



# PAAB-003

——Pedestrian Automatic Activation Bollards

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## 1 Scope

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

## 2 Brief Description

PAAB-003 contains a main pillar and an auxiliary column, they are the assistant devices of pedestrian crossing safety system in intelligent traffic. A zebra crossing needs a set of Pedestrian Automatic Activation Bollards which includes two main pillars and two auxiliary, and they should install at the two sides of a zebra crossing. Two signal lights on the pillar adopt image warning way, the display screen adopts text warning way, and the voice warning module adopts voice alarm way, full journey inform the pedestrian zebra situation, warn them pay attention to the zebra crossing safety and develop the civilized habit. (Customizable display screen text content and voice warning content)

## 3 Function

### 3.1 Install at the Road Section of Red and Green Signal Light

PAAB-003 should install with the red and green signal light for Real-Time synchronization.

-When the red and green lights lit green: The signal lights on the pillars synchronically turns into the green arrows “↑”, the display screen shows the words “GO” and the voice broadcasts prompting pedestrians can pass.

-When the red and green lights lit yellow: The front LED signal lights and the LED displays on the pillars start to flash for informing the pedestrians in the waiting area should stop; The back LED signal lights also flash for informing the pedestrians are crossing should back to the waiting area.

-When the red and green lights lit red: The signal lights on the pillars synchronically turns into the red “×”, the display screen shows the words “STOP” for warning stop. If the pedestrians who ignore the traffic signal light rule to pass, the voice alarm will warn people.

(Installation direction is optional. Above description is only for the installation direction of LED display screen being toward to the pedestrian waiting area.)

### 3.2 Install at the Road Section without Red and Green Signal Light

#### 3.2.1 PAAB-003 can be installed independently

The front and back lights on the PAAB-003 are yellow icons “●” which can light all day, the display screen shows warning text for informing the pedestrians who are in the waiting area and who are crossing the crosswalk should improve their safety conscious. When a pedestrian passes between the main pillar and the auxiliary pillar, the voice alarm will emit for inform the pedestrians who will cross the road should improve their safety conscious.

3.2.2 PAAB-003 can install with our company's specific road studs for achieving Two-Aspect warning, the drivers warning and the pedestrians warning.

This type adds the specific road studs. When a pedestrian passes between the main pillar and the auxiliary pillar, the road studs start to flash and the direct light can be toward to the drivers for warning them the pedestrians are passing ahead. This type can achieve two-aspect warning that the drivers warning and the pedestrians warning.

## 4 Features

### 4.1 The Three-Dimensional Warning

- There is one LED signal light on the top and one at the back of the pillar, providing full journey warning for the pedestrians who are ready to enter the zebra crossing and who are in the zebra crossing.

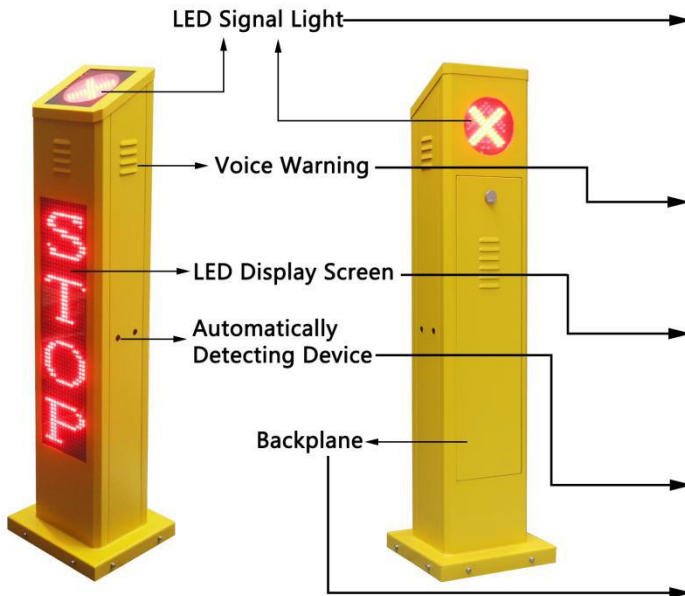
- Front patch LED display screen: Having larger angle than the traditional plug-in display screen, pedestrians can clearly see the contents of the display screen no matter at the front or at the side.

- New adding the voice warning is more straightforward and convenient for visually impaired people which can bring greater warning effect than the traditional red and green signal light.

4.2 It can be used with our cloud warning platform to achieve the online monitoring equipment, data collection and data analysis function.

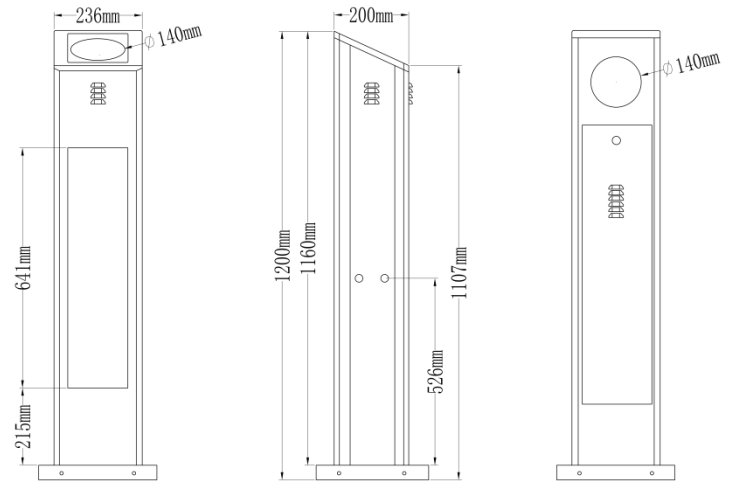
## 5 Specification

### 5.1 Pedestrian Automatic Activation Bollards



- LED Signal Light: One pillar has 2 LED signal lights. It has two image patterns, one is yellow "●", another one is red "×" and green "↑".
- Voice Warning: When a pedestrian passes between the main pillar and the auxiliary pillar, the voice alarm will emit. (voice content can be customized.)
- LED Display Screen: Text content and color can be customized.
- Automatically Detecting Device is used for judging the orientation and the number of the pedestrians which provides ELLUMIN cloud platform accurate statistic.
- Backplane: It can be opened to examine and fix product.

- 5.1.1 Product Material: Galvanized Sheet, Plastic Coating
- 5.1.2 Product Color: Yellow (Customizable)
- 5.1.3 Product Size: 320(l)\*300(w)\*1200(h)mm
- 5.1.4 Product Weight: 22kg
- 5.1.5 Operating Voltage: AC 90-240V, 50-60HZ
- 5.1.6 Waterproof Level: IP55
- 5.1.7 Work Temperature: -40°C ~ +80°C



### 5.2 LED Signal Light

- 5.2.1 Size: φ140mm
- 5.2.2 Pattern: Red '×' and Green '↑', Yellow '●'
- 5.2.3 LED PCS: Red '×' 44pcs, Green '↑' 42pcs, Yellow '●' 40pcs
- 5.2.4 LED Brightness Intensity: ≥4000cd/ m<sup>2</sup>
- 5.2.5 LED Wavelength: Red: 620-625nm, Green: 518-520nm, Yellow: 588-590nm
- 5.2.6 Operating Voltage: DC 12V
- 5.2.7 Rated Power: <20W
- 5.2.8 Work Temperature: -40°C ~ +80°C
- 5.2.9 Visible Angle: >30°
- 5.2.10 Visible Distance: >300M
- 5.2.11 Operating Life: >50000 Hours
- 5.2.12 Withstand Wind: >150km/Hour
- 5.2.13 Operating Humidity: 10% ~ 95%RH

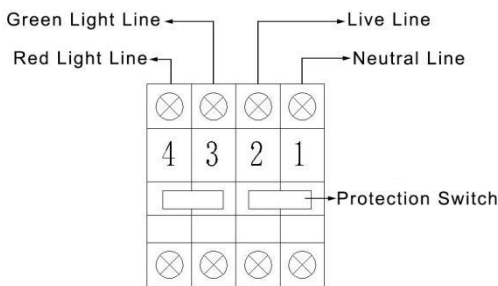
### 5.3 LED Display Screen

5.3.1 Light-Emitting Tube:

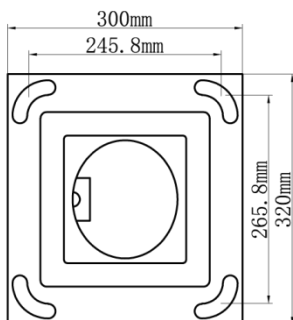
Type	Tube Model	Wavelength	Brightness
Red Tube	3535	620-630nm	500mcd
Green Tube		520-525nm	1300mcd

- 5.3.2 Display Screen Area:0.1024m<sup>2</sup>
- 5.3.3 Module Resolution:16(H)×64(W)
- 5.3.4 Pixel Spacing:10mm
- 5.3.5 Pixel Density:10000 P/m<sup>2</sup>
- 5.3.6 Brightness Intensity:≥4000cd/m<sup>2</sup>
- 5.3.7 View Angle (Horizontal/Vertical):horizontal: ≥110°,vertical≥110°
- 5.3.8 Optimal Visible Distance:5M~30M
- 5.3.9 Grayscale Level/Display Color:65536 level grayscale
- 5.3.10 Frame Change Rate:≥60 frame/S
- 5.3.11 Refresh Rate:≥1000Hz/S
- 5.3.12 Working Time:>72 (H)
- 5.3.13 Display Screen Life:>50,000(H)
- 5.3.14 Display Screen MTBF(Normal Operation Average Time):>8,000(H)
- 5.3.15 Blind Point Rate:≤0.0001
- 5.3.16 Input Signal / Control Mode: GPRS
- 5.3.17 Control Distance:Nationwide
- 5.3.18 Surface Flatness:<1mm
- 5.3.19 Operating Temperature:-40℃~+80℃
- 5.3.20 Operating Humidity:10%~98%RH
- 5.3.21 Waterproof Level:IP65
- 5.3.22 Light-Emitting Device Driving Method: 1/4 scan constant current driving
- 5.3.23 Protective System:Over temperature/overload/power failure
- 5.3.24 Operating Voltage:AC90-240V, 50-60HZ
- 5.3.25 Power Consumption:Full display screen brights/70W
- 5.3.26 Protective Technology:Moisture-proof, dust-proof, anti-corrosion, anti-static

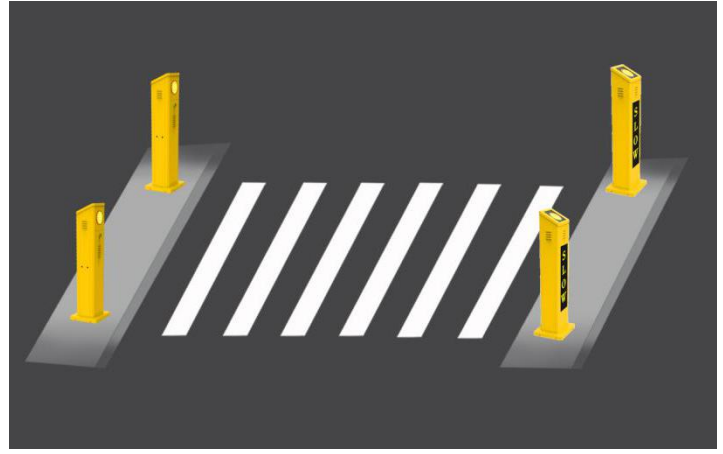
## 6 Connection Diagram(Install with Red and Green Signal Light)



## 7 Basement Installation



## 8 Application



## 9. ELLUMIN Cloud Platform

### 9.1 Description

ELLUMIN cloud platform is an important part of the smart city which can monitor the operation of the devices, as well as collect and analyze the devices' statistic for you.

### 9.2 Function

#### 9.2.1 Monitoring Device

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

The dashboard features a navigation bar with the following menu items: APPLICATION, DEVICE MANAGEMENT, ALL ALARMS, USERS, and TEST. The main content area displays four key metrics:

- Devices:** 27 s (View All Devices)
- Device Location:** 27 s (View Device Location)
- Alarms:** 19 s (View All Alarms)
- User Info:** 0 s (View All Users)

Below the metrics, a map view shows the device locations. A tooltip for a specific device provides the following details:

- ID: 030301000001d5
- Longitude: 120.58216920525331
- Latitude: 30.452366641574756
- Type: Point surface emitting screen
- Temperature: 12
- BTEMP: 12
- Voltage: 12470
- Cut-Off Voltage: 14100

A search bar at the bottom allows querying devices by name or ID. Below the search bar is a table with the following columns: Type, Device Name, Device Status, Notification Status, and Electronic Label.

Type	Device Name	Device Status	Notification Status	Electronic Label
	Lianzhongcun1			

## 9.2.2 Online Control Device

Remotely change the operating status of the device online.

The screenshot shows the 'DEVICE MANAGEMENT' section of the ELLUMIN web interface. At the top, there is a navigation bar with 'APPLICATION', 'DEVICE MANAGEMENT', 'ALL ALARMS', and 'USERS'. A 'TEST' button with a user icon and a refresh arrow is on the right. Below the navigation bar, the current equipment is identified as 'Lianzhongcun (030301000001cf)'. A 'show history' button is located to the right. The main control area includes a 'revise' button, a 'Reload' button, and three input fields: 'Cut-off Voltage' (mV), 'PanelLuminescenceDutyCycle' (%), and 'DelayTime' (second). Each input field has a corresponding 'revise' button. At the bottom, there is a 'Normal Working' toggle switch currently set to 'ON'.

## 9.2.3 Programmable Control

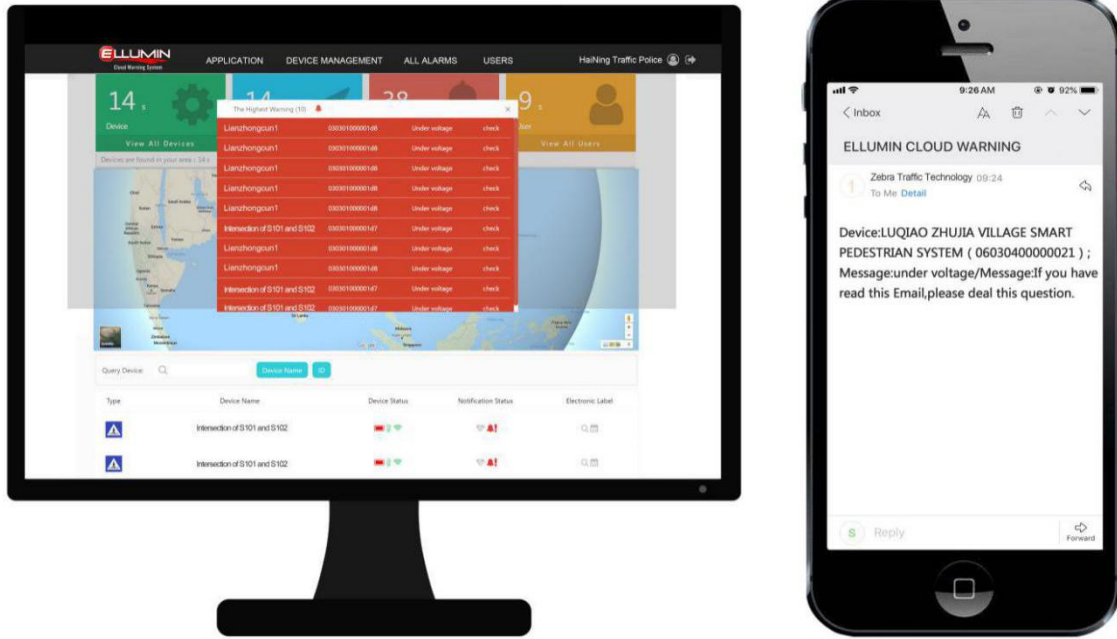
Customize Calendar Editor is easy to schedule Manage devices.

(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 shows the 'CALENDAR EDITOR' section of the ELLUMIN web interface. The navigation bar is identical to the previous screenshot. The main content area features a calendar for the month of 11 2018. The calendar grid shows days from Sun. to Sat. with dates ranging from 28 to 8. To the right of the calendar is a '+ Add a calendar event' button. Below the calendar, the 'Allocation schedule' section is visible. It shows the current equipment as 'Lianzhongcun (03030100000128)'. There is an 'Allocate:' field with the value 'No schedule'. At the bottom, there are two buttons: 'Application' (yellow) and 'Delete Application' (orange).

## 9.2.4 Emergency Notification

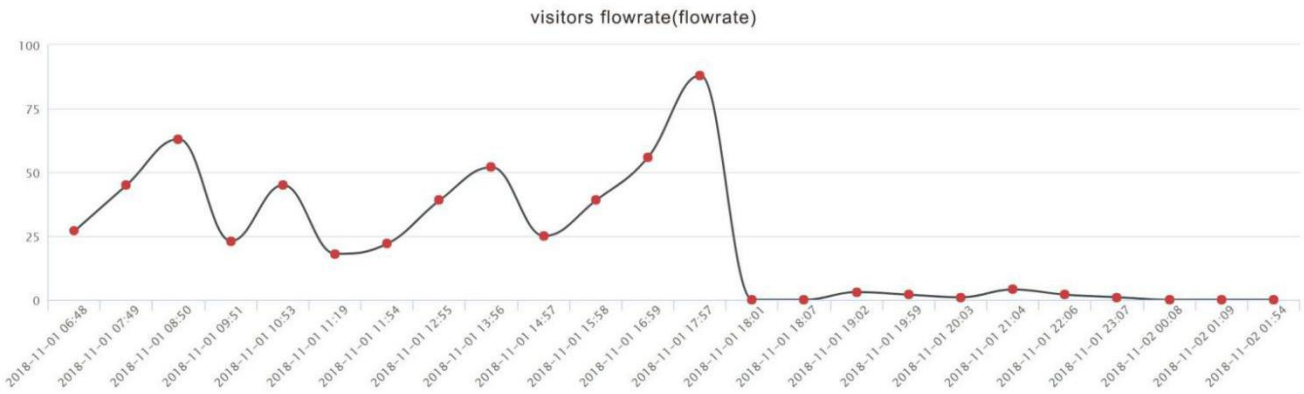
When a traffic emergency occurs or there is something wrong with the device, workers will immediately receive the notifications through E-mail and web page.



## 9.5 Date Reporting

9.5.1 It can generate professional data reports by capturing, filtering, summarizing, analyzing and summarizing the data of the day.

9.5.2 Provide strong data support by historical data exported to EXCEL in chronological order.



Time	electric current (mA)	Delay Time (S)	Duty Cycle (%)	visitors flowrate (...)	UploadInterval(*1...	Temperature(°C)	voltage (v)
2018-11-02 01:41...	0	20	50	0	6	12	12.70
2018-11-02 01:09...	0	20	50	0	6	12	12.72
2018-11-02 00:08...	0	20	50	0	6	14	12.73
2018-11-01 23:07...	0	20	50	6	6	14	12.76

TOTAL ITEM: 244 < PREV 1 2 3 ... 25 NEXT > 10 Item/Page

Export Table