

PRODUCT SPECIFICATION



ILLUMINATING YOUR WORLD

RRFB Intelligent Pedestrian System

Smart Pedestrian System

Contents

Contents.....	2
1 Scope.....	3
2 Products Description.....	3
2.1 Background.....	3
2.2 Brief Description.....	3
2.3 Features.....	3
3 Electrical Specification.....	3
4 RRFB(Rectangular Rapid Flashing Beacon).....	4
4.1 Specification.....	4
4.2 Optical Specification.....	4
4.3 Electrical Specification.....	4
4.4 Structural Diagram.....	5
4.5 Product Image.....	5
5 Road Stud(optional).....	6
5.1 Specification.....	6
5.2 Optical Specification.....	6
5.3 Electrical Specification.....	6
5.4 Structural Diagram.....	6
6 Push Button-PB-002(option).....	7
6.1 Specification.....	7
6.2 Electrical Specification.....	7
6.3 Structural Diagram.....	7
7 Push Button-PB-001(option).....	8
7.1 Specification.....	8
7.2 Specification-Electrical.....	8
7.3 Structure Diagram.....	8
8 Traffic Sign-Install with push button(optional).....	9
9 Control Box.....	10
9.1 Specification.....	10
9.2 Structural Diagram.....	10
9.3 Wiring Description.....	10
10 Application Example.....	11

1 Scope

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

2 Products Description

2.1 Background

*Data collection showed higher rates of motorist yielding at crosswalks where this 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

RRFB Intelligent Pedestrian System is an innovative system that complies with the MUTCD standard and enhances the safety of pedestrian/vehicle interactions at crosswalks.

The system is activated by push button. Once the system starts, the driver-facing warning equipment flashes at preset frequency (RRFB flashes) to warn of pedestrians entering the crosswalk.

2.3 Features

- 2.3.1 FHWA MUTCD compliant
- 2.3.2 High intensity lights perform effectively during day and night
- 2.3.3 Automatically dim based upon ambient light, reducing glare
- 2.3.4 Environmentally friendly solar power supply, easy to install and maintain

3 Electrical Specification

3.1 Power Supply: 20W Solar Module

3.2 Battery: 8.7Ah standard lithium-ion batteries

(can provide 4 days of rated use when fully charged, can activate 800 times per day, each activation duration is 30s)

3.3 Operation: Charge for 3 hours, can activate 800 times, each activation duration is 30s

4 RRFB(Rectangular Rapid Flashing Beacon)

4.1 Specification

Once the pre-warning system starts, the driver-facing RRFB light bars flash to warn of pedestrians entering the crosswalk, causing vehicles to slow and yield.

4.1.1 Material: Aluminum sheet, powder-coated

4.1.2 Product Size: 23.78" x 4.72" x 1.67"

(MUTCD IA-21 requires the outside edges of the RRFB indications, including any housings, shall not project beyond the outside edges of the W11-2, S1-1, or W11-15 sign that it supplements.)

4.1.3 Each Indication Size: 6.90" * 2.49"(175*63mm)

(MUTCD IA-21 requires the each RRFB indication shall be at least 5 inches wide by at least 2 inches high)

4.1.4 Space between the Two Indications: 7.59"(193mm)

(MUTCD IA-21 requires the indicator light spacing should be at least 7")

4.1.5 Thickness(Aluminum Panel): 0.079" (2 mm)

4.1.6 Weight: 3.858 lbs

4.1.7 Operating Temperature: -4°F to +158°F (-20°C to +70°C)



4.1.8 Protection Level: IP55

4.1.9 Installation Method: Pre-drilled bolted connections

4.1.10 Top with an adjustable fastener, fastening it to give a fixed angle.

4.2 Optical Specification

4.2.1 Color: Amber

4.2.2 LED Qty: 2 arrays of 40 LEDs

4.2.3 Meet SAE J595 CLASS 1 brightness.

4.2.4 Flash Pattern: WW + S (combination wig-wag and simultaneous flash)

(MUTCD IA-21 requires the RRFB should be WW + S flashing pattern)

4.2.5 Product Flash Frequency: 75 times per min (or customized)

4.2.6 Each RRFB indication flash rate: 5 flash per second

(MUTCD IA-21 requires the flash rate of each individual RRFB indication, as applied over the full flashing sequence, shall not be between 5 and 30 flashes per second to avoid frequencies that might cause seizures.)

4.2.7 Auto brightness for conditions.

(MUTCD IA-21 requires that an automatic signal dimming device should be used to reduce the brilliance of the RRFB indications during nighttime conditions to minimize excessive glare during nighttime conditions.)

4.2.8 Each side of RRFB has one pedestrian indicator light. The lights flash simultaneously with RRFB for notifying pedestrians that the RRFB is in operation.

4.2.9 Each LED equipped with an optical lens to reduce nighttime glare.

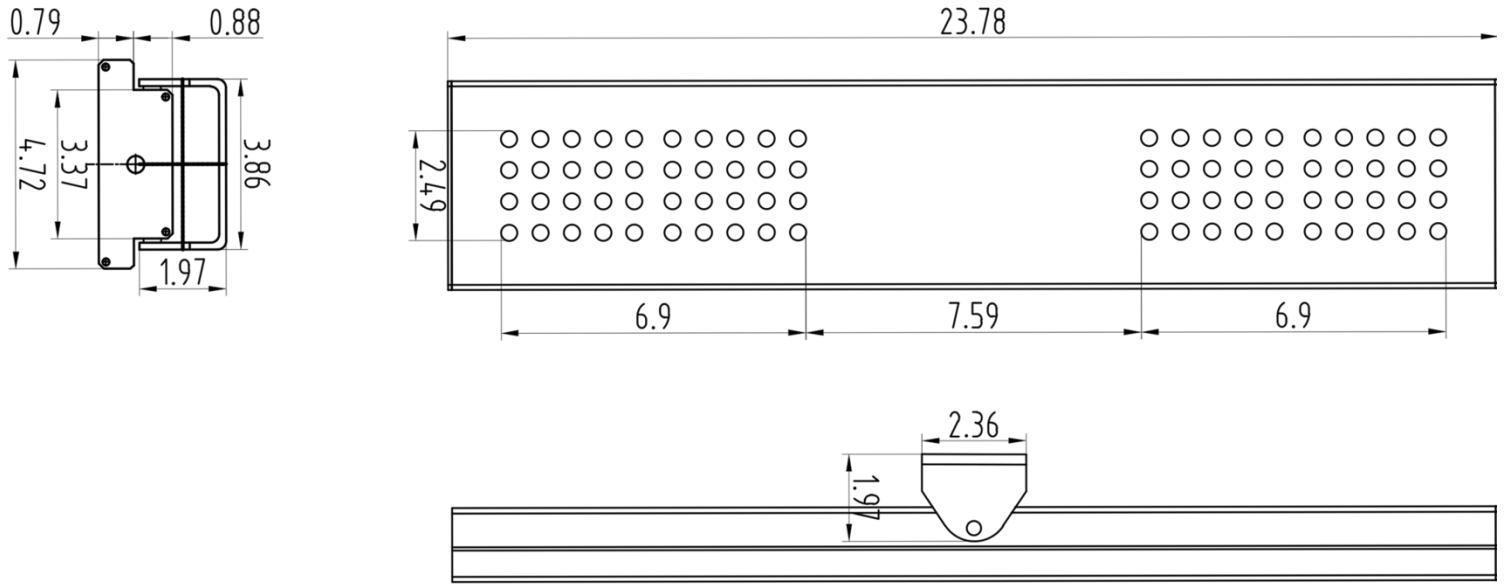
4.3 Electrical Specification

4.3.1 Power Supply: DC 12V

4.3.2 Power Consumption: <1.6W

4.3.3 Current Consumption: 140mA

4.4 Structural Diagram



Unit: Inch

4.5 Product Image



Front



Back



Top
(with Adjustable Fastener)



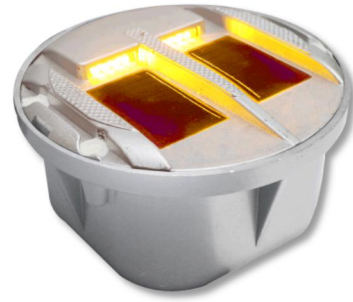
Side
(with pedestrian Indicator light)

5 Road Stud(optional)

When the pre-warning system starts, the driver facing LEDs flash to warn of pedestrians entering the crosswalk, causing vehicles to slow and yield.

5.1 Specification

- 5.1.1 Material: Aluminum
- 5.1.2 LED Protective Cover Material: Polycarbonate Lens
- 5.1.3 Diameter: Ø6.69" (Ø170 mm)
- 5.1.4 Height(with basement): 3.87" (98.2 mm)
- 5.1.5 Protection Level: IP68
- 5.1.6 Operating Temperature: -4°F to +176°F(-20°C to +80°C)



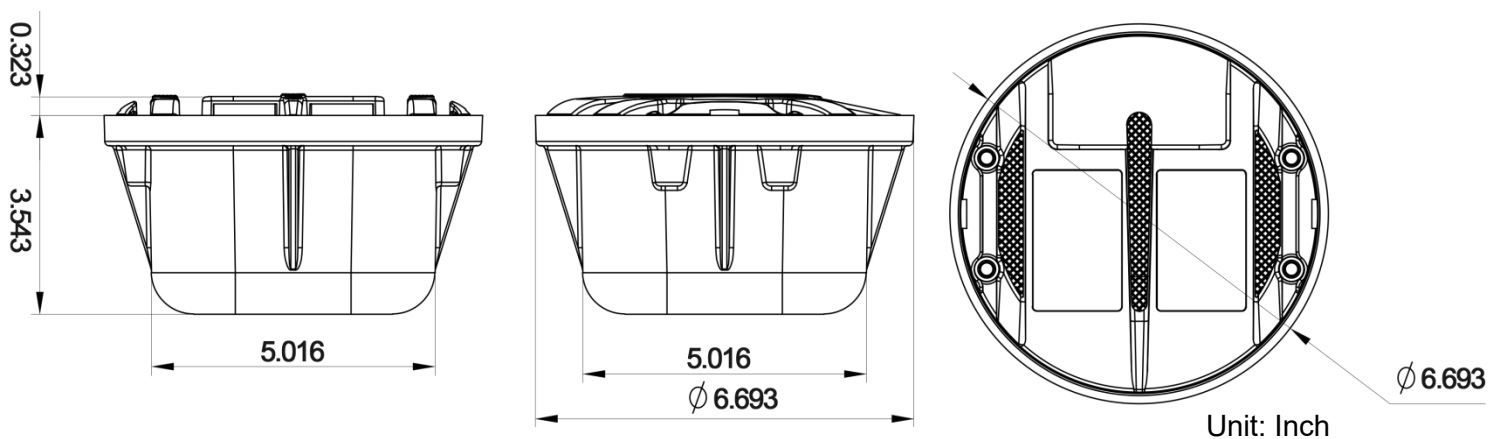
5.2 Optical Specification

- 5.2.1 LED Qty: 8 LEDs
- 5.2.2 LED Color: Yellow(Red,Green,Blue,White 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 Electrical Specification

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

5.4 Structural Diagram



6 Push Button-PB-002 (Option)

6.1 Specification

Activates pre-warning system via push button

6.1.1 Material: Aluminum housing with stainless steel accessories

6.1.2 Protection Level: IP65

6.1.3 Operating Temperature: -4°F to +176°F (-20°C to +80°C)

6.1.4 The pattern of lighted area can be customized

6.1.5 A lighted pattern area is installed integral to the push button to give confirmation that the system is in operation. (Conform to the MUTCD IA-21)



6.2 Electrical Specification

6.2.1 Power Supply: DC 12V

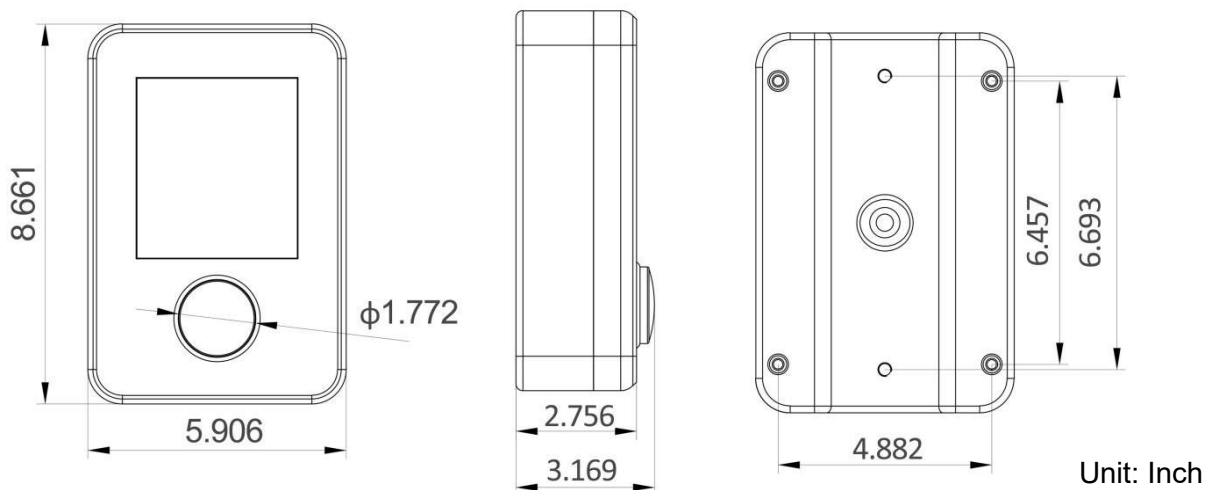
6.2.2 Standby Power Consumption: 0.06W

6.2.3 Max Power Consumption: 2W

6.2.4 Standby Current Consumption: 5mA

6.2.5 Max Current Consumption: 170mA

6.3 Structural Diagram



7 Push Button-PB-001 (Option)

7.1 Specification

Activates pre-warning system via push button

7.1.1 Material: Aluminum housing with stainless steel accessories

7.1.2 Protection Level: IP65

7.1.3 Operating Temperature: -4°F to +176°F(-20°C to +80°C)

7.1.4 Film Color: Green / yellow / blue



7.2 Electrical Specification

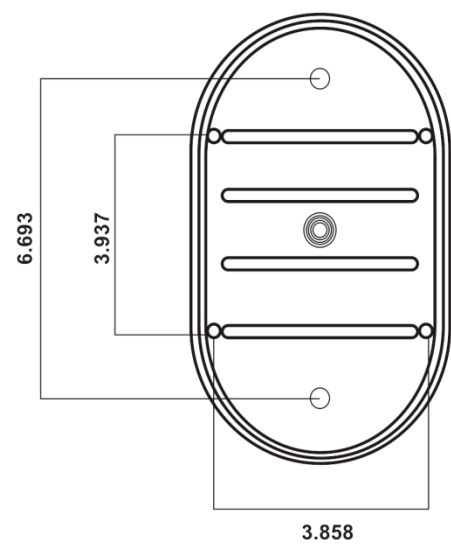
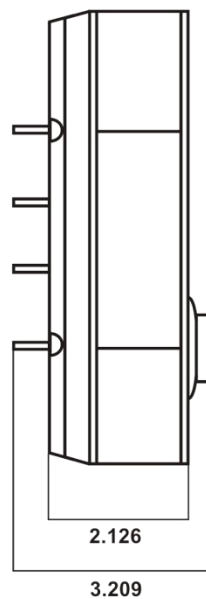
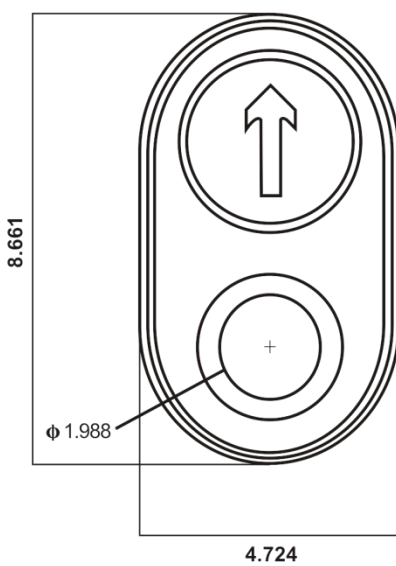
7.2.1 Contact Rating: 50W

7.2.2 Max.Switching Voltage: DC 200V

7.2.3 Max.Switching Current: DC 0.5A

7.2.4 Max.Carry Current: DC 1.0A

7.3 Structural Diagram



Unit: Inch

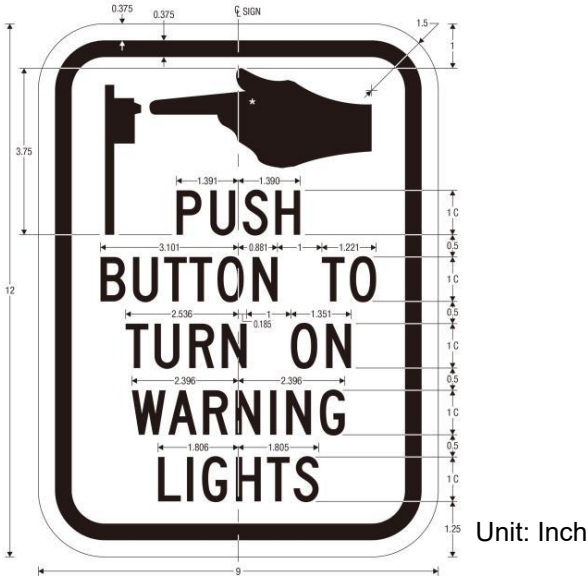
8 Traffic Sign-install with push button (Optional)

8.1 Material: Double layer aluminum-plastic panel + reflective sheeting

8.2 MUTCD R10-25 sign should be installed explaining the purpose and use of the pedestrian push button detector.(Conform to the MUTCD IA-21)

8.3 Structural Diagram:

8.4 Product Image:

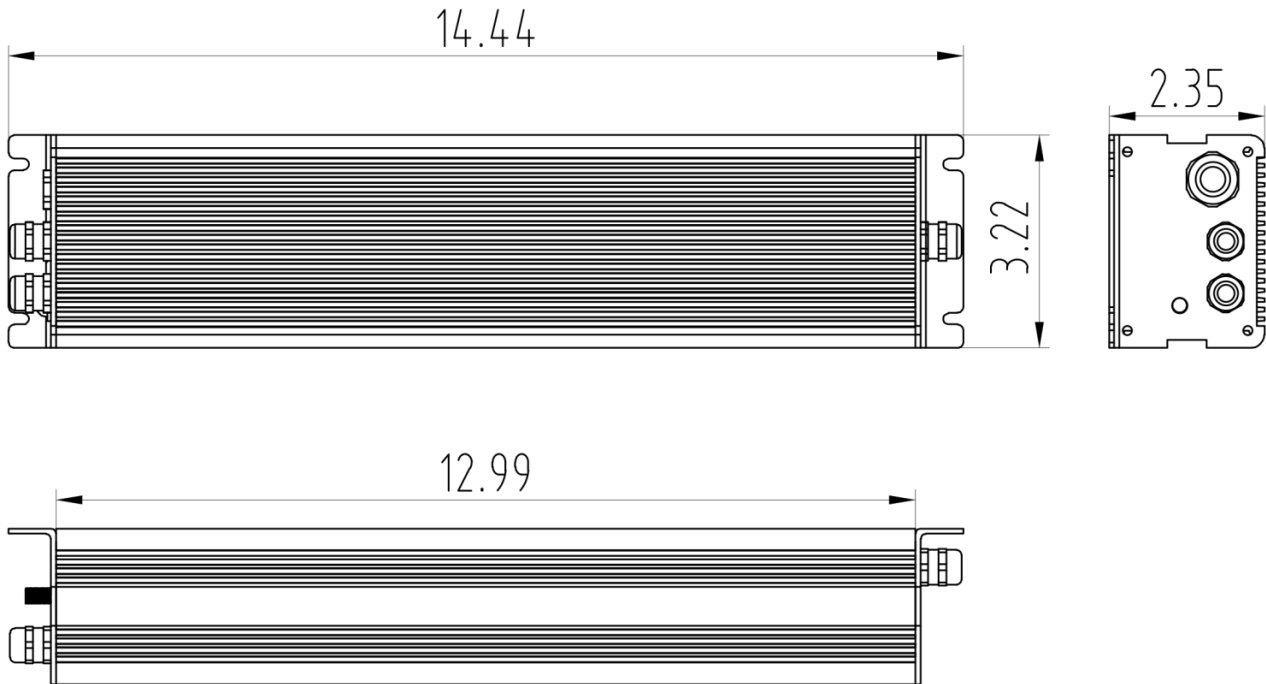


9 Control Box

9.1 Specification

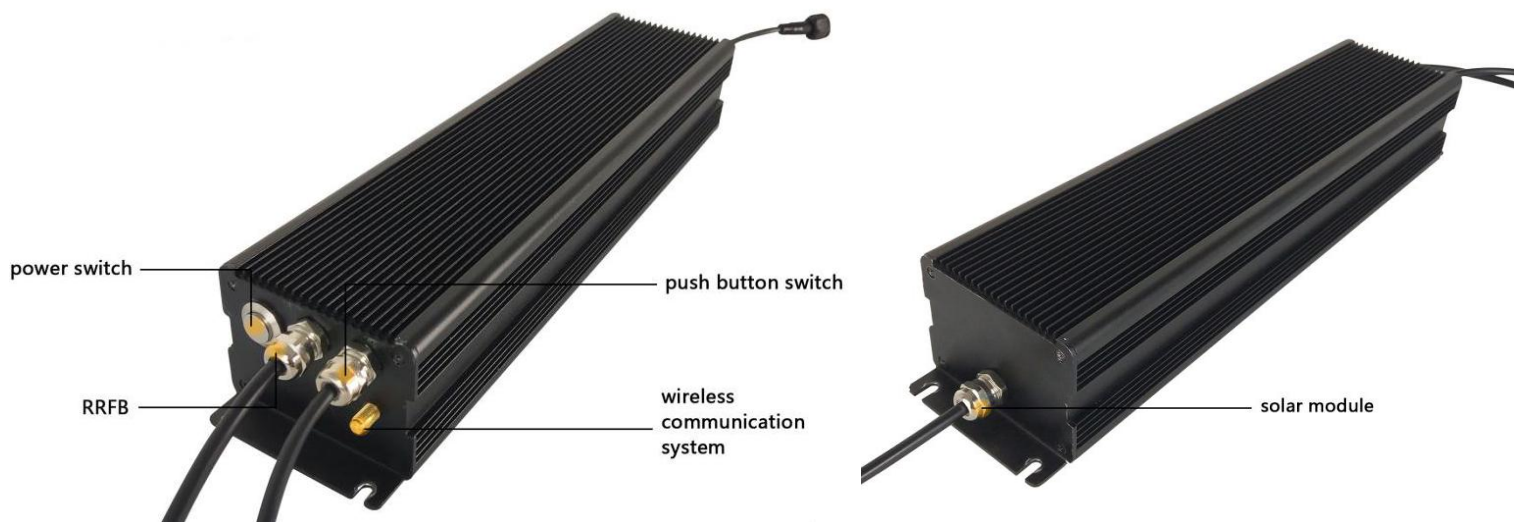
- 9.1.1 Material: Aluminum alloy
- 9.1.2 Product Size: 2.36" x 3.23" x 14.45"
- 9.1.3 Operating Temperature: -4°F to +176°F(-20°C to +80°C)
- 9.1.4 Protection Level: IP65

9.2 Structural Diagram



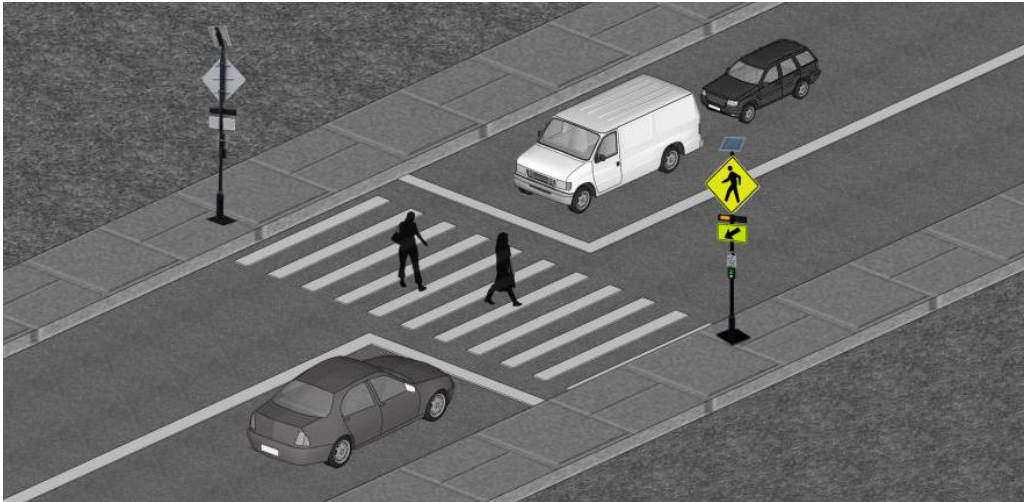
Unit: Inch

9.3 Wiring Description



10 Application Examples

RRFB Intelligent Pedestrian System suited to various road conditions.



Mounted at Regular Crosswalk



Mounted at Poor Visibility Crosswalk Section



Mounted at Mid-Block Crosswalk