

Features:



- ◆ Operating Voltage: USB 5VDC;
- ◆ Frequency of Operation: 13.56MHz;
- ◆ RF Compatible: ISO15693;
- ◆ RF Output Power: Up to 1.4W (Max) ;
- ◆ Reading and Writing Distance: Within 30 mm;
- ◆ IP20;
- ◆ Working temperature: 0~40°C;
- ◆ Shell Material: PC;
- ◆ Warranty: 1 Year.

Application:

- ◆ SUI image above table for U6 series LED drive power NFC wireless programming, current setting.

DESCRIPTION

NFC wireless programmer is based on near-field wireless communication technology, the signal is transmitted by electromagnetic induction coupling mode of the wireless frequency part of the spectrum, and the data transmission can be completed without power on, and the LED driver parameter configuration is realized. NFC technical operation distance is short, mainly to establish point-to-point data transmission between devices, NFC has the characteristics of close distance, high bandwidth, low energy consumption and high security. This programmer uses Mini USB interface to communicate and supply power to the upper computer through USB data lines. The communication is transmitted by encryption mode, that is, the data is configured from the upper computer, and then the reader transmits the data encryption to the terminal LED driver module to realize the functions of driving the current setting of the power supply, and the same LED driver meets the different application requirements. A burning tool meets RoHS requirements.

Configuration Connection Schemes:



(Note: When configured, the LED driver does not need to be powered on, Reader the antenna area is close to the LED driver antenna position, the distance is less than 30 mm.)

Indicator and sound indication

1.Indicator Description

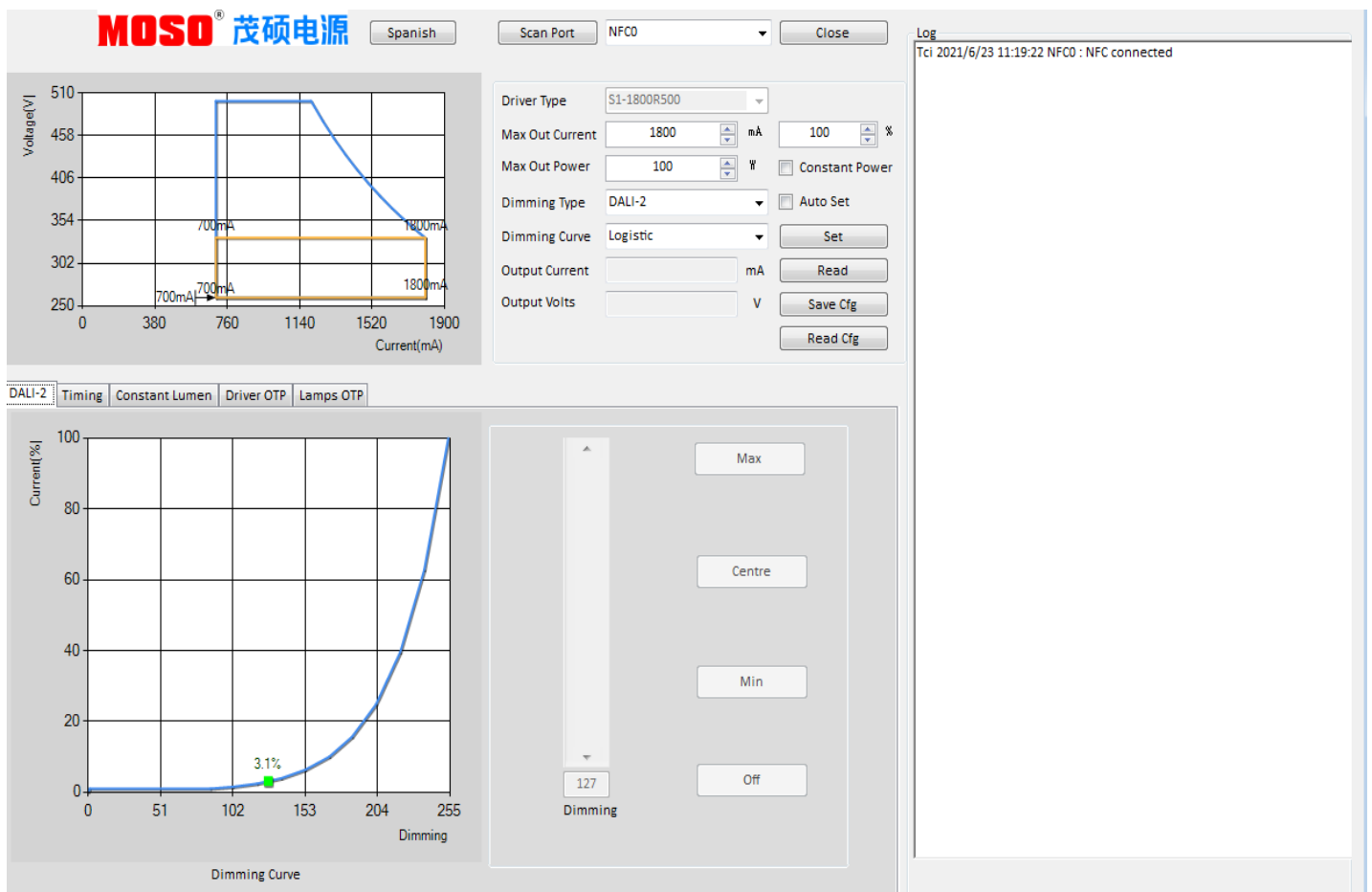
When the Reader is connected to the computer, the red indicator light is always on, and the green indicator light flashes 3 times, indicating that the power on is normal, and the system will automatically install USB drive when it is used for the first time.

When the configured LED driver is close to the Reader (distance less than 30mm), the green indicator light is always on, indicating that the configured LED driver has been sensed.

2.Warning tone

When the configured LED driver is close to the reader, after the UI is successful (refer to the software instructions), "Di" sound indicates that the LED driver is found by the UI,

"set NFC tags success" indicates that the parameters are written to the NFC Tag of the LED driver.

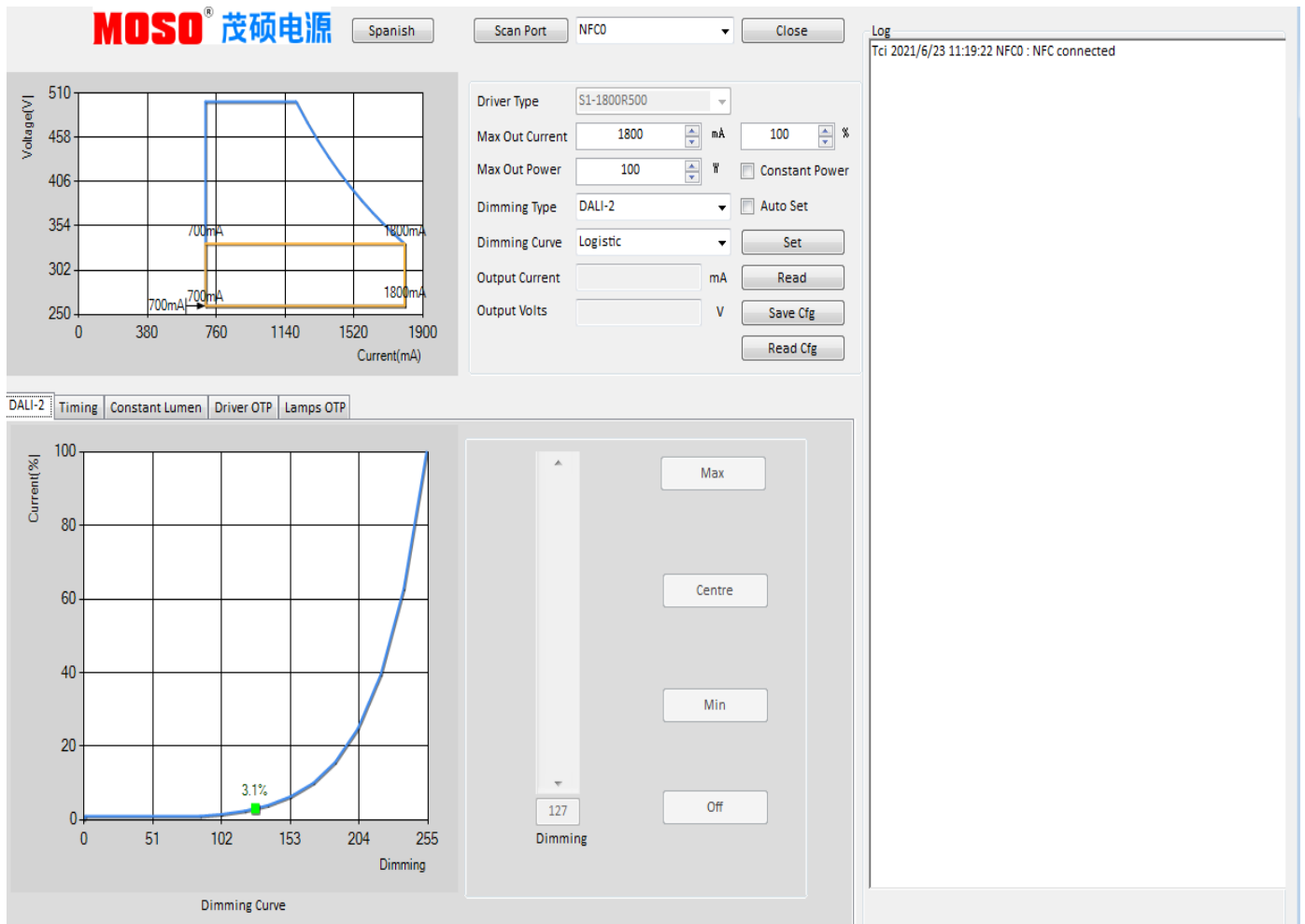


UI image above:

U6 Driver Configuration Interface Description:

1. The Driver type bar in the UI is the current driver model, can not be changed, factory is set.
2. Maximum output current setting maximum output current can be set according to actual needs (Note: Set the current value to 10%I_{max}-100%I_{max}).
3. Maximum output power set, set the maximum output power, ensure that the driver does not exceed this set Max power, if the output voltage is high resulting in the output power exceeding the set value, the output current will be reduced so that it does not exceed the set maximum power.
4. The constant power function ensures that the output power of the LED driver is constant during the dimming process. (For example, the dimming is 50% and the output power is 50% of the set maximum power)
5. Dimming mode has three options: DALI-2 dimming, timing dimming (traditional timing dimming, virtual midnight, adaptive), DALI-2 +timing dimming.
6. After the above parameters are set, click on the set button to configure successfully. Or click the automatic setting for batch setting of the driver.

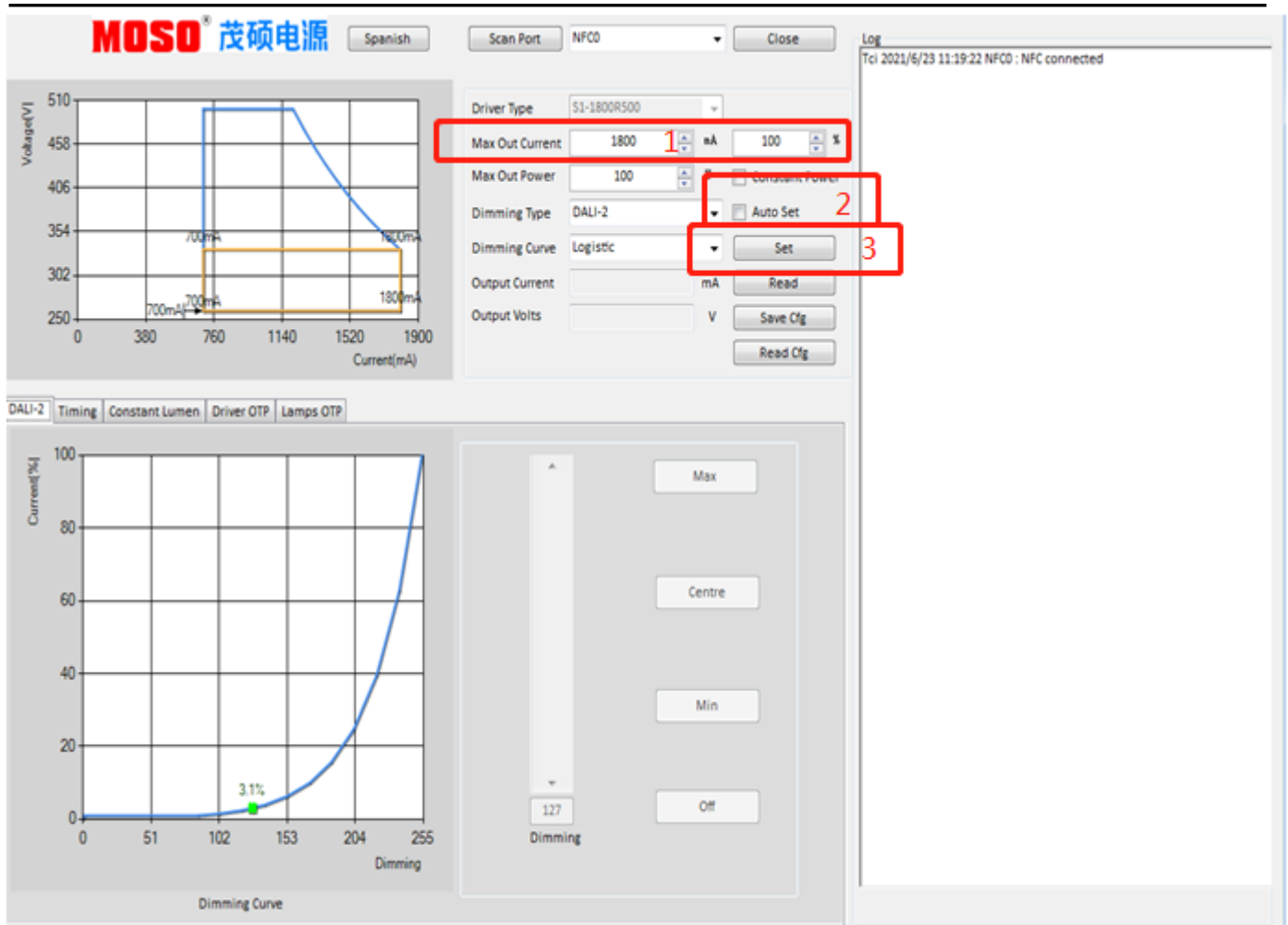
Operation instructions:



Step 1:

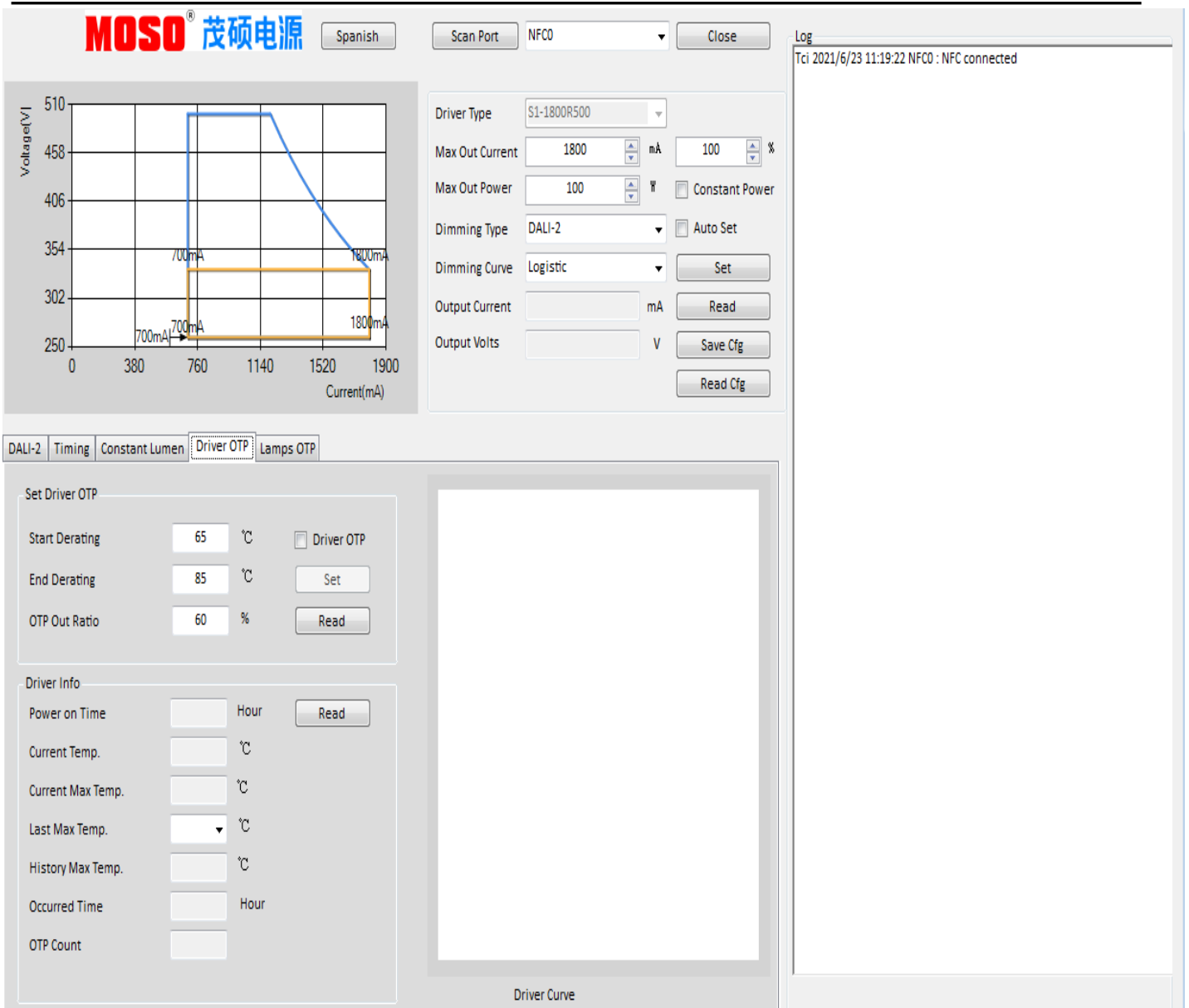
As shown in the schematic diagram of the configuration connection scheme.

1. Connect the corresponding micro USB cable plug to the computer and the NFC Tag reader respectively.
2. Open U6 PC software.
3. Connect the power NFC interface (with NFC position identification on the housing) close to the NFC Tag reader. "Di" connected successfully shown in figure: The programming interface is shown as NFC. Right border showing NFC connected Reader and showing the driver firmware version.



Step 2:

1. As shown red box "1" in UI image above, set the target value in the "Set Current", for example 1800mA. (Other parameters can be set based on actual needs).
2. As shown in the red box "2" in UI image above, click the settings key to configure successfully. The right box prompts for successful configuration.
3. As shown in the red box "3" in UI image above, check the automatic setting key to set the parameters to configure the power in batches.



Set Driver OTP

Calculate the current dimming value according to the following formula,

$$\text{Val} = (254 - \text{Voor}) * (T - T_s) / (T_e - T_s) + \text{Voor}$$

Note :

Val is the current dimming value,

Voor is the corresponding dimming value of the OTP out Ratio, the OTP Out Ratio is the percentage of the maximum output current.

T_e is the endderating temperature, End Derating

T_s is start derating temperature, Start Derating

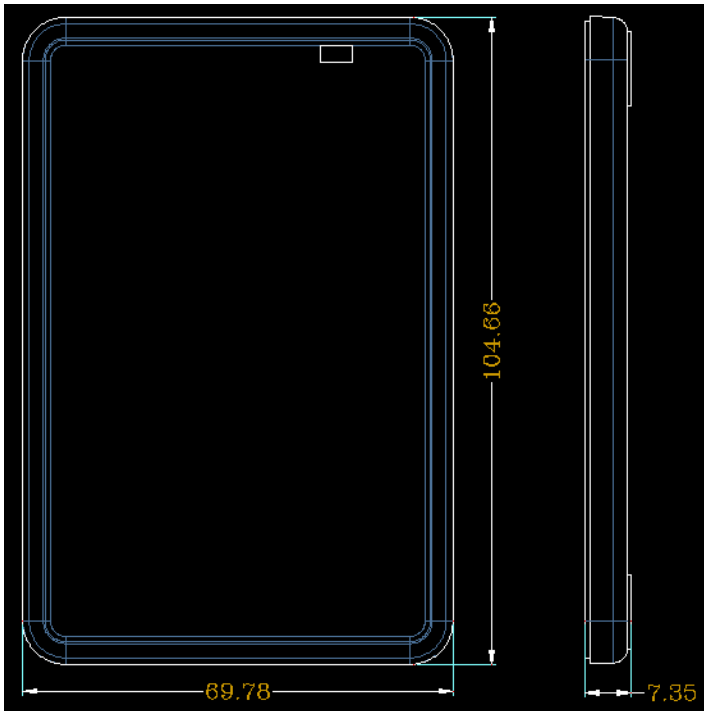
T is the current temperature

The screenshot displays the MOSO NFC Reader software interface. At the top left, there is a graph showing Voltage (V) on the y-axis (ranging from 250 to 510) and Current (mA) on the x-axis (ranging from 0 to 1900). The graph shows a blue curve that rises to a peak of 458V at 1140mA and then gradually declines. A yellow box highlights a region of the graph between 700mA and 1800mA, with a voltage of approximately 330V. The interface includes various control panels: 'Driver Type' (S1-1800R500), 'Max Out Current' (1800 mA), 'Max Out Power' (100 W), 'Dimming Type' (DALI-2), 'Dimming Curve' (Logistic), 'Output Current' (mA), and 'Output Volts' (V). A 'Log' window on the right shows the connection status: 'Tcl 2021/6/23 11:19:22 NFC0 : NFC connected'. The 'Set Lamps OTP' section is highlighted with a red box, showing parameters: Resistance at 25°C (100 KΩ), Sensor constant (BETA) (4050), Start Derating (65 °C), End Derating (85 °C), and OTP Out Ratio (60 %). The 'Lamps Info' section shows fields for Current Temp., Current Max Temp., Last Max Temp., History Max Temp., Occurred Time, and OTP Count. Red boxes and arrows indicate the following steps: 1. Setting 'Start Derating' to 65; 2. Selecting 'Lamps OTP'; 3. Pressing 'Set'; 4. Powering on the LED driver; 5. Pressing 'Read' to read all parameters; 6. Pressing 'Read' to read OTP parameters.

Set Lamps OTP

1. As shown red box "1" in UI image above, set the target value in the "Start Derating", for example 65. (Other parameters can be set based on actual needs).
2. As shown in the red box "2" in UI image above, select "Lamps OTP".
3. As shown in the red box "3" in UI image above, press "Set" button write the all parameters to NFC Tag .
4. As shown in the red box "4" in UI image above, power on the LED driver, wait 5s, power off it.
5. As shown in the red box "5" in UI image above, press "Read" button read all parameters from NFC Tag to UI image above buffer.
6. As shown in the red box "6" in UI image above, press "Read" button read the lamps OTP parameters from UI image above buffer.

MECHANICAL OUTLINE



REVISION HISTORY

Version	Description of Change		Changed Date	Notes
	Before	Now		
A.1		Datasheets Release	2020-12-23	