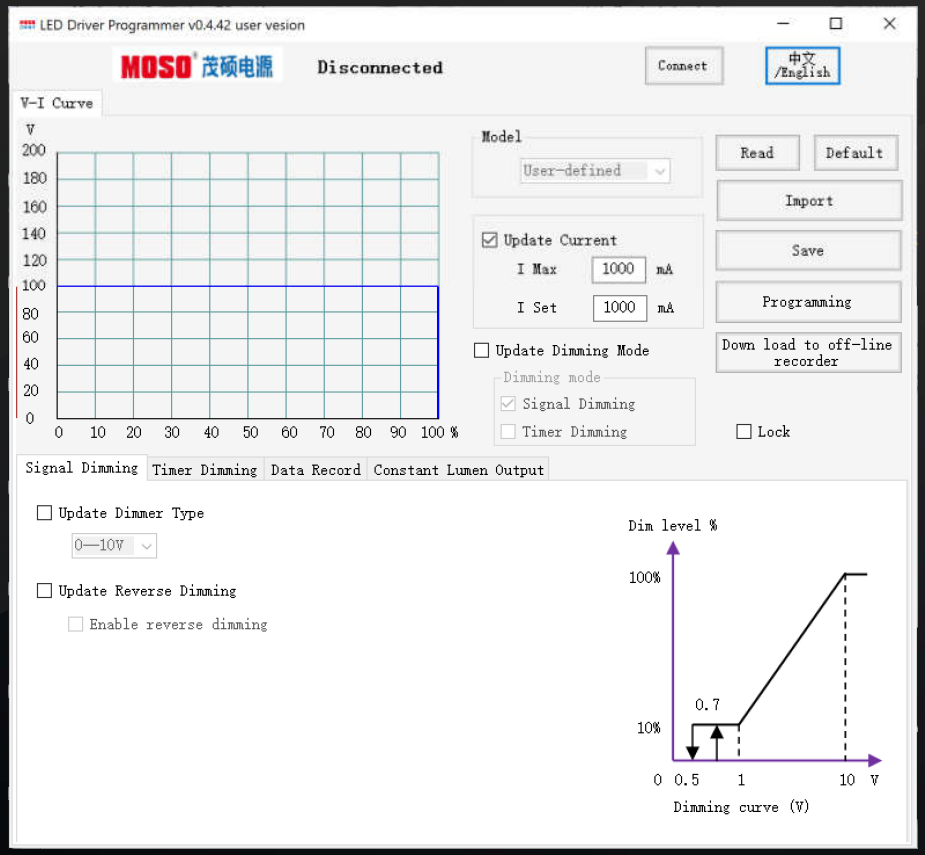
Output Configuration

Model read, fast and flexible

Programming- Set Iout



Procedure:

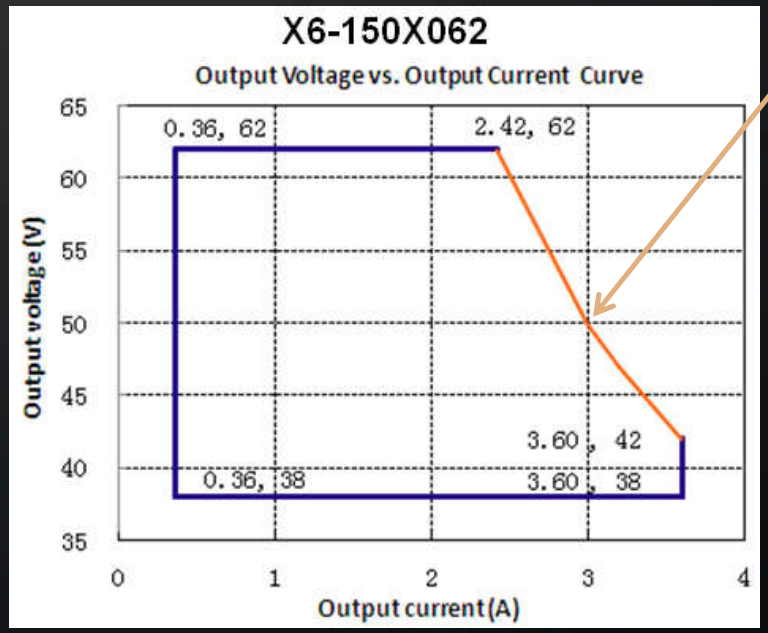
- Click “English” to switch to English interface.
- Click “Connect”, the software will read the model number of the driver by itself.
- A message pop up “ The software found a new model which is different from historical record, do you want to change to the new model?” Click YES.
- When the model number shows in the software, it means the connection is successful. Otherwise you need to check if the connection is something wrong.

Programming- Set Iout

One driver has wide range of outputs, so client can change Iout freely, within the operating range stated in datasheet.
Take X6-150X062 for example, you can use different Iout and Vout to reach same power.

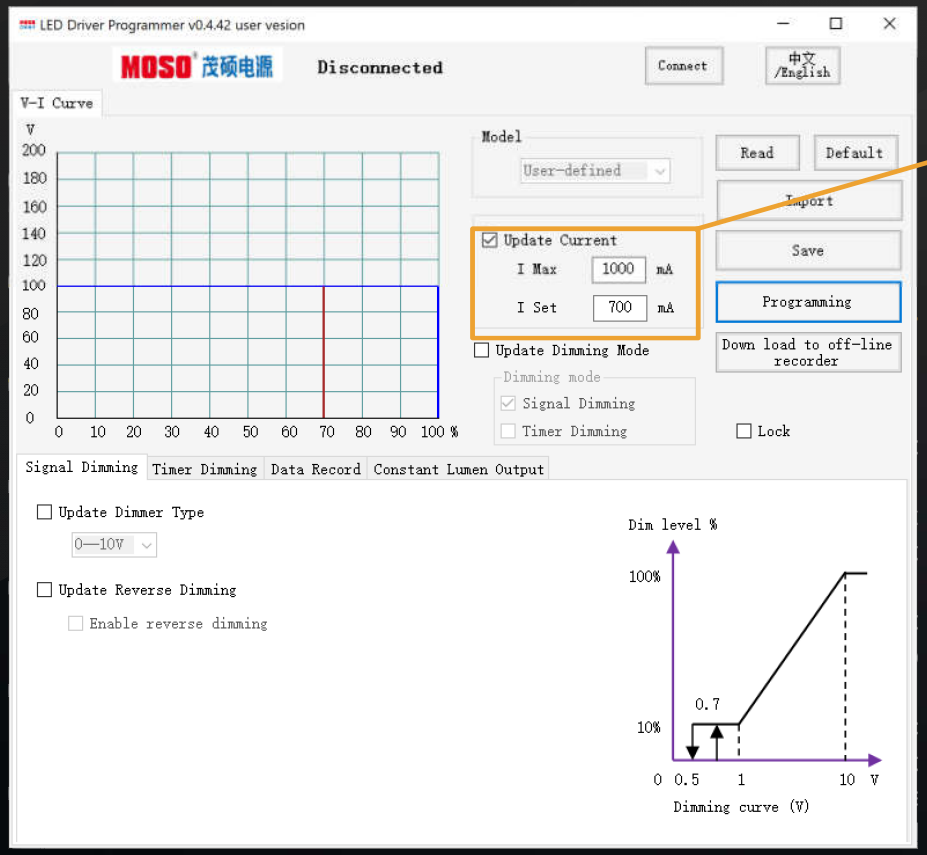
Vo:42V, Io:3.60A, 150W
Vo:48V, Io:3.13A, 150W
Vo:54V, Io:2.78A, 150W
Vo:56V, Io:2.68A, 150W
Vo:62V, Io:2.42A, 150W

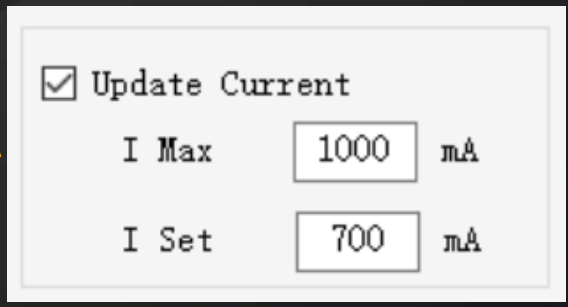
} X6-150X062



Calculate what is the Iout values you need, to power your LED light fixture.
Make sure the Iout and Vout you use is within the operation range of such driver, otherwise the light fixture couldn't be powered on properly when the Vout is over-low, or start protection mode, when the Vout / Iout is beyond the operation range.

Programming- Set Iout





Procedure:

Imax is fixed depends on the driver design, customer cannot change it.

I set should be defined based on customer's needs. Click "Programming".

Once Iset is configured, there is a red line shows percentage of loading, so customer can refer to datasheet to find corresponding efficiency, THD, etc.

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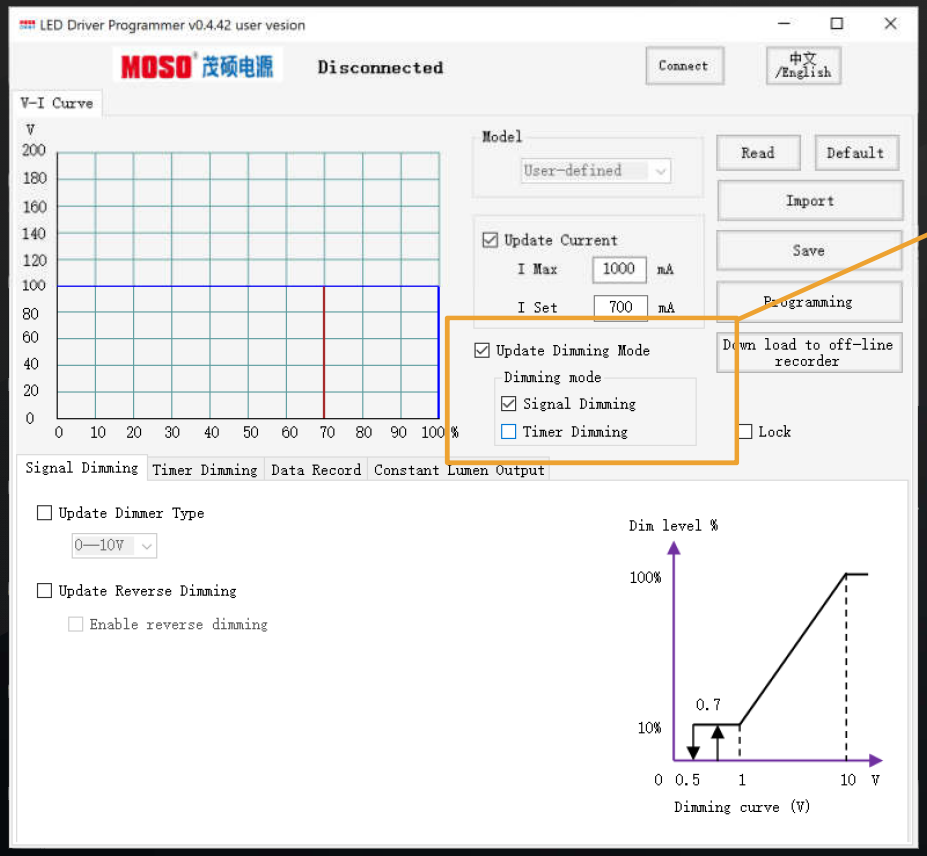
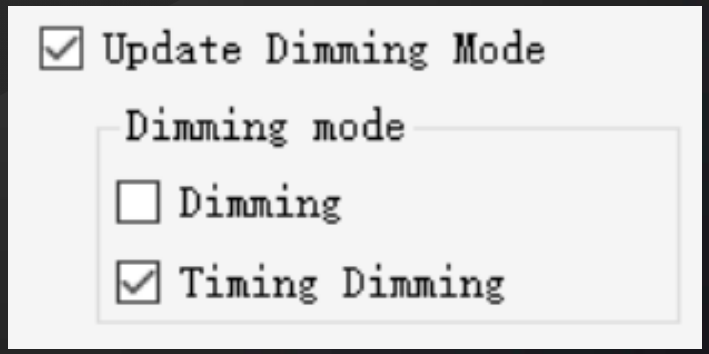
Dimming Setting

0-10V or timing control

Visual diming curve

Programming- Set Dimming

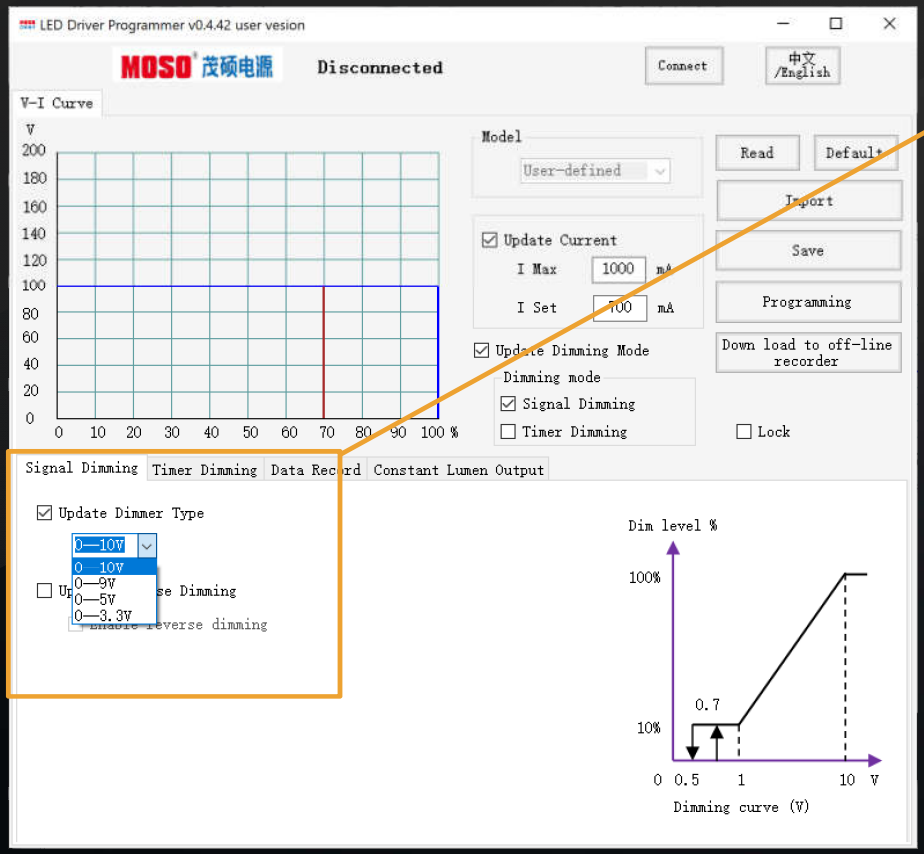


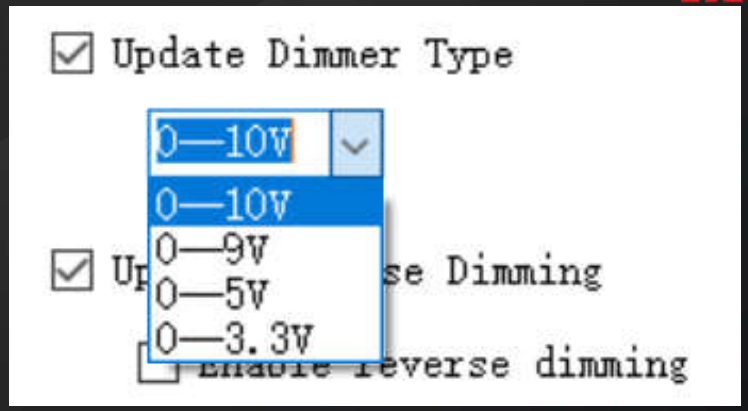


Procedure:

- If you want to use any dimming mode, select “Update Dimming Mode”.
- If you use a 0~5V/10V or PWM dimming system or dimmer, select “ Signal Dimming”.
- If you want to set a internal timer dimming schedule, select “ Timer Dimming”.

Programming- Set Dimming

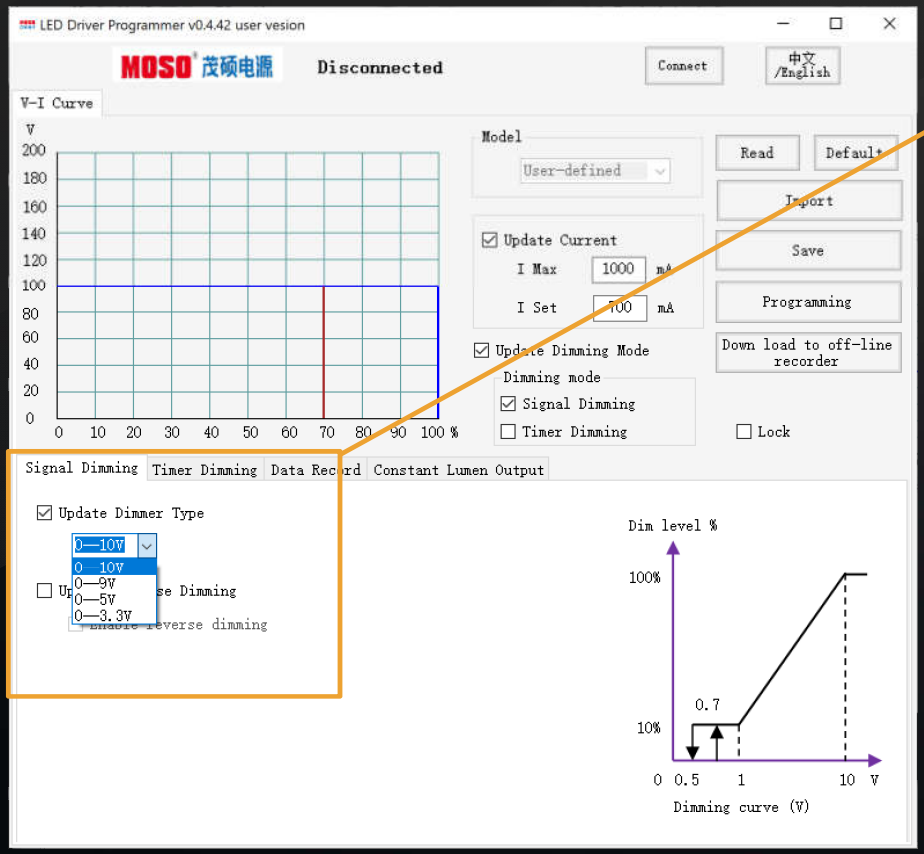


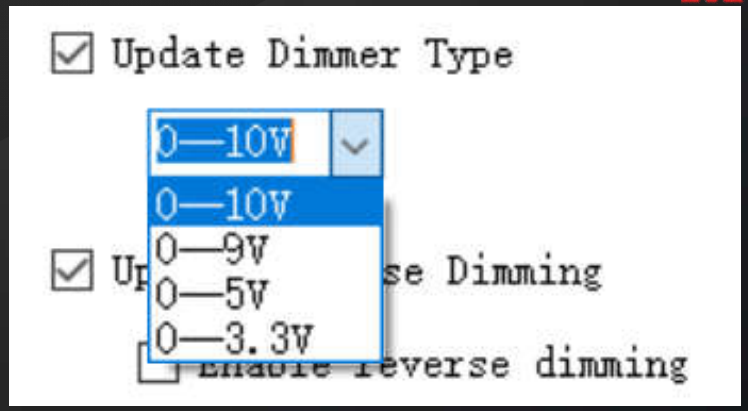


Procedure:

- The default setting is 0~10V dimming mode.
- Customer can change to 0~9V / 0~5V / 0~3.3V as well.
- Customer can select “reverse dimming” for some applications, for example, tunnel lighting projects usually use reverse dimming.

Programming- Set Dimming





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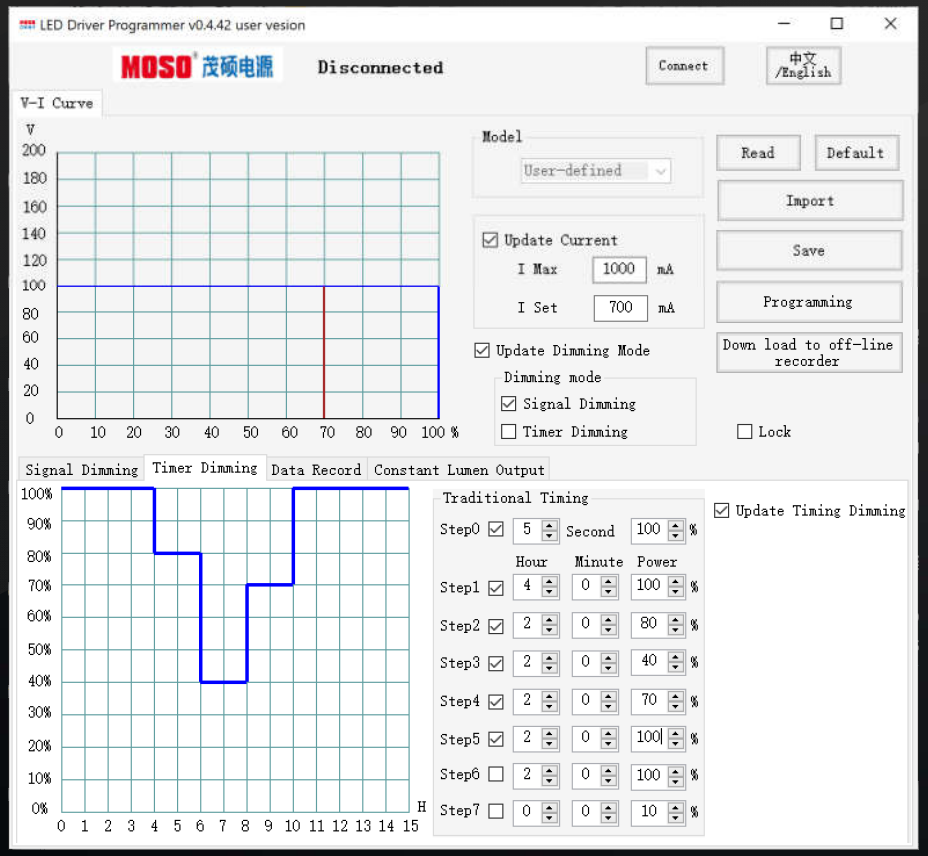
Programming- Set Timer Dimming

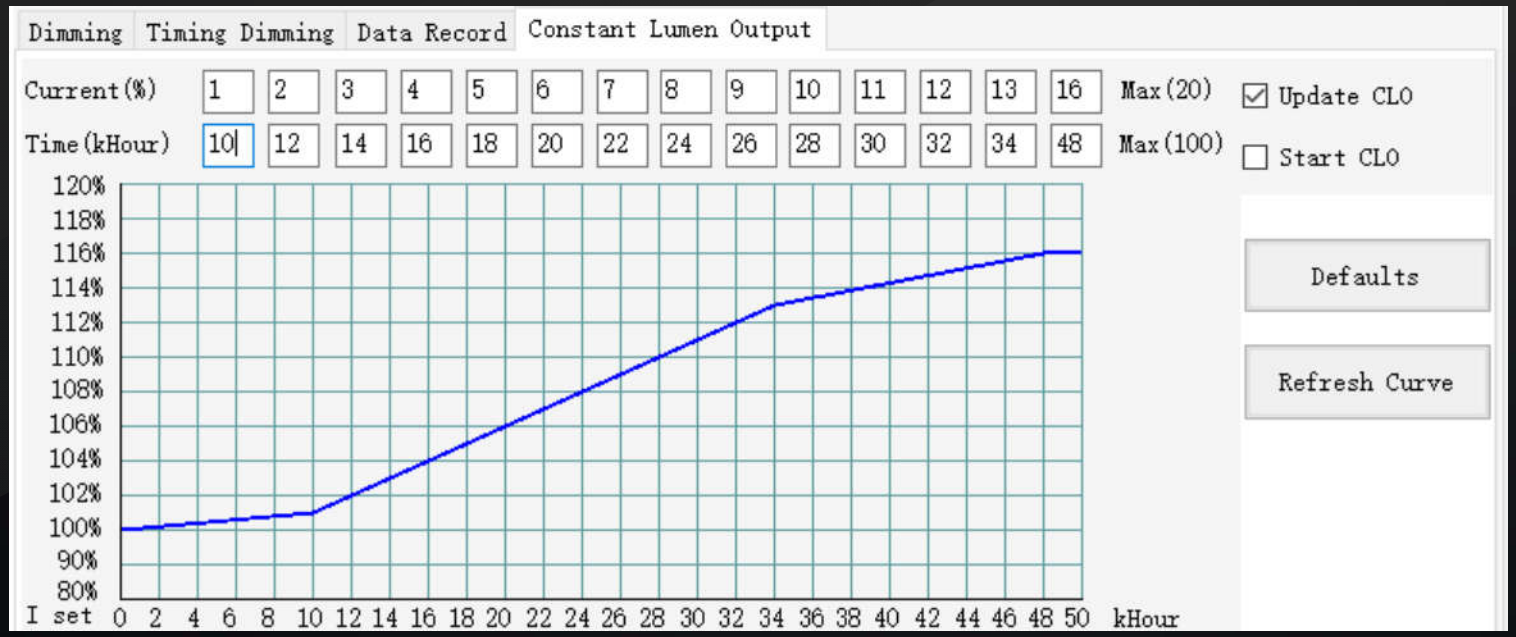


Procedure:

- If customer would like to set auto-dim schedules in night, select “Update Timing Dimming”
- Define dimming schedule in “Traditional Dimming”
- Once the timer dimming schedule is configured, every time once the driver is power on it will start to calculate the hours and run the dimming schedule.
- “Virtual Mid-night” dimming function will be updated soon, so the driver can adjust the dimming hours depends on different operating hours in winter and summer.

Programming- Set CLO

CLO Function (Constant Lumen Output)



Procedure:

- Refer to LEDs datasheet and calculate light decay within lifespan, and consider lumen maintenance factor, cusomer can define CLO function.
- Use less Iout when the light fixture is new and high efficient, increase Iout little by little over the lifespan, to compensate the light loss and maintain same lumen output over the life circle.

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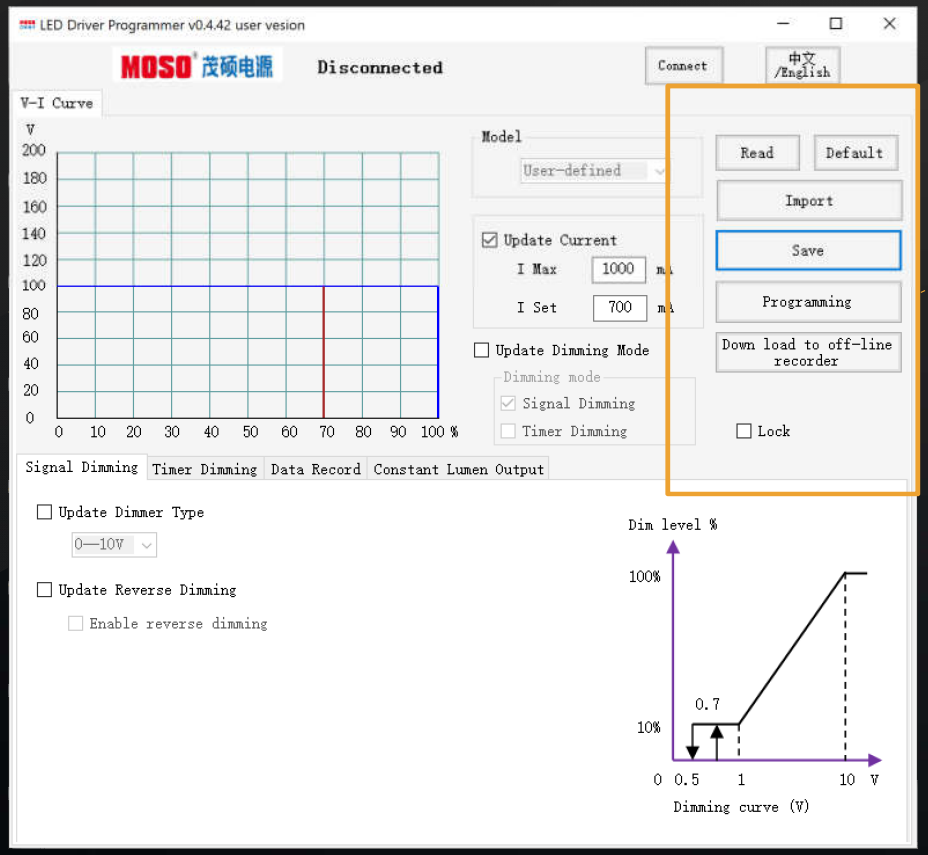
Batch & Field Programming

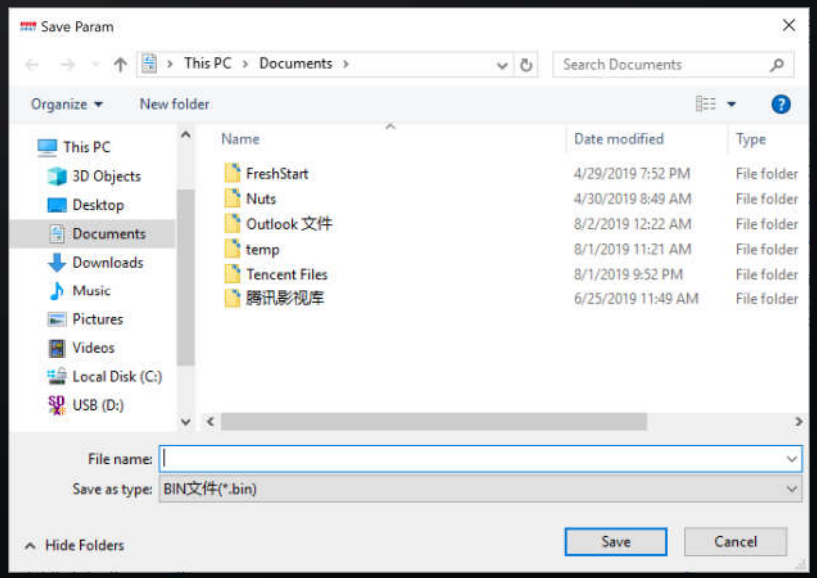
Low cost, fast and flexible

Programming- Batch Programming



Procedure:

- After all above settings was done, click “Save” to saving your setting of this driver to your computer, in case you want to save the record, or for future tracking, or reuse…
- Or “Download to off-line recorder”



Batch/Field Programming

Procedure:

- Client can save all above programming setting to a off-line recorder, and use the recorder for batch programming, or re-configure on field.

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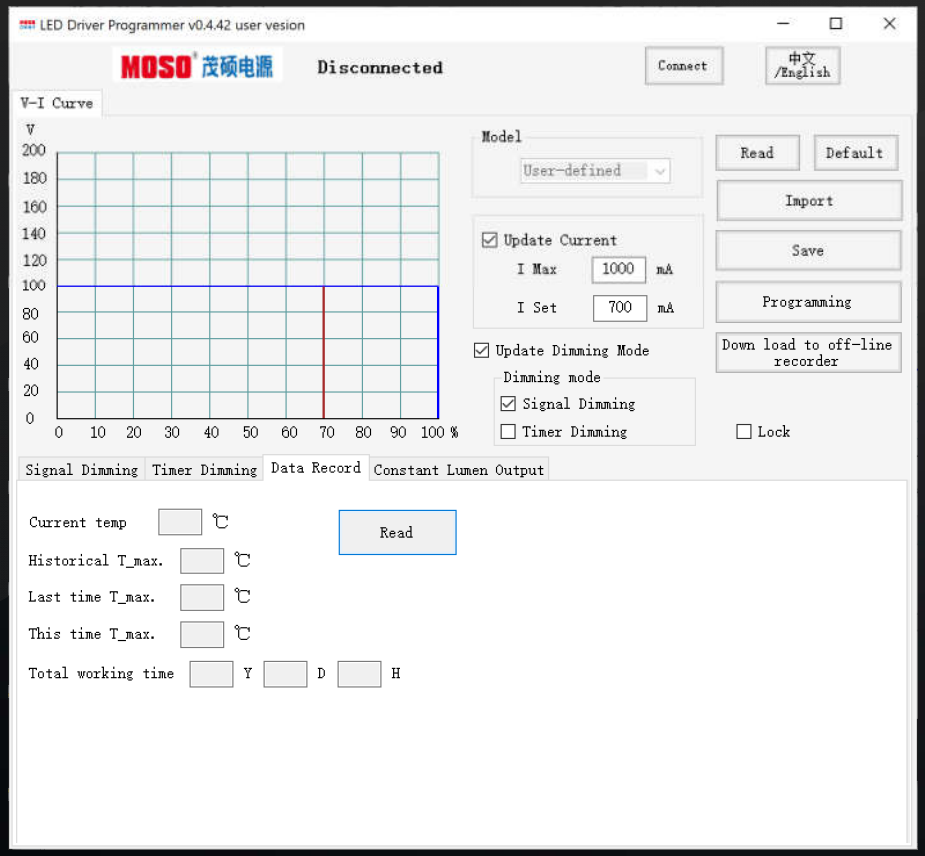
Working Log(BLACK BOX)

Automatic data logging,

support to export the data record

Programming- Black Box Function



Reading and record operation conditions of the driver

Procedure:

- This function is used when a engineer develop a fixture and check if the driver works properly with the cooling and LED modules, or when the driver is defective.
- Connect the divers to programmer and computor as same as how to program it.
- Click “Read” to know total operated hours of the driver, to check if it’s within warranty, and how many working hours per day.
- To read highest key components temperatures in history, and real time component temperatures, to diagnose driver failures.