



# **LTE Cat.1 Lamp Controller NEMA**

## **User's Manual**

### **NJ-iot305**

**Xiamen Net-Join IoT Technology Co., Ltd.**

<https://light.net-join.com/>

## 1. Product Overview

The NJ- IoT305 utility street light controller, leveraging 4G Cat.1 cellular technology, ensures reliable real-time connectivity and high single-light uptime, while reducing deployment costs and facilitating seamless upgrades through direct LTE network integration. The 4G Cat.1 standard offers extensive coverage, massive device connectivity, competitive data throughput, low power consumption, and an optimized network architecture. The controller performs wireless data acquisition and reporting of comprehensive operating parameters, including input/output currents and voltages, active and apparent power, power factor, line frequency, temperature, and switch status.

## 2. Core Functions and Advantages

1. Communication: LTE 4G Cat.1 wireless communication,
2. NEMA interface
3. Frequency Band: Supports global bands covering Southeast Asia, Europe, Africa, America;
4. Power Supply: AC 90-265V, 50/60Hz
5. 1-channel 0%~100% stepless dimming output, compatible with 1–10V and PWM
6. Load Current: Single-channel safe output 4.5A; built-in relay rated 10A
7. Timer Control: Timed switch on/off & time schedule management supported
8. Detection, Alarm & Positioning: Customizable automatic terminal operation; alarms for lamp pole tilt, cable leakage and other faults, integrated positioning function
9. Protection & Default State: Over-current, over-voltage, under-voltage & overload protection; lamp and circuit status detection
10. Active reporting of various faults, including lamp, driver and wiring failures
11. Remote Maintenance: Remote firmware upgrade supported
12. Environmental Rating: Industrial operating temperature -35°C ~ +65°C, 13. IP65 waterproof rating

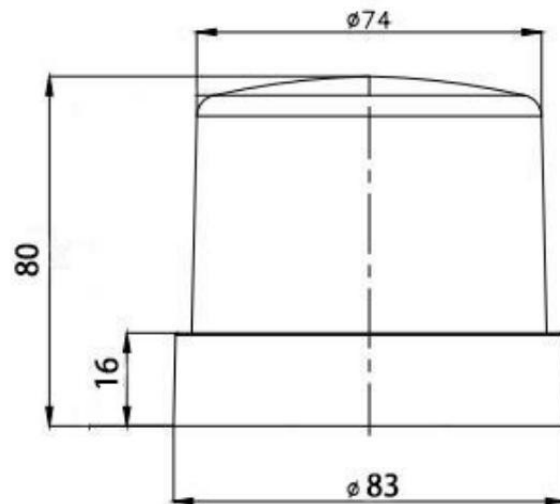
## 3. Product Dimensions

Outer Size: 83 mm × 80 mm (W × H)

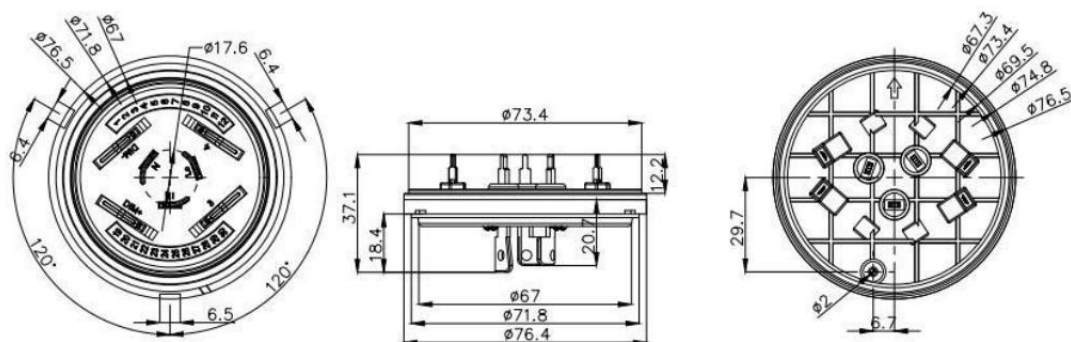
Net Weight: 0.2kg

(An error of 1–2 mm may exist due to different measuring methods. Please take the actual received product as the standard.)

### 3.1 Product Dimension Parameters



## NJ-iot305 Product Base Size



## NJ-iot305 Product Detailed Size

## 3.2 Product Outline



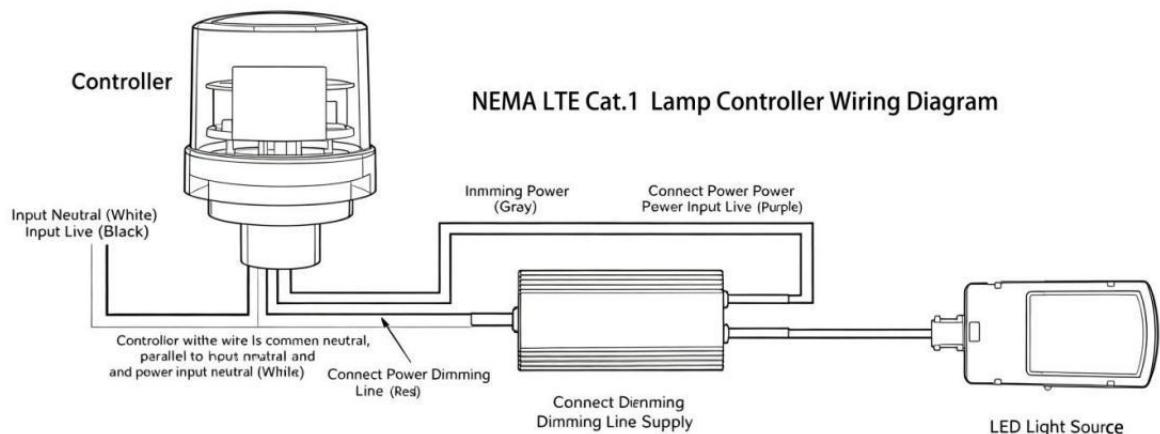
Detailed of NJ-iot305

## 4. Technical Parameters

| Parameter Name       | Parameter Value |
|----------------------|-----------------|
| communication method | 4G cat.1        |
| Supply Voltage       | AC 90-265V      |
| Maximum load current | 4.5A            |
| Wattage              | ≤1000W          |

| Parameter Name                 | Parameter Value                               |
|--------------------------------|-----------------------------------------------|
| Dimming method                 | 0-10V/PWM                                     |
| No-load power consumption      | <2W                                           |
| Operating temperature          | - 35℃ ~ +65℃                                  |
| Protection class               | IP65                                          |
| Support global frequency bands | Europe/Africa/America/<br>Southeast Asia etc; |

## 5. Installation instructions



Mount the NEMA- based lamp- controller at a proper spot. Make sure the installation position allows easy access for power- supply and signal- wire wiring. Normally, the unit is fitted onto the lamp- pole or control cabinet. The lamp controller comes standard with a 5- pin or 7- pin base for single- lamp and dual- lamp applications respectively.

► For safety, always operate with the power off.

a) Connecting the drive power supply

The power supply needs to support 0-10V dimming or PWM dimming power supply.

The output of the single-light controller is connected to the input of the driving power supply. The dimming line of the single-light controller is connected to the dimming line of the driving power supply.

b) connected load

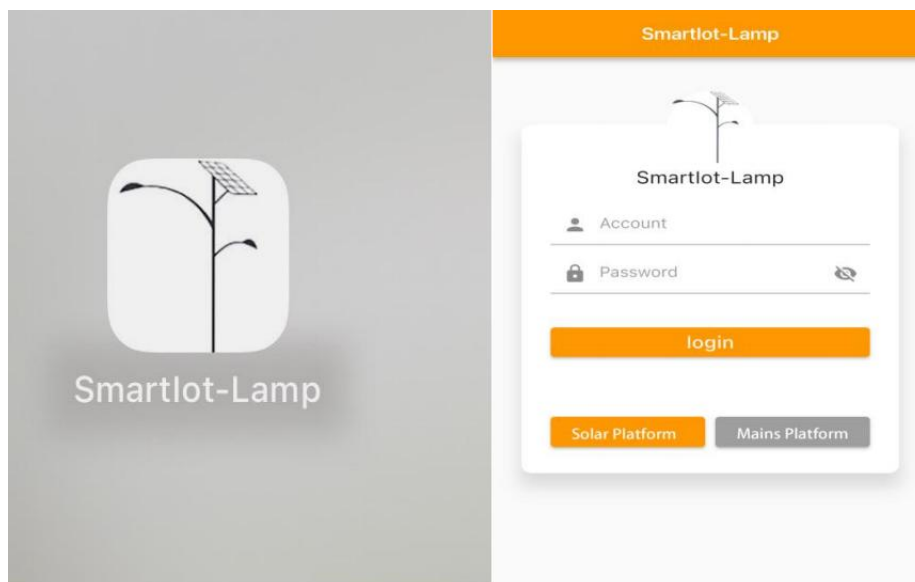
The output of the drive power supply is connected to the light source and the power output is DC.

c) Access to utility power

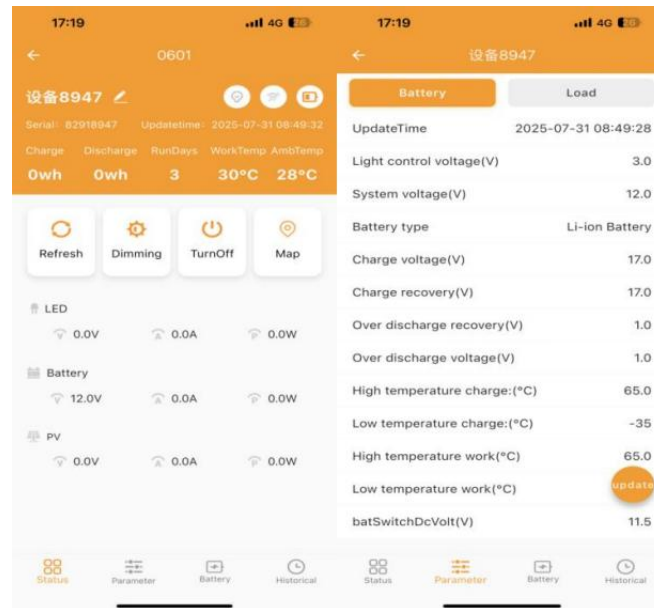
Ensure that the input of the single lamp controller is connected to the mains when steps A and B are completed. Lamps are switched on by default

- \*Additionally the installation should be securely fastened and avoid scratches and insulation damage to the line

## 5. Mobile App

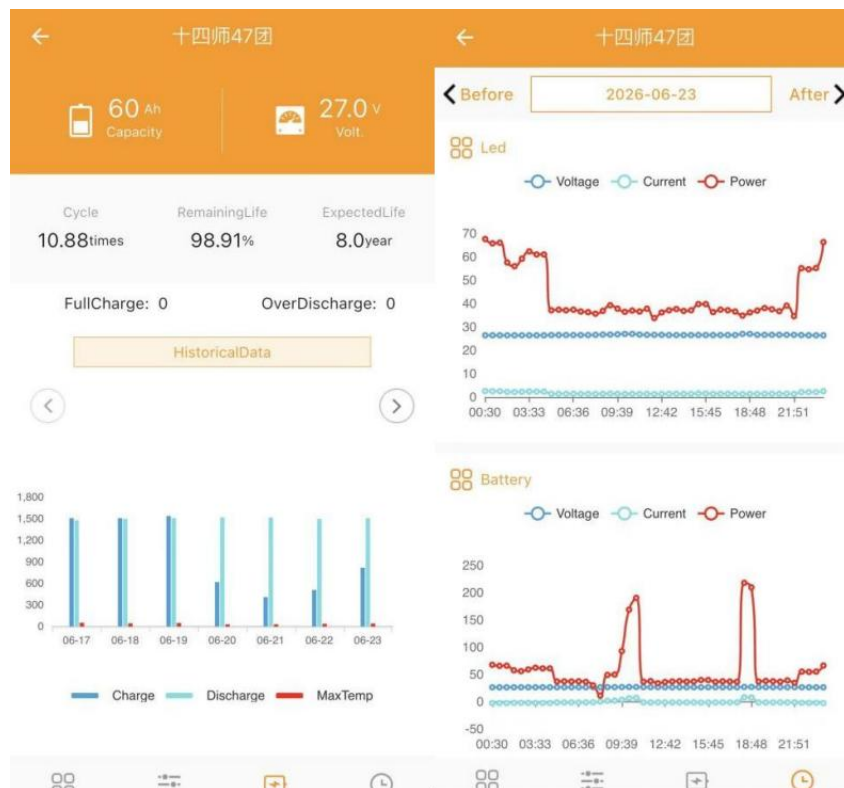


Enter account number and password, click login, enter the system, you can see the account information and the account of the subordinate user.



By clicking on a device to select a device in the device list and enter the device information interface, you can update, dim, switch, and view the map of the device.

In the interface of parameters, you can send down parameters and update parameters.

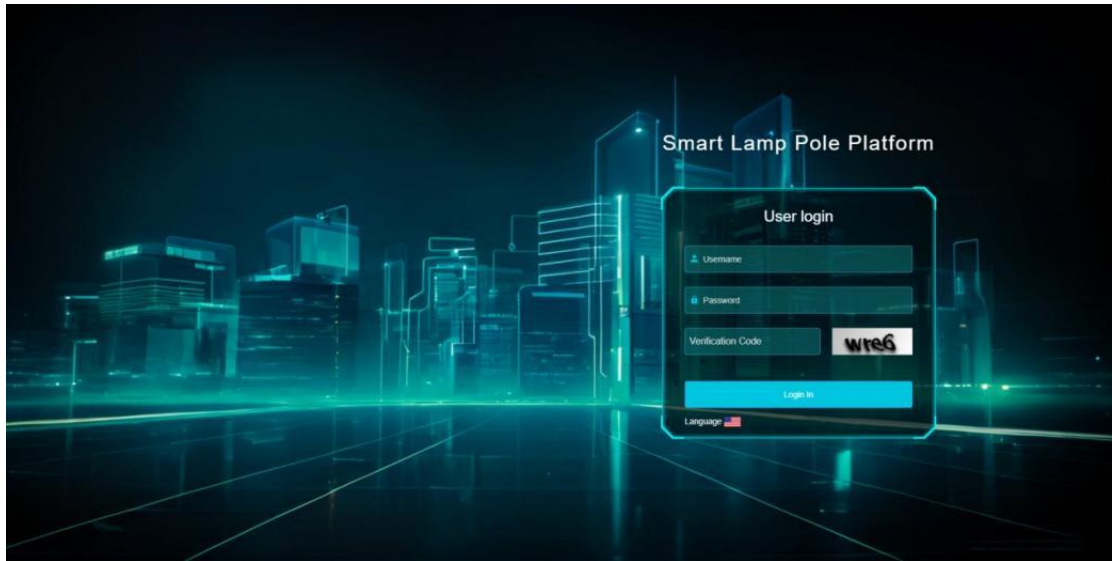


Click the battery to view the historical data of the battery, and view the corresponding historical working time, historical power generation/discharge(wh).

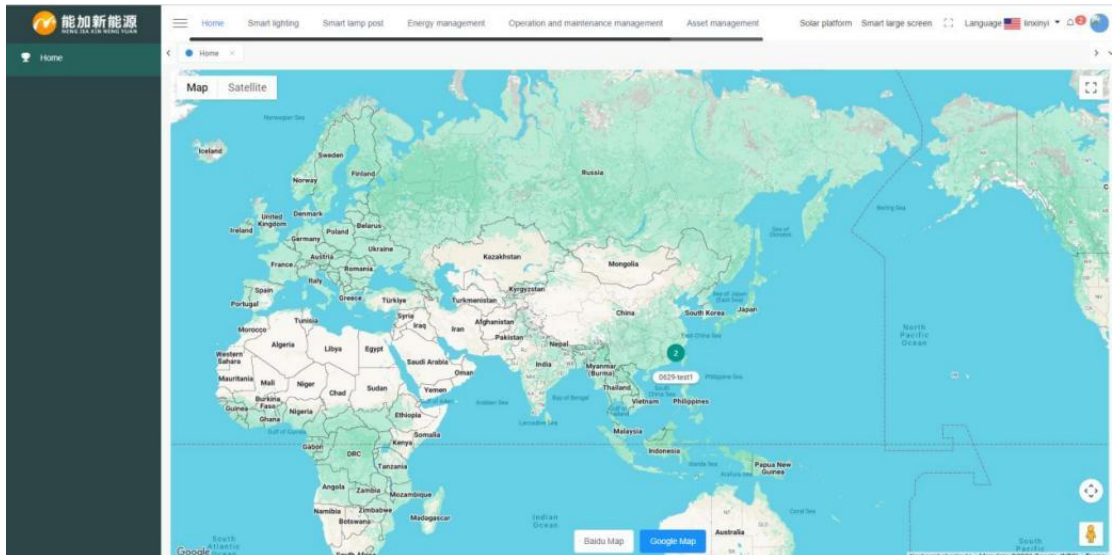
In the interface of historical data, you can select the device and date to view the data table graphs (voltage,current, power and temperature)of solar panels, batteries, load sand temperatures.

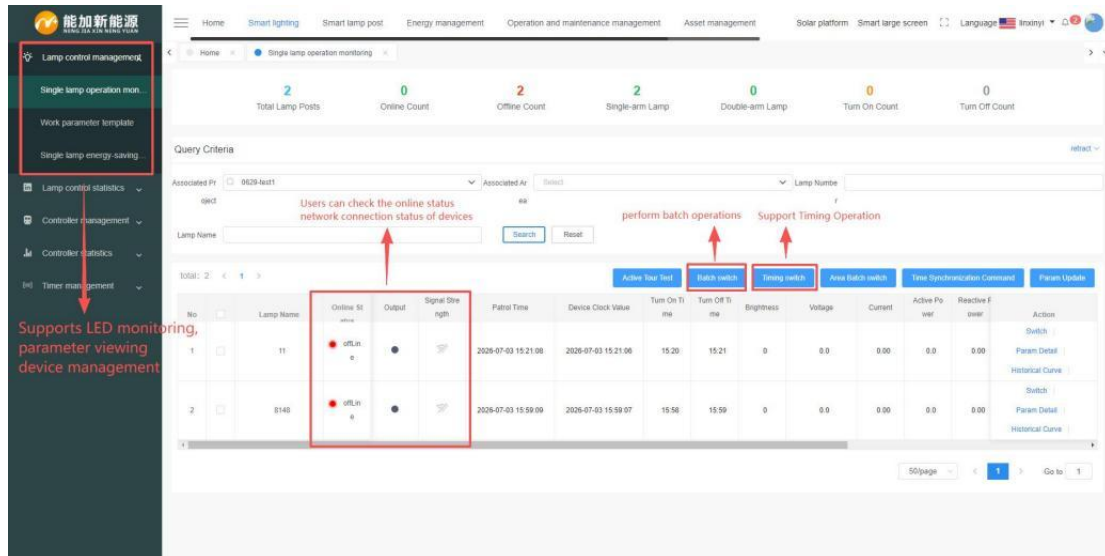
## 6. Display on PC side

- Website Entry : <https://gm.xmnengjia.com>

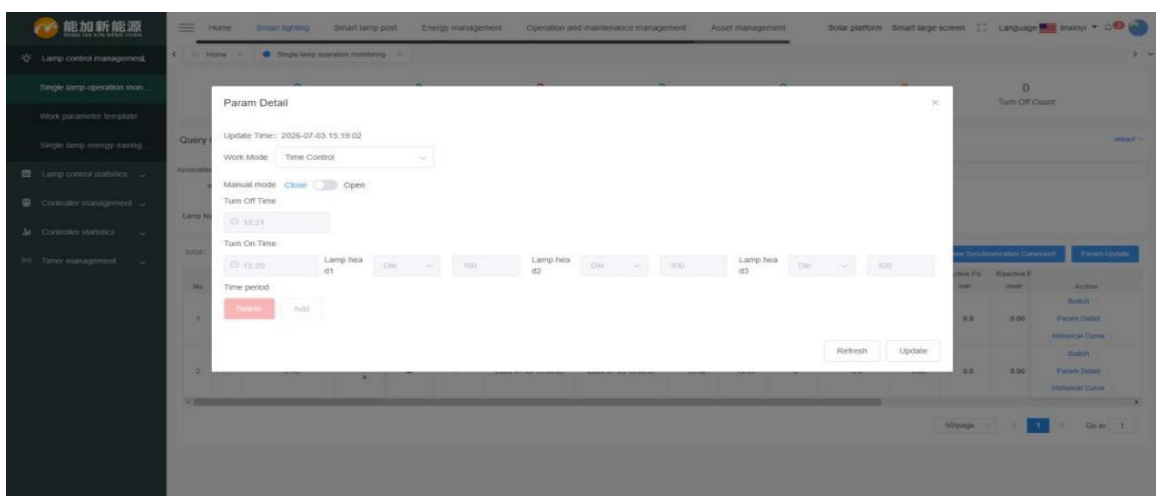


- This is the main page. All devices available for user binding are displayed on this Home interface.

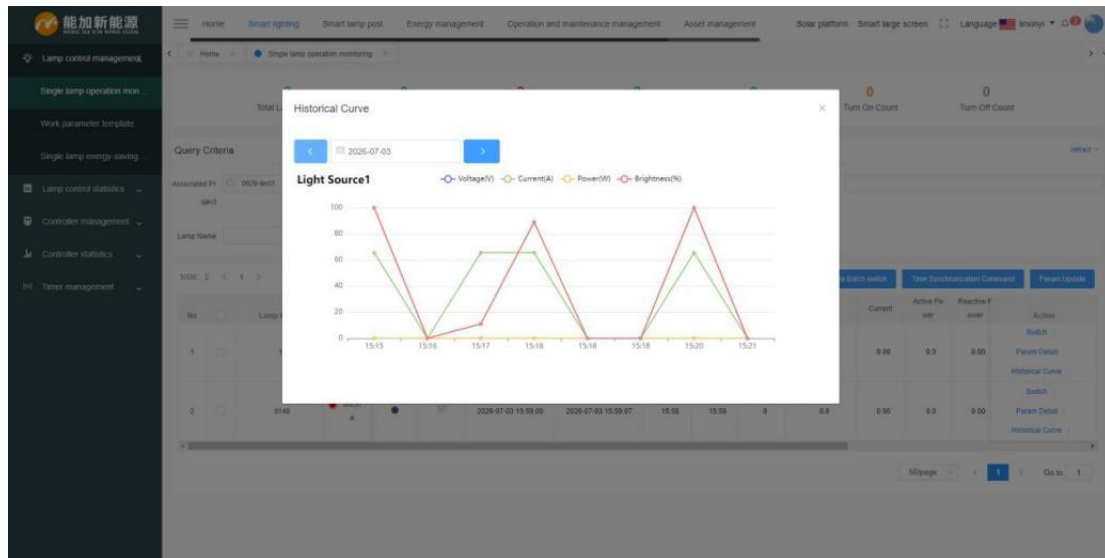




- Active Tour Test: Batch online inspection, one-click verification of device online connectivity status
- Batch Switch: Mass on/off control for all lamps, quickly adjust lighting status of the whole road uniformly
- Timing Switch: Batch schedule timing strategies, support automatic brightness adjustment & lamp on/off by time periods
- Area Batch Switch: Group lamp control by regions, differentiated lighting management for main roads, parks and branch roads
- Time Synchronization Command: Synchronize local clock of all devices in batch to ensure accurate execution of timing strategies
- Param Update: Batch modify lamp operation parameters, including dimming level, output power, alarm thresholds and other configurations



- The timing function supports customized time schedules, enabling remote automatic on and off control of street lights as per user-defined time settings.



- Historical status of the device: Select the time to view the voltage, current and power of the solar panels, batteries, loads, temperature.



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