

# SMART PEDESTRIAN SYSTEM

## EVERY LITTLE LIGHT FOR SAFETY

European Intelligent Pedestrian System

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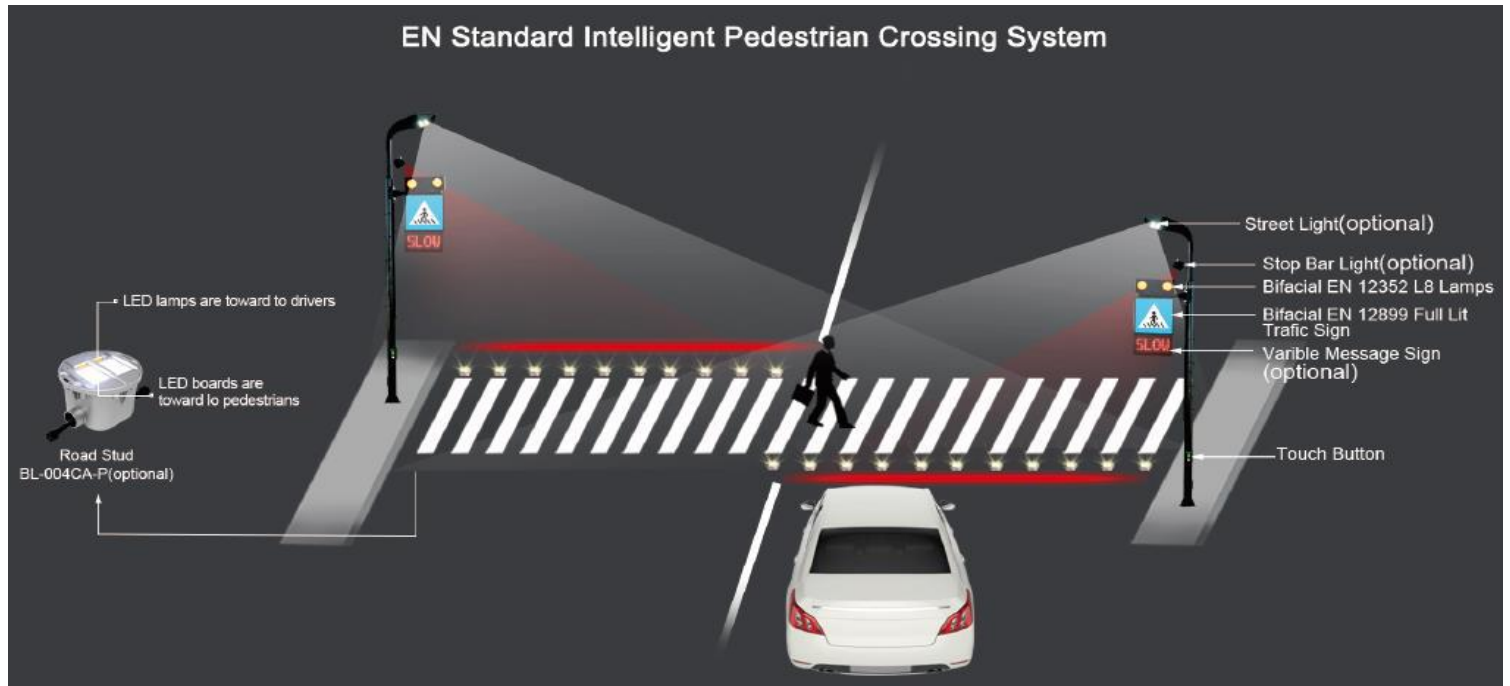
## 1 Scope

This specification covers the detailed Specification and Performance for the following products listed as below:

## 2 Products Description

### 2.1 Background

The official data showed higher motorist yielding rates at crosswalks where the similar system had been installed in comparison to lower rates for standard warning beacons. The higher yielding rates were sustained even after two years of operation, and no identifiable negative effects were found.



### 2.2 Brief Description

Pedestrian crossings must be suitably lit for decreasing the accident rate. Ellumin European Intelligent Pedestrian System is an innovation system as well as EN12899&EN12352 conformer, particularly designed to enhance the safety of zebra crossings.

The system can be activated actively by push button. Once the system starts, stop bar, warning lamps and embedded road stud together light, warning sign brightness increase, message board change to red words "slow" to drivers for warning them there ahead pedestrians will cross the crosswalk, please slow down and give way.

The street lights and warning signs are automatically operate at the night, enhancing the warning effect and safety of zebra crossing.

### 2.3 Features

2.3.1 Comply with European EN12899&EN12352 standard

2.3.2 LED lamps adopt daytime visible light design for effective warning in daytime and nighttime

2.3.3 Solar or AC power supply optional

2.3.4 Can connect to the ELLUMIN Cloud for better solving traffic problems and managing traffic order

2.3.5 Can be applied in various urban or suburban settings where pedestrian safety is a concern, especially at crosswalks or intersections with high vehicle traffic

## 3 L2/L8L Warning Lamps(optional)

### 3.1 Specification

Once the pre-warning system starts, the warning lamps toward to drivers flash for warning drivers there ahead pedestrians will cross the crosswalk, please slow down and give way.

3.1.1 Comply with European EN12352 standard

3.1.2 Good night visibility brings better warning effect

### 3.2 Type

EN 12352 L2 Lamps:

Double sided  
Complete Set  
Frame and 2 pcs of EN12352 L2 lamps  
Material: Coated aluminum frame  
size:600x180x48mm



EN 12352 L8 Lamps:

Double sided  
L8 lamps size:224\*224\*36mm  
LED qty: 120pcs yellow  
Box material: Coated aluminum frame  
Box dimension:800x300x48mm



## 4 Double Sides Fully Lit Sign(optional)

### 4.1 Specification

Once the pre-warning system starts, the warning sign brightness increases to drivers for warning drivers there ahead pedestrians will cross the crosswalk, please slow down and give way

4.1.1 Comply with European EN12899 standard

4.1.2 Good night visibility brings better warning effect

4.1.3 Different dimension optional for different solutions

4.1.4 Constant light at night

### 4.2 Type

ILS-S60-2:

EN12899  
Double sides  
Input voltage:230 VAC or 12 VDC  
Light emission area:60\*60cm  
Reflective film:Avery 6600T reflective film



ILS-S80-2:

EN12899  
Double sides  
Input voltage:230 VAC or 12 VDC  
Light emission area:80\*80cm  
Reflective film:Avery 6600T reflective film



## 5 Road Stud(optional)

Once the pre-warning system starts, the led lamps toward to drivers flash for warning drivers there ahead pedestrians will cross the crosswalk, please slow down and give way; the led board towards to pedestrians flash for warning pedestrians you will cross the crosswalk, please take cautious.

### 5.1 Specification

- 5.1.1 Material: Aluminum + PC window(for led)
- 5.1.2 LED Protective Cover Material: Polycarbonate Window
- 5.1.3 Diameter: Ø170mm Depth: 98.2mm
- 5.1.4 Rising From Road Surface: 8.2mm
- 5.1.5 Protection Level: IP68
- 5.1.6 Operating Temperature: -4°F to +176°F (-20°C to +80°C)



### 5.2 Specification-Optical

- 5.2.1 LED Qty: 8 LEDs
- 5.2.2 LED Color: Yellow(Red,Green,Blue,White is available upon request)
- 5.2.3 LED Brightness Intensity: 25000-30000mcd
- 5.2.4 LED Configuration: Unidirectional
- 5.2.5 Visual Distance: 1640 ft(500 m)

### 5.3 Specification-Electrical

- 5.3.1 Power Supply: 5V 100mA Solar Module
- 5.3.2 Power Consumption: 500mw
- 5.3.3 Current Consumption: 120mA
- 5.3.4 Lighting Time: 150H after fully charged in flashing mode

## 6 Push Button-PB-002(optional)

### 6.1 Specification

When the pedestrian who will cross the crosswalk pushes the button, the pre-warning system starts.

- 6.1.1 Material: Aluminum
- 6.1.2 Protection Level: IP65
- 6.1.3 Size: 15(W)\*22(H)\*8(T)cm
- 6.1.4 Back-lit lighting once push it
- 6.1.5 The design of LED lighting part can be customized





## 7 Infrared Sensor Beacon(optional)

### 7.1 Specification

When the pedestrians pass through the detection zone of the barricade lights, the pre-warning system starts.

- 7.1.1 Material: PC+ diamond grade reflective film
- 7.1.2 Product size: diameter 126mm, height 113mm
- 7.1.3 Operating Temperature: -20℃-+70℃
- 7.1.4 Detection distance: outdoor more than 10m
- 7.1.5 Trigger mode: broken wire alarm
- 7.1.6 Induction element: infrared thermal sensor



### 7.2 Specification-Electrical

- 7.2.1 Battery parameters: 3.7V 2000mAh lithium battery
- 7.2.2 Maximum power consumption: 4W
- 7.2.3 Standby power consumption: 1mW
- 7.2.4 Average working current: about 100mA
- 7.2.5 Power supply: 5V 150mA solar module

## 8 TPU Warning Post(optional)

### 8.1 Specification

- 8.1.1 Product size: 20\*10\*80CM
- 8.1.2 Product material: new TPU high-performance material +3M flexible super reflective film
- 8.1.3 Use GB/T 18833 Type IV flexible reflective film
- 8.1.4 Add reflector design to the base



## 9 Pedestrian system function

- 9.1 The control module is for ensuring the system effective operation and upgrading the system operation efficiency
- 9.2 It integrates two more functions in one that receive activation signals from activation equipment and send working order to the warning equipment
- 9.3 And it can also satisfy the need of customized functionality of the system

## 10 6 Meters Post Street Light(optional)

The street light will automatically operate at the night to illuminate zebra crossing for better warning the drivers.

### 10.1 Specification

- 10.1.1 Material:Galvanized sheet
- 10.1.2 Light source:150W
- 10.1.3 Color temperature:6000K white
- 10.1.4 Post height:6 meters
- 10.1.5 Foot cage: 4-M20\*800mm; panel:300\*300\*3mm

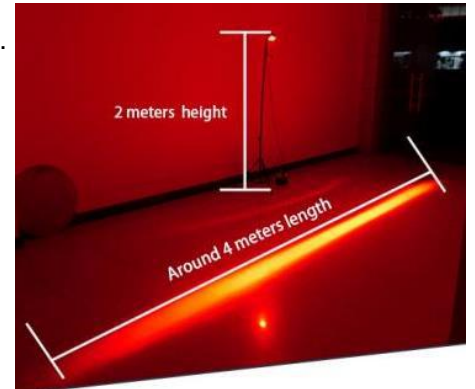


## 11 Stop Bar Light(optional)

### 11.1 Specification

Once the pre-warning system starts, stop bar for vehicles when sense the pedestrians.

- 11.1.1 Dimension:9.7x7x7.3CM
- 11.1.2 Led: 6pcs super bright
- 11.1.3 Lighting effective: Red bar lighting
- 11.1.4 Power: 30W
- 11.1.5 Installation 2 meters height, bar lighting length around 4 meters

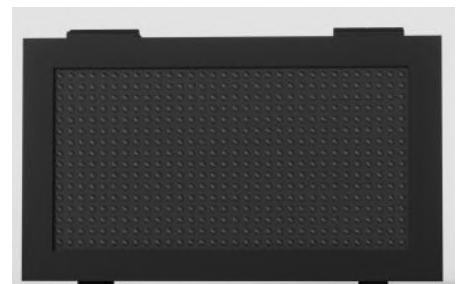


## 12 Variable Message Sign

### 12.1 Specification

Once the pre-warning system starts, change to Red words “slow” to warning.

- 12.1.1 Material: Iron cabinet with black paint
- 12.1.2 Optical Lens type
- 12.1.3 Frame size:800\*460\*120mm
- 12.1.4 Display size: 640\*320mm
- 12.1.5 Each panel size:320\*160mm
- 12.1.6 Each Panel Static Current:10mA
- 12.1.7 Pixel Pitch: P20
- 12.1.8 Led lifetime: >50000H





12.1.9 Viewing Angle: Horizontal  $\pm 15^\circ$  ,Vertical  $\pm 15^\circ$

12.1.10 Viewing Distance:>100m

12.1.11 Brightness Level: 1-10 Grade(Adjustable)

12.1.12 Variable Message Sign, words changeable

## 13 Auxiliary System - ELLUMIN Cloud(optional)

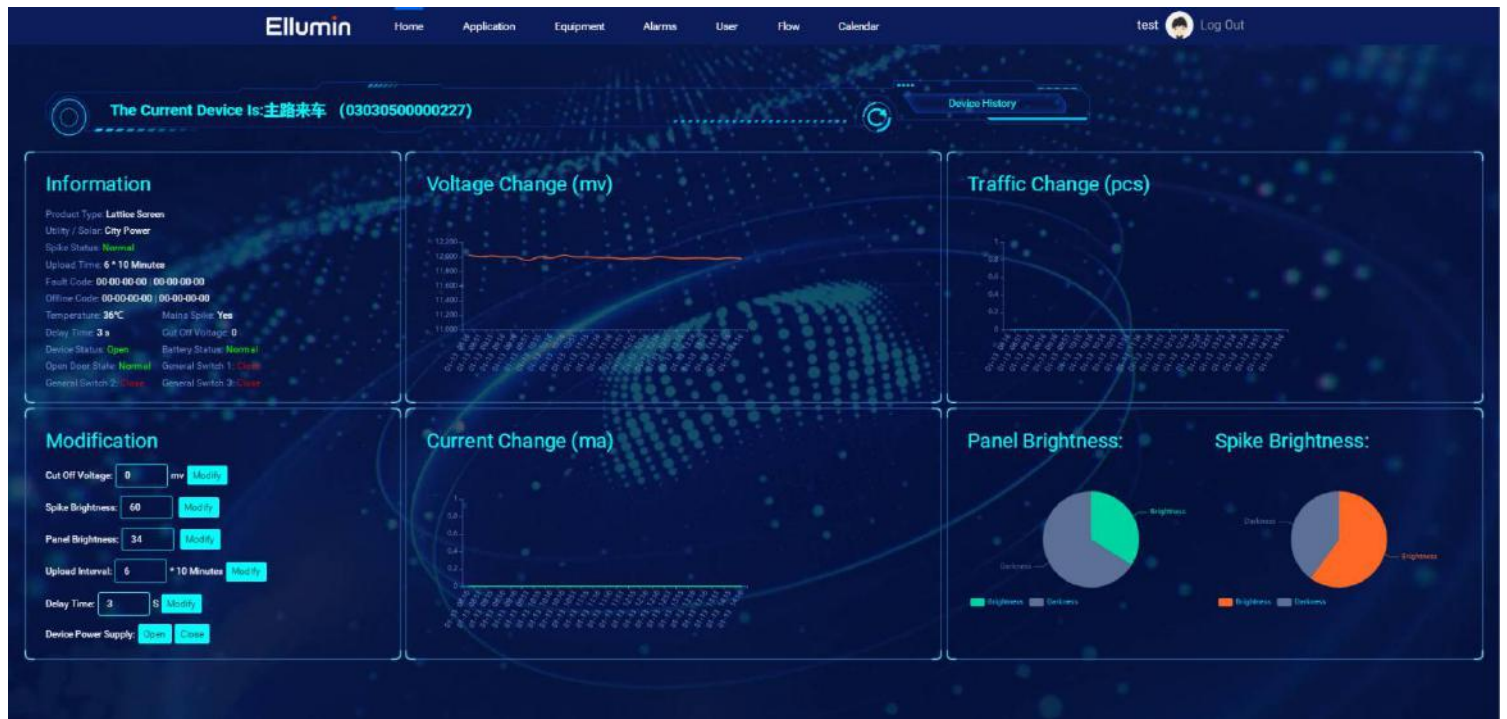
### 13.1 Description of ELLUMIN Cloud

The cloud warning platform is a technology-based platform developed by ELLUMIN. It can be connected with all ELLUMIN pre-warning systems to help you better solve traffic problems and manage traffic order.

### 13.2 Function

#### 13.2.1 Data Reporting

- It can generate professional data reports by capturing, filtering, summarizing and analyzing the data of the day.
- Provide strong data support by historical data exported to EXCEL in chronological order.



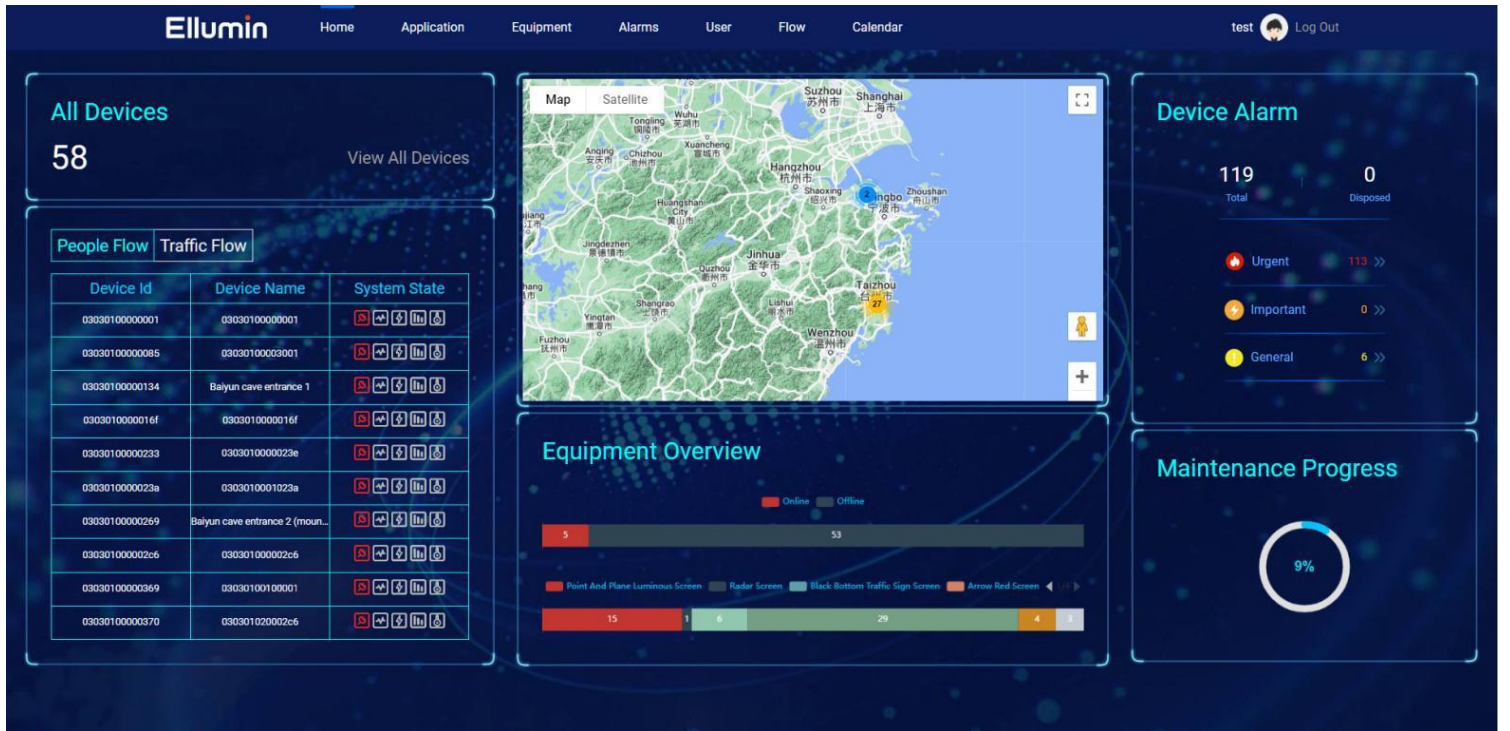
#### 13.2.2 Monitoring Device

Monitoring device's operation and display in map pattern, and support to filter the dedicated device.



### 13.2.3 Online Control Device

Remotely change the operating status of the device online.



### 13.2.4 Programmable Control

Customize Calendar Editor is easy to schedule Manage devices.

(Based on the calendar year with the ability to program in holidays and daylight savings time, ideal for school, business and industrial facility work schedules)

The screenshot displays the Ellumin web interface. On the left is a calendar for July 2023 with a grid of dates and times (e.g., 3:45p zdy12345). In the center is an 'Event List' section with 'Add Event' and 'Assign Device' buttons, and a list of events with checkboxes and icons. On the right is a 'Select Device' panel with a search bar and a list of device IDs and names, such as '030310000001' and 'Luqiao'.

### 13.2.5 Emergency Notification

When there is something wrong with the device, workers will immediately receive the notifications through E-mail and web page.

