

# **PATTARAWIT**

**TRAFFIC (THAILAND) CO.,LTD** 

บริษัท ภัทรวิทย์ ทราฟฟิค (ประเทศไทย) จำกัด



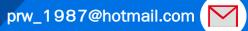






02-9464633-5, 084-144-6641













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January 1<sup>st</sup>,2022

#### Letter of Distributor Agreement

3M Thailand Ltd. on behalf of Minnesota Mining and Manufactruing (3M USA), who are the official manufacturers of product, would like to appoint

#### Pattarawit Traffic (Thailand) Co., Ltd.

12/4 Soi Ram Inthra 77, Ram Inthra sub-district, Khan Na Yao district, Bangkok, Thailand 10230

In the area of Traffic & Safety Markets, Transportation Safety Division, as 3M Thailand 's approved sign fabrication under quality assurance procedure for 3M Reflective materials which consist of:

3M Reflective Sheeting
 Engineer /Engineer Prismatic /High Intensity /High Intensity Prismatic /Diamond Grade Cube

บริษัท 3เอ็มประเทศไทย จำกัด 3M THAILAND LIMITED

- 2. 3M Process Colors
- 3. 3M Raised pavement marker (RPM)
- 4. 3M Roadway Material

This is effective from January 1<sup>st</sup>, 2022 to December 31<sup>st</sup>, 2022

Jirawan Teeramungcalanon

Country Sales Leader - Transportation Safety Division

Transportation & Electronics Business Group

3M Thailand Ltd.

# **3M** Reflective Sheets



Use for traffic safety signs, delineators, and traffic safety equipment - Price: Yard



24", 30", 36", 48"



24", 30", 36", 48"

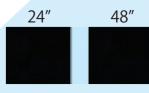


24", 30", 36", 48"

Fluorescent Fluorescent Fluorescent







## **Cushion Tank's Warning Sign and Warning Sign**

(Code 2-48, 2-60 and U.40, 2-61)



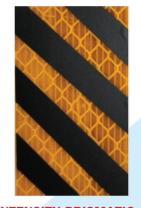






**DIAMOND GRADE**  $(DG^3)$ Size Ø 0.75 M Size 0.45 x 0.75 M





HIGH INTENSITY PRISMATIC GRADE ENGINEER GRADE PRISMATIC (HIP) Size Ø 0.75 M Size 0.45 x 0.75 M





(EGP) Size Ø 0.75 M Size 0.45 x 0.75 M

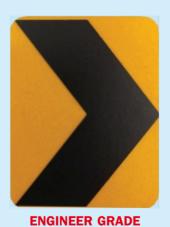
#### Chevron



 $(DG^3)$ Size 0.60 x 0.75 M



PRISMATIC GRADE (HIP) Size 0.60 x 0.75 M



Size 0.60 x 0.75 M



**ENGINEER GRADE** PRISMATIC (EGP) Size 0.60 x 0.75 M









### **REGULATORY SIGNS**

### **WARNING SIGNS**









# GUIDE SIGNS-CONVENTION HIGHWAYS





2-63 45×60 (a.63)

60x75







3-1

**A12** 4025 3-3 3-2









60x75

















(a.61)





ทางชรุชระ ยาว nu.









3-28







60x50 75x60

75x60

























3-27









3-30

3-31

3-32

ทางแยก 700 ม.

INTERSECTION 700 m.

อ.วังม่วง 25

อ.มวกเหล็ก

WANG MUANG

MUAK LEK

3-33

3-34

3-35

3-29



























90x180





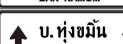














BAN THUNGKHAMIN



INTERSECTION AHEAD









ทางปิด











# GUIDE SIGNS-CONVENTION HIGHWAYS











นครราชสีมา NAKHON RATCHASIMA

80x180



ถนนพทธมลพลสาย2

60x180

แม่น้ำเจ้าพระยา 30×100

เขตสุขาภิบาล

คลองพรุพ้อ

ห้วยจรเข้

เขตจังหวัด นครศรีธรรมราช

เขตอำเภอ ชะอวด

85x180

เขตเทศบาลตำบล บ่อสร้าง

หนองจอก

บ.หนองม้า a.dla4 ร.บุรีรัมย์

65x180

บ.หนองม้า BAN NONG MA

กม. 846

80x45



3-50





60x100



40x60

60x60



60x100

















ด่านซัง นน.



90x120

90x120

60x60

120x180















วัดราษฎร์อุปถัมภ์ (วัดบางเหรียง) Rat Uppatham Temple (Bang Riang Temple) 拉特五芭腾寺 (邦良寺)

น้ำตกโตนปริวรรต Ton Pariwat Waterfall 顿芭里洼瀑布

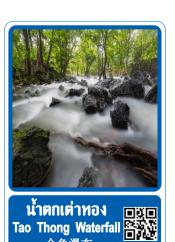
สถานีเพาะเลี้ยงสัตว์ป่าพังงา Phang-nga Wildlife Breeding Center 攀牙野生动物养殖场

180x180





180x280



350x240





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金龟瀑布



#### TRAFFIC SIGN ON EXPRESSWAY / OVERHEAD-OVERHANG



















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# **Delineator system**

### **3M** White Color and Yellow Color

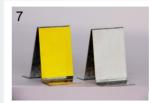
### Function: Apply on a barrier, guard rail, curb, or other types of obstacles



Width 10 cm. Height 10 cm.

1 Side

2 Sides



Width 7.5 cm. Height 10 cm.

1 Side

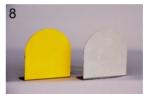
2 Sides



Width 15 cm. Height 10 cm.

1 Side

2 Sides



Width 15 cm. Height 15 cm.

1 Side



Width 15 cm. Height 7.5 cm.

1 Side



Width Ø 15 cm.

1 Side

2 Sides



Width 15 cm. Height 5 cm. 1 Side



Width 10 cm. Height 10 cm.

1 Side



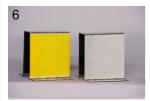
Width 15 cm. Height 15 cm.

1 Side



Width 15 cm. Height 15 cm.

1 Side



Width 10 cm. Height 10 cm.

1 Side

2 Sides



Width 15 cm. Height 10 cm.

1 Side

2 Sides







### **Conformable Reflective Sheeting 3M**

High Prismatic Grade Reflective Sheet for mounting guide rails and bridge railings



1 box contains

- 200 round reflective targets, size 6 cm.
- 100 reflective square targets, size 3x15 cm.
- 2 cans of glue
- 1 roller



1 box contains

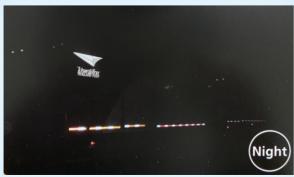
- Reflective sheet size 10 cm. x 25 yards, 1 roll.
- 2 cans of glue
- 1 roller

### **Diamond Grade Conspicuity Markings**

### 3M Reflective Stripes - Diamond Grade Conspicuity Markings (For Vehicle)



- 3M Reflective Stripes Diamond Grade (For Vehicle)
- Available Colors Red, Yellow, and White, Size Width 55 mm.
   Height 50 m.
- Easy to clean with regular vehicle cleaners.
- As a reminder, drivers of other vehicles can see far and clearly both day and night.
- Special construction, Prismatic Lens Technology, coated with synthetic resin that is strong and durable











### **Delineator for guide post**

Made from galvanized steel sheet. Attached with 3M reflector **HIGH INTENSITY PRISMATIC GRADE** 





A set consists of

- Reflective target, round shape, size 6 cm., 2 pieces
- Reflective target, square shape, size 15x4 cm., 1 piece
- Mounting nuts, 4 pieces



### Kilometer Markers



Size: 0.30 M x 0.60 M

#### **HIGH INTENSITY PRISMATIC GRADE**











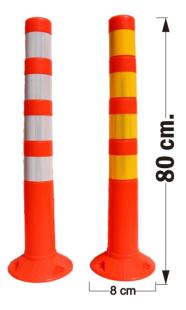




### Reflective Flexible Guide Post



- Size: 8 x 80 cm., flexible
- Return to its original shape when falling or bending without leaving a dent. Made of good material, durable, strong, and not fading.
- Apply with **3M** reflective sheet, DIAMOND GRADE type
- Size 3 inches, available in 3 stripes and 4 stripes.
- See more clearly than ever at night. Easy installation and increased security







# **Steel Flex**





- N N ม u 0 0
- N ม 0 0 A A

- Size: Width 10 cm. Length 140 cm.
- Made of flexible steel
- The outer layer is coated with Polyester Powder Coating







### Solar-Powered 360° Road Stud



- Diameter 100 mm.
- Use the solar panel to control the flashing.
- Made from high-strength glass shell
- High-powered LED bulbs available in two types - single-sided and double-side
- Able to withstand compression, pressure, and scratch.
- Flashing speed 300 times/min ± 10%
- Work continuously for 4-5 nights

### 360° Reflective Glass Road Stud



- Reflect light well, strong and durable
- Available in 2 colors white and yellow

### Solar-Powered Road Stud

- Available in 2 types, 3 LEDs and 6 LEDs, Colors - White and Yellow, Size 10.3 x 10.3 cm.
- Size 10.3 x 10.3 cm., made from well-formed aluminum
- It is made to easily withstand the impact of the car's wheels.
- Battery NI-MH 800mAh / 12V (included with lamp)
- Solar charge time 6-8 hours
- Flashing light, working at night for up to 72 hours.
- Solar panel 0.2W / 2V
- Can be observed from a distance of 500 meters
- Resistant to the sun, resistant to rain, long service life.
- IP65 standard











### Road Stud 3M

#### **Alloy Raised Pavement Markers**





- The pin body is made of ADC12 aluminum alloy.
- Reinforce the steel core inside the dowel to increase the strength
- Made from a special type of polymer that enhanced the lens is highly scratch resistant and the surface is smooth to prevent dust accumulation.
- Micro Prismatic Lens ultra-high luminance reflector
- Long service life and environmental resistance
- Help the driver to see the lane or traffic lane more clearly
- TIS. 2573 2555 Quality Standards







Road Stud – Lens Types		White Lens type		Yellow Lens type	
Measurement Angle		0.2/0°	0.2/+20°	0.2/0°	0.2/+20°
Luminous intensity Coefficient	Measured value	1000	1000	900	900
(Unit: Millicandela per Lux)	Standard value - TIS. 2573 - 2555	279	112	167	67











#### Two types - With Reflective Sheet Stipes and Without Reflective Sheet Stipes

#### With White Reflective Sheet Stipes

Small Size

30 x 50 cm.

Medium Size

35 x 70 cm.

Large Size

45 x 80 cm.



#### Without Reflective Sheet Stipes

Small Size

30 x 50 cm.

Medium Size

35 x 70 cm.

Large Size

45 x 80 cm.



### Size 90 cm.

Size 37 x 90 cm.



### Traffic Cone with Solar-Powered LED Flashing Crown for Traffic Cone



#### Bolt-on type without

Reflective Sheet Stripes

Small Size

30 x 50 cm.

Medium Size

35 x 70 cm.

Large Size

45 x 80 cm.



#### Bolt-on type with

Reflective Sheet Stripes

Small Size

30 x 50 cm.

Medium Size

35 x 70 cm.

Large Size

45 x 80 cm.

• Size 9x18 cm.

• Weight 333 grams, 4 LEDs

• Visible up to more than 500 M

• 360° visibility LED lamp

• Battery 1500 mAh rechargeable Ni-MH battery

• 0.3 W Solar-Powered

More than 120 hours of life service

• 96 hours of continuous use without being exposed to the sunlight

Reflective Sheet Stripes - White Color



บริษัท ภัทรวิทย์ ทราฟฟิค (ประเทศไทย) จำกัด PATTARAWIT TRAFFIC (THAILAND) COMPANY LIMITED 12/4 ซอยรามอินทรา 77 แขวงรามอินทรา เขตคันนายาว กรุงเทพฯ 10230 TEL(662) 946-4633-5 FAX. (662) 946-4636







### **Black Base Traffic Cone**

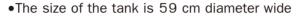
Two types - With Reflective Sheet Stipes and Without Reflective Sheet Stipes

#### With White Reflective Sheet Stipes

- Adding a black base makes it weighs more than a common rubber cone
- Weight 4.3 KG, Size 90 cm.
- Base size 36x36 cm.
- The material is extra flexibility does not break easily
- There is a button under the base to keep the rubber cone above road level.
- Can enter the name of the organization as needed

## **Safety Barrel**





- Rubber base width diameter 70 cm.
- •Height 90 cm.
- •Weight 7.2 kg
- Made of high-quality plastic (from the USA)
- •Beautiful shape and the orange color is clearly visible
- Attached with **3M** reflective tape, Engineer Grade type
- •Can enter the name of the organization as needed
- •Increase safety for road users even more.



### **Solar-Powered Barricade Warning Light**



One-Sided



Two-Sided

- Solar panel, voltage 3V
- current 120mA
- Battery Type SLA
- Voltage 2V/2.5AH
- LED, diameter 5 mm.
- Yellow color or red color 6 LEDs
- Flashing rate 60 times/min +/-20%
- Polycarbonate material

Install on the edge of a barricade, bridge railing, or construction site blocker. The function automatically at nighttime and can be seen over a long distance









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# Reflective Safety Vest (8 Stripes Model)







**Front** 





**Front** 

**Back** 

- High-quality materials
- Apply with 8 stripes of the reflective sheet
- There is a slot for holding an identification card
- Can enter the name or logo of an organization as needed
- •The reflective part of the stripes is visible both daytime and nighttime

### Reflective Safety Vest - 8 Stripes (Special Edition)





**Front** 

**Back** 

- High-quality materials
- Apply with 8 stripes of the reflective sheet
- Large Horizontal Stripes
- The reflective part of the stripes is visible both daytime and nighttime
- Can enter the name or logo of an organization as needed

### Reflective Safety Vest (4 Stripes Model)





**Front** 

**Back** 

- Without Screen Printing an organization's Name or Logo
- Screen Printing an organization's Name or Logo

**Reflective Safety Vest** (Black Color with Green Stipes Model)





**Front** 

**Back** 

**Reflective Safety Vest** (Black Color with front Zip Model)





**Front** 

**Back** 

**Reflective Safety Vest** (3M Lemon-Yellow Color Model)





**Front** 

**Back** 









# Reflective Safety Vest (Orange Color with Front Zip Model)



# Reflective Safety Vest (Green Color with 8 Stipes Model)



Reflective Safety Vest
(Orange Color with Black and Green
Reflective Stripes Model)



Reflective Safety Vest (Green Color with Front Zip Model)



Reflective Safety Vest (Chevron Stripes Model)











### **Safety Helmet**





The helmet body is made of ABS, a high-density plastic that is extremely durable. The headband is made of PVC, adjustable from 500 mm. to 600 mm. There is a front vent, modern style, and the inner head strap is made of nylon material 23 mm. X 1 mm. Inside the Sweat Band is made of canvas mixed with PVC that is soft and smooth. Does not irritate the skin and prevent sweat from flowing into the eyes while working. A hat shell holder made of PE (polyethene) is a high-density plastic. Elastic chin strap, width 20 mm., adjustable size and padding in the amount of 6 adjustable points. cap tightening with lock slider/swivel.

#### Raincoat



#### **Mechanic Uniform**



- Made from polyester blended with cotton
- Reflective sheet 8 stripes
- Front zip and two front pockets
- The shirt has an adjustable button fastening.
   Two side pockets and stretch waist pant









## **Floor Stand Signs**



- Made of good plastic (from the USA), strong, durable, and wind-resistant.
- Easy to move, lightweight, easy to store
- Easy to use, can be used both indoors and outdoors.
- Text and symbols are applied with 311 reflective sheets.
- Can be used both front and back



- Engineer Grade:
- High Prismatic Grade type :
- Diamond Grade Fluorescent :



#### **Traffic Steel Barrier**

(There are two types with wheels and without wheels)





Size	Types		
200 cm.	With wheels		
200 cm.	Without wheels		
150 cm.	With wheels		
150 cm.	Without wheels		
100 cm.	With wheels		
100 cm.	Without wheels		







## **Cushion Tank**





- Size 91 x 61 x 91 cm.:
- Size 91 x 91 x 91 cm.:



**Sola Cell Model (Solar-Powered)** 

- Size 91 x 61 x 91 cm.:
- Size 91 x 91 x 91 cm.:





- Made of good plastic flexible to help reduce impact. Use to place on the island
- If an accident occurs when a car crashes the island-head barrier will absorb the incoming impacts, which help prevent danger to a certain extent
- Improve the visibility of the island area more clearly both day and night. with **3M** reflective tapes, Diamond Grade Fluorescent type (yellow)
- Easy to install and move
- Easy to install, the base can be fixed and can load sandbags into the tank to increase the weight.

  If there is any damage to the tank part, a new tank can be replaced immediately.
- \*\* Solar-Powered type can be used continuously for more than 20 days without it being exposed to the sunlight



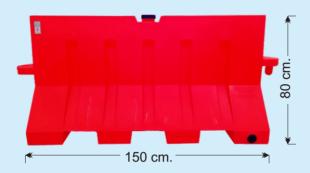




# Road Barrier (Water can be filled)











#### **Unique Feature:**

- Visible from a long distance
- Easy to move
- Can be placed in a row or angle
- Multi-purposes
- UV resistance and environmental resistance
- Available colors Red and White
- Can enter the name or logo of an organization as needed
- Clearly visible from a long distance, even though nighttime, or a location that has low light sources
- Made from Polyethylene material
- TIS. 816 2556

Size
<b>50 x 100 x</b> H <b>80</b> cm.
<b>45 x 150 x</b> H <b>80</b> cm.
<b>45 x 150 x H55</b> cm.
<b>50 x 200 x</b> H <b>100</b> cm.









# **Traffic Light**





Retrofit colors: red, yellow, and green (Circle type)

Retrofit colors: red, yellow, and green (Arrow type)

- Retrofit traffic light size 300 mm.
- Made from Polycarbonate
- The black color help protect the material from UV
- Flexible and hard to break, erosion resistance, fixed shape
- LED lamps are made of Optical Grade Epoxy, UV resistance
- The function of the LEDs can function properly under the temperature between -40° to +85°
- Wave Length value at the temperature of Ta=25°
  - Red Color = 615 650 nm.
  - ∘ Yellow Color = 585 597 nm.
  - Green Color = 560 509 nm.
- Number of LEDs in a Traffic lamp
  - ∘ Circle type Ø300 mm. (230 LEDs)
  - Arrow type Ø 300 mm. (136 LEDs)
- LED light can be used continuously for 100,000 hours
- IP 65 standard resistance to water and dust
- Protection circuit from over-voltage
- Protection circuit from over current

# **Solar-Powered Traffic Flashing Light (Due-Type)**





Size-300 mm.

- 300 mm. Polycarbonate concave lens
- Colors clear and black
- 270 LEDs size 5mm. per lamp
- Working hours > 100,000 hours
- Alternate Flashing (Top-Bottom) for 24 hours
- Can be used without being exposed to the sunlight > 360 hours
- Luminous Intensity > 880,000 mcd
- Visible distance of around 1,000 m.
- Solar panel, power 20W, voltage 12V
- Current 22A, ISO 9001 standard
- Dry Batteries 12 volt
- Electric current capacity 22A/21A
- •TIS. 718 2530 Standard





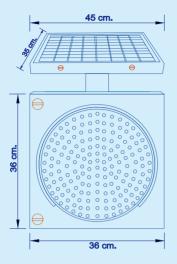






# Solar-Powered Traffic Flashing Light











- Solar-powered flashing lamp Polycarbonate concave lens
- Available colors Yellow and Green
- Len's size 300 mm. made from polycarbonate
- 270 LEDs size 5mm. per lamp
- Working hours > 100,000 hours
- Flashing: 40-60 times per minute/24 hours
- Can be used without being exposed to the sunlight > 360 hours
- Luminous Intensity > 1,000,000 mcd
- Visible distance of around 1,000 m
- Solar panel, power 20W, voltage 18V
- Current 1200mA
- ISO 9001 standard
- Dry Batteries 12 volt
- Electric current capacity 22Ah
- TIS 718 2530 Standard



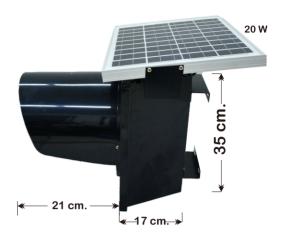




# Solar-powered Traffic Flashing Light (Mast Arm)





















### Solar-Powered Flashing Light (300 mm.)

### (Vehicle and Rain Sensor System)



#### working style

- Flashing Light will flash yellow color throughout 24 hours
- 2 types if order more than 4 pieces
  - o Each light will flash at the same time
  - o Flash individually as each sensor detect a vehicle
- When a sensor detects a vehicle, the flashing light will automatically change from yellow to red
- When a sensor detects rain, the flashing light will automatically change from yellow to red

• Solar panel size: 20W

• Battery size: 12V 12A

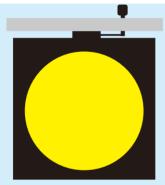
Sensor type: TOF

• Charge control circuit: 12-24V 10 A

· Wireless alarm transmitter

• Rain sensor





**Solar-Powered Flashing Light (300 mm.)** 

#### Includes 2 color in the same piece, red and yellow

Solar panel size: 20W

Battery size: 12V 12A

LED

o Size 5 mm.

o 200 LED

- Yellow/Red color
- Wireless transmitter
- Solar-powered flashing light size 300 mm.
   made from polycarbonate

• Flashing 40-60 times per min

• Solar panel size: 20W

• Battery size: 12V 12A

• Sensor type: TOF

• Charge control circuit: 12-24V 10 A

• Wireless alarm transmitter

• Rain sensor

### **TOF SENSOR**











# Traffic Sign Board – LED

(Solar-Powered)









- Flashing solar-powered sign board
  - Use 3M Diamond Grade reflective sheets
- Work well in both daytime and nighttime
  - Flashing LED passes ISO 9001 standards
- LED has a lifespan of 100,000 hours
  - o Solar panel size: 20W
  - o Voltage: 18V
  - o Power: 1200mA
  - o Standard ISO 9001
- Battery size 12V DC / 12A
  - TISI standard 718 2530
  - o Still flashing for 360 hours without sunlight
- LED size: 5 mm.
  - Yellow color
  - Waterproof lens
  - o 20 W solar powered
- Circuit by Rass Diods inside wiring box
  - Prevention against interchangeable wires
- Fully customizable road signs
- 10 types of flashing, customers can adjust the speed of each flash











### **Speed Limit Sign Board Controlled by Rainfall Volume**

(Solar-Powered)



• Solar panel size: 40W

Battery size: 12V 40A

• Rain detection sensor

• Sign size 90 x 180 cm.

• 3M reflective sheets, type 9 diamond grade

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ID Line: 0623868561

• Slippery when wet 5 mm. LED sign, yellow color

• Speed limit 5 mm. LED sign, red color

#### **Features**

- For the slippery when wet sign, it will not flash until rainfall. During rainfall, the sign will automatically flash.
- For the speed limit sign, the speed limit number will light up for all 24 hours.
  - o Depending on settings, during rainfall, the speed limit number will change automatically







### **Speed Limit Sign Board Controlled by Rainfall Volume**

(Solar-Powered)



• Solar panel size: 40W

Battery size: 12V 40A

• Rain detection sensor

• Sign size 90 x 180 cm.

• 3M reflective sheets, type 9 diamond grade

• Slippery when wet 5 mm. LED sign, yellow color

Speed limit 5 mm. LED sign, red color

#### **Features**

- For the slippery when wet sign, it will not flash until rainfall. During rainfall, the sign will automatically flash.
- For the speed limit sign, the speed limit number will light up for all 24 hours.
  - Depending on settings, during rainfall, the speed limit number will change automatically







# **Chevron Link**

(Solar-Powered and Flashing Control by Wireless System)





- Solar-powered flashing signs
- Installed with 3M reflective sheet, type 9 diamond grade (TIS 606-2549)
- Can choose whether the sign will automatically flash at daytime/nighttime
- Flashing in the same direction
- Wireless System control by radio frequencies
- The signs are made from steel with boiled e-proxy. This prevents rust.
- Strong and Durable. 126 total LED
- LED size: 5 mm., yellow color
- Illumination of LED: 1 million mcd
- Waterproof lens. 500 meters visibility
- Solar panel power: 20 W
- Maximum voltage: 17.6 V
- Short circuit current: 1.82 A
- Open circuit voltage: 22.5 V
- Circuit by Rass Diods, prevention against interchangeable wires

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ID Line: 0623868561

- Lead-acid battery
  - o Size: 12 V
  - o Electric current: 12 A







# Solar-Powered Curving Warning Sign Board



(Vehicle and Rain Sensor System)



#### **Product description**

- . When the sensor detects a vehicle, the flashing rhythm will be faster for the safety of drivers
- When the sensor detects rainfall, the flashing rhythm will be faster
- 2 patterns of flashing in case the product is bought in multiples (running in patterns and running at the same time), work the entire 24 hours



• Solar panel size: 20W

• Battery size: 12V 12A

• LED size: 5 mm.

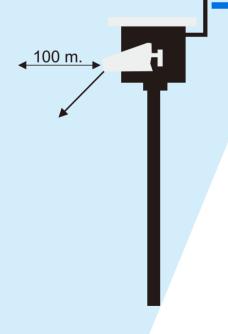
• 126 total LED, yellow color

• 12-24V 10A charge control circuit

Wireless transmitter and receiver

• Sign size: 60x75 cm.

M Diamond Grade reflective sheets



• Solar panel size: 20W

• Battery size: 12V 12A

• LED size: 5mm.

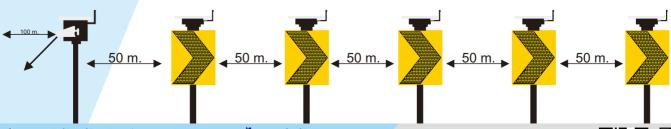
• 126 total LED, yellow color

• 12-24V 10A charge control circuit

• Wireless transmitter and receiver

• Sign size: 60x75 cm.

**3M** Diamond Grade reflective sheets









### Solar-Powered Curving Warning Sign Board - Duo Type



#### (Vehicle and Rain Sensor System)

- When the sensor detects a vehicle, the flashing rhythm will be faster for the safety of drivers
- When the sensor detects rainfall, the flashing rhythm will be faster.
- 2 patterns of flashing in case the product is bought in multiples
   (running in patterns and running at the same time), work the entire 24 hours









• Solar panel size: 40W

• Battery size: 12V 22A

• LED size: 5 mm.

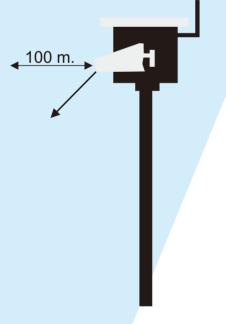
• Number of LEDs: 126, yellow color

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• Wireless transmitter and receiver

• Sign size: 60x75 cm.

• 3M Diamond Grade reflective sheets



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• LED size: 5 mm.

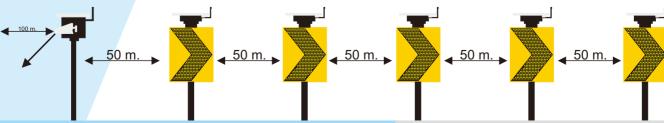
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• 12-24V 10A charge control circuit

Wireless transmitter and receiver

• Sign size: 60x75 cm.

• 3M Diamond Grade reflective sheets





บริษัท ภัทรวิทย์ ทราฟฟิค (ประเทศไทย) จำกัด PATTARAWIT TRAFFIC (THAILAND) COMPANY LIMITED 12/4 ขอยรามอิหารา 77 แขงรามอิหารา เขตคันนายาว กรุงเทพฯ 10230 TEL(662) 946-4633-5 FAX. (662) 946-4636





### **LED Siren Light with Magnetic Base**

Traffic Safety Equipment (Mounted on the Roof of the Car)

- Base width 16 cm. magnetic base size 6.7 cm. Height 13.5 cm. (attached to car roof)
- Material PC + ABS + Magnetic base no need to drill the roof of the car.
- There are 4 functions to choose from, which can be easily adjusted by the switch
- It supports a wide range of voltages between 12-24V,
   so it can be used in many varieties of vehicles.
- Power 40 watts
- >30,000 working hours
- Installed from a car's cigarette lighter socket.
- The cable is a coiled cable that can be stretched convenient and save storage space.
- At night time, it can be seen clearly up to more than 800 meters away.
- Made of good material, waterproof, rainproof, and resistant to all weather conditions.
- Dust and liquid protection level IP65
- It is an LED siren light, so it has a longer lifespan than normal light





### **LED Warning Light, Rear Control System**



- Voltage DC12-24V Power 100W
- Arrow size 60 x 26 cm. 1 set contains 2 arrows
- >30,000 working hours
- Clear light with 240 LED light bulbs 12 m wire length
- work with controller
- Can be adapted to work in many ways
- Dust and liquid protection level IP65
- Easy to install, complete with accessories, and ready to use.
- Made of good material, waterproof, rainproof, and resistant to all weather conditions.







### **Transportable Siren**

#### (Traffic Safety Equipment)



- The lamp has 2 colors, yellow and red.
- There is a low-height adjuster.
- There is a compartment for placing the battery.
- Has wheels for easy movement
- Add a handle to make the cart more convenient.
- Yellow 3M High-Intensity Prismatic Grade Reflective Tape are applied on the pole

### Solar-Powered Siren Flashing Light - Size: 300 mm.

- Size 300 mm.
- 2 types, 170 LEDs per 1 lamp, yellow or red
- Flashing pattern alternating top-bottom 2 steps
- Solar panel 20W
- Battery 12V 22A
- Fully charged, it can be used for up to 48 hours.
- The sign is made by applying 3M reflective sheet DIAMOND GRADE (DG) type on a galvanized steel sheet
- Size 0.30 x 0.50 m. (with a selection of agency names)
- The base is a control box for inserting batteries
  - o Size 40 x 40 x 20 cm.
- Total height: 160 cm.
- Pole size: 2 inches
- Wheel size: 8 inches
  - Easy to transport
- Product life: 100,000 hours
- Signs are customizable







only the lamp









#### **Traffic Baton**



- Size 54x4 cm.
- The body is made of PVC
- Impact resistance
- Reflective film coating
- Handle ABS
- Hand strap
- Anti-slip pattern
- Home charger 220v does not use batteries
- Operation Flashing light solid light on/off with just one button.
- For the first use, it should be charged for 8-10 hours

#### **Traffic Baton with Three-Features**



- 3 flashing patterns
- There are red lights and flashlights.
- Powered by 2 batteries
- The length of the baton is 54 x 4 cm.
- ABS handle with hand strap
- Lightweight, easy to carry

### **Traffic Baton with Whistle Sound Feature**

- The length of the baton is 54 x 4 cm.
- There are red lights, blue lights, and flashlights.
- There is a button for pressing the whistle
- Powered by 3 AA batteries
- Can see more than 200 meters



# Traffic Convex Mirror

- Polycarbonate traffic mirror type
- Polycarbonate has a special feature that is highly flexible and does not break.
- The back of the mirror is made from fiber glass
  - o Size: 24, 32 and 38 inches
- 200 times more durable than a normal mirror
- Very light, durable against UV rays
- Frame is made from orange ABS
- Sharp reflection which closely reflects the vehicle's true distance
  - o Clearly see vehicles running against the road
- Best installed at a dangerous corner where driver visibility is limited
  - o For instance, often use in corners at the car park







Note: There is a protective film. attached to the mirror The user must peel this film off before use.









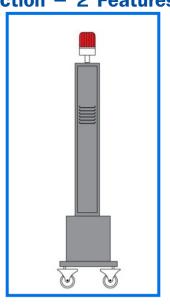
### **Transportable Triangle Signboard Stop Sign for Inspection**



- Resistant light and all-weather conditions.
- Stop triangle sign with the name of the agency
- Stop triangle sign with the name of the agency
- 2-sided stop sign, diameter 45 cm.
- There are 4 wheels of 8-inch pan wheel
- Can use 1 power system is 220V household electricity

### **Transportable Triangle Signboard Stop Sign for Inspection – 2 Features**





- Circle stop sign with a selection of agency names
- 5-inch siren light VCT power cable 10 meters
- There are 4 wheels of the 8-inch wheel.
- Can use 2 power systems, 220V household power, and battery.
- save battery, save electricity

### **Reflective Triangle Sign**



- Sign size 50 x 50 cm.
- The cross stand uses thick steel, foldable, rotatable
- Text and symbols are applied with 3M reflective sheets. There are 3 types to choose from.



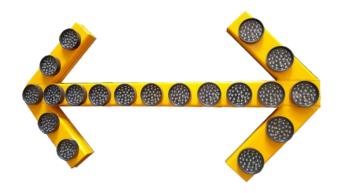
**Engineer Grade Reflective Sheeting High Prismatic Grade Reflective Sheeting Diamond Grade Fluorescent Reflective Sheeting** 

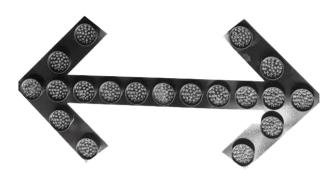






## **LED Rear Arrow Warning Light, Rear Control System**





- The structure is made of steel coated with epoxy paint
- 1 small lamp with LED bulbs, size 5 mm., yellow, 19 sets of lights, 30 light bulbs each set, a total of 370 light bulbs
- Flashing Pattern Left, Middle, and Right
- There is a switch control to adjust the flashing speed
- Open continuously for up to 24 hours use 24 Vdc.
- There is a remote control in the front of the car. The cable is 15 meters long.
- Can see in a wide and clear view both daytime and nighttime.
- Strong, durable, and easy to maintain

#### • LED flashing sign

• Size: 5 mm.

• Yellow color

Voltage: 24V DC

• Number of LEDs: 19 sets

• 1 set = 30 LED

• Total LEDs: 570 pieces

- Flashing Pattern Left, Middle, and Right
- There is a switch control to adjust the flashing speed
- Open continuously for up to 24 hours
- There is a remote control in the front of the car. The cable is 15 meters long.
- Can see in a wide and clear view both daytime and nighttime.
- Recommended to install at the back of the vehicle





## **Rear Flashing Light Sign**





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#### **TOA Color Products**







TOA spray paint High-quality spray paint, fast-drying, beautiful, durable, high gloss and good adhesion on all surfaces Made from high-quality leavening Can be used both outside and inside Can be used on all wood, steel and plastic surfaces Before use, the paint should be shaken thoroughly until the sound of the glass ball is uniform (about 2 minutes). While spraying, the canister should be shaken periodically. For a good finish, spray 2 times (providing a distance of about 1 foot from the surface, first spray lightly, let it dry for about 10 minutes and then spray a second coat.

SUPER MATEX ACRYLIC WATER Made from super acrylic resin mixed with sun and rain-resistant pigments to suit the tropical climate, especially, with anti-fungus, mercury-free, and lead-free, it gives beautiful colors, is durable, worthwhile, and it has received industry standards.

SUPER MATEX Varnish It is a standard quality oil. Made from high-quality resin. Provides durability and can maintain the color shine for a long time. A mixture of antifungal agents Free from mercury and lead

SUPER MATEX rust-proof red primer It is a rust-proof metal primer with red oxide. Mixed with a special type of alkyd resin provides excellent rust protection properties, and quick drying and helps to enhance the adhesion of the topcoat to the surface better.

WASH PRIMER paint As a primer before applying other layers Used for glossy metal surfaces or alloys such as zinc, and aluminum.

RUST TECH paint It is 2-part epoxy paint, with high film thickness, anti-rust, and excellent adhesion. Can be applied on all types of surfaces such as old paint surfaces, rusted surfaces, galvanized steel, aluminum, and stainless steel.

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# Street/Alley Signs





















# **Electric Lighting Equipment**



Light bulbs



Sodium lamps



Wires



Halogen lamps



Sodium ballast



TALLOS I

Igniter



Capacitor



Magnet



Lampholder



Eagle plug



**Duct tape** 



Normal duct tape



Relay



**Photocell** 



Photocell pin



Fuse ball



Rainproof fuse set



Cylinder fuse



Safety switch cabinet



**Transformer** 



Double fuse panel/ single fuse panel



Wire connector slip



Sodium lamp cover



Fluorescent lamp











## **Guard Rail**



















# **Cold Plastic Red**

### Anti-Skid















- Reduce accidents from slipping in dangerous areas such as curves, steep slopes, and dangerous curves.
- Use at the head of the road, dangerous ways, crossings, and zebra crossings.
- Helps to reduce the braking distance to be shorter.
- Increased visibility in hazardous areas at risk of an accident.







### **3M** Reflective Paint

## **Easy Applied for More Safety**









Can be applied on many types of surfaces such as concrete, masonry, and wood such as guideposts, bridgeheads, piers, walls, and trees. Packing quantity: 400 grams/can. Colors can reflect light to make objects visible at night.



#### **Features**

- m reflective paint with high-quality glass beads, ready to use.
- **3M** reflective paint can reflect light when exposed to light sources.
- 3M reflective paint has a brightness value of 35 CPL

(at an angle of 0.2 degrees/-4 degrees).

Easy to use, good adhesion on concrete, cement, or wood surfaces, and dry quickly. The Application area is approximately 3 square meters/can (Under the condition of a thickness of 100 microns)

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# **EPOXY**



## **PART A**

#### **Epoxy Features**

Part A is a chemical for mixing with a hardener part B. It is a unique formula epoxy for bounding road studs to provide strength, impact resistance and pressure resistance from the traffic of cars. It has unique properties that harden quickly, suitable for urgent work. It takes about 40-50 minutes to harden. If used under the sunlight, it will harden in about 30 minutes. The hardened mixture will be strong and has excellent adhesion.

#### How to use

Clean the surface to be used free of dust and oil stains. Mix part A and part B with the ratio of 1 part A to 1 part B. Stir the two components together until homogenous. Put the well-mixed components to use by applying or pouring onto the workpiece that needs adhesion after mixing it should be used up within 30 minutes.

#### **Warning**

Keep it out of reach of children, be careful not to get it in your eyes, and store it at room temperature.

## **PART B**

#### **Epoxy Features**

Part B is a hardener for mixing with a chemical part A. It is a unique formula epoxy for bounding road studs to provide strength, impact resistance and pressure resistance from the traffic of cars. It has unique properties that harden quickly, suitable for urgent work. It takes about 40-50 minutes to harden. If used under the sunlight, it will harden in about 30 minutes. The hardened mixture will be strong and has excellent adhesion.

#### How to use

Clean the surface to be used free of dust and oil stains. Mix part A and part B with the ratio of 1 part A to 1 part B. Stir the two components together until homogenous. Put the well-mixed components to use by applying or pouring onto the workpiece that needs adhesion after mixing it should be used up within 30 minutes.

#### Warning

Keep it out of reach of children, be careful not to get it in your eyes, and store it at room temperature.







No.	Product name	Model	Number	check certificate
1	Barrier	Size: W45xL150xH55 cm.	MIT6409001255	
2	Barrier	Size: W50xL150xH80 cm.		
3	Barrier	Size: W50xL100xH80 cm.	MIT6409000927	
4	Barrier	Size: W50xL200xH100 cm.	MIT6409001254	
5	Cushion Tank	Size: W91xL61xH91 cm.	MIT6409003205	
6	Cushion Tank	Size: W91xL91xH91 cm.	MIT6409003206	
7	Traffic Cone	Size: H80 cm.	MIT6408005275	
8	Safety Barrel	Size: H90 cm.	MIT6409003204	
9	Flexible Guide Post	Size: H80 cm.	MIT6409001291	
10	Traffic Sign	Guiding Sign Board "Cross Position" Size: 0.75x0.75 m. (Square Shape)	MIT6410000998	
11	Traffic Sign	Compulsory Sign Board "Keep Aligned to the Left or Right" Size: Ø 0.75 m. (Circle Shape)	MIT6410000993	
12	Traffic Sign	Compulsory Sign Board "Stop" Size: 0.75x0.75 m. (Octagon Shape)	MIT6410000999	หถัง
13	Traffic Sign	Kilometer Marker Sign Size: 0.80x0.45 m.	MIT6410000980	nu. 840









No.	Product name	Model	Number	check	certificate
14	Traffic Sign	Warning Sign Board "Community Area, Reduce Speed" Size: 1.50x1.80 m.	MIT6410000997	เขตชุมชน ลดความเจ้า city Limit REDUCE SPEED	
15	Traffic Sign	Warning Sign Board "U-Turn on the Right-side Warning" Size: 0.75x0.75 m. (Square Shape)	MIT6410000985	<b>(1)</b>	
16	Traffic Sign	Warning Sign Board "Right Curve Warning" Size: 0.75x0.75 m. (Square Shape)	MIT6410000983	<b>(</b>	
17	Traffic Sign	Warning Sign Board "Left Curve Warning" Size: 0.75x0.75 m. (Square Shape)	MIT6410000982	5	
18	Traffic Sign	Warning Sign Board "Warning of Obstacles" Size: 0.45x0.75 m. (Rectangle Shape)	MIT6410000988		
19	Traffic Sign	Warning Sign Board "Warning of Obstacles" T.72 Size: 0.45x0.75 m. (Rectangle Shape)	MIT6410000987		
20	Traffic Sign	Warning Sign Board "Warning of Obstacles" T.73 Size: 0.45x0.75 m. (Rectangle Shape)	MIT6410000986		
21	Traffic Sign	Warning Sign Board "Right Curve Guide" Size: 0.60x0.75 m. (Rectangle Shape)	MIT6410000992		
22	Traffic Sign	Warning Sign Board "Left Curve Guide" Size: 0.60x0.75 m. (Rectangle Shape)	MIT6410000991		
23	Traffic Sign	Warning Construction Sign Board "Warning Obstacles Ahead, Move to the Righ Size: 0.60x1.20 m. (Rectangle Shape)	MIT6410000989 nt-Side"		
24	Traffic Sign	Warning Construction Sign Board "Warning Obstacles Ahead, Move to the Left-Size: 0.60x1.20 m. (Rectangle Shape)	MIT6410000990 -Side"	<b>—</b>	
25	Traffic Sign	Warning Construction Sign Board "Construction Site Ahead" Size: 0.75x0.75 m. (Square Shape)	MIT6410000996	านก่อสร้าง construction	
26	Traffic Sign	Warning Sign Board "Double Arrows Warning" Size: 0.75x0.75 m. (Square Shape)	MIT6410000984	KA	









No.	Product name	Model	Number	check certificate
27	Traffic Sign	Compulsory Sign Board "Keep Right" Size: Ø0.75 m. (Circle Shape)	MIT6410000995	
28	Traffic Sign	Compulsory Sign Board "Keep Left" Size: Ø0.75 m. (Circle Shape)	MIT6410000994	
29	Traffic Sign	Compulsory Sign Board "No Parking" Size: Ø0.75 m. (Circle Shape)	MIT6410000981	
30	Delineator	Rectangle Shape – One-Side Size: 7.5x10 cm.	MIT6410000196	
31	Delineator	Rectangle Shape – One-Side Size: 15x5 cm.	MIT6410000193	
32	Delineator	Square Shape – Two-Side Size: 10x10 cm.	MIT6410000195	
33	Delineator	Square Shape – Two-Side Size: 15x15 cm.	MIT6410000194	
34	Delineator	Half-Circle Shape – One-Side Size: 15x15 cm.	MIT6410000197	
35	Delineator	Trapezoid Shape – One-Side Size: 15x10 cm.	MIT6410000201	
36	Delineator	Circle Shape – One-Side Size: Ø10 cm.	MIT6410000200	
37	Delineator	Circle Shape – One-Side Size: Ø15 cm.	MIT6410000198	
38	Delineator	Square Shape – One-Side Size: 10x10 cm.	MIT6410000191	
39	Delineator	Square Shape – One-Side Size: 10x10 cm.	MIT6410000199	



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No.	Product name	Model	Number	check certificate
40	Delineator	Rectangle Shape – One-Side Size: 15x7.5 cm.	MIT6410000192	
41	Delineator	Rectangle Shape – One-Side Size: 15x10 cm.	MIT6410000190	
42	Solar-Powered Traffic Flashing (170 LEDs) Ø300 mm.	g Light (LED) – Red Color	MIT6409003587	
43	Solar-Powered Traffic Flashing (170 LEDs) Ø300 mm.	g Light (LED) – Yellow Color	MIT6409003586	
44	Solar-Powered Traffic Flashing (270 LEDs) Ø300 mm.	g Light (LED) – Red Color	MIT6409003585	
45	Solar-Powered Traffic Flashing (270 LEDs) Ø300 mm.	g Light (LED) – Yellow Color	MIT6409003636	
46	Reflective Safety Vest	4 Stripes	MIT6410000202	
47	Reflective Safety Vest	8 Stripes	MIT6410000203	
48	Traffic Sign	Warning Sign Board "Left Curve Warning" Solar-Powered Size: 0.60x0.75 (Rectangle Shape)	MIT6412001445 m.	
49	Traffic Sign	Warning Sign Board "Right Curve Warning" Solar-Powered Size: 0.60x0.75 (Rectangle Shape)	MIT6412001446 m.	
50	Traffic Sign	"Reduce Speed Sign" Solar-Powered Size: 90x120 cm. (Rectangle Sl	MIT6412001447 hape)	anniti







No.	Product name	Model	Number	check certificate
51	Traffic Sign	"Reduce Speed Sign" Solar-Powered Size: 90x120 cm. (Rectangle Sh	MIT6412001448 nape)	60 ванитыцёй
52	Traffic Sign	Warning Sign Board "School District Warning Sign" Solar-Powered, Top Sign Size: 6 Bottom Sign Size: 50x60 cm.	MIT6412001449 60x60 cm.,	URÎS NÎUL School Zone
53	Solar-Powered Warning Sign Board	Warning Sign Board  "Lean to the Left-side"  Top Sign Size: Ø 60 cm. (Circle  Bottom Sign Size: 45x75 cm. (Reference)		
54	Traffic Sign	Warning Sign Board (MAST ARM)"Reduce Speed in the School District Warning Sign Size: 0.75x3.00 m.	MIT6412001950	สดความเร็ว      เอาะสาย      เอาะสาย      โดย
55	Traffic Sign	Warning Sign Board (MAST ARM) "Reduce Speed in the Community District Warning Size: 0.75x3.00 m.		apprilling 30 Company
56	Solar-Powered Warning Sign Board	Warning Sign Board "Double Arrows Warning" Top Sign Size: Ø75 cm., Bottom Size: 45x75 cm.	MIT6412001952 n Sign	
57	Solar-Powered Road Crossing Warning Sign	Warning Sign Board "Crossing Point" Top Sign Size: 0.60x0.60 cm., Bottom Sign Size: 0.50x0.60 m.	MIT6412001953	
58	Traffic Sign	Warning Sign Board (MAST ARM) "Reduce Speed Si Size: 0.75x3.00 m. (Rectangle S	_	ARRITUITÍ ARRIVE STED



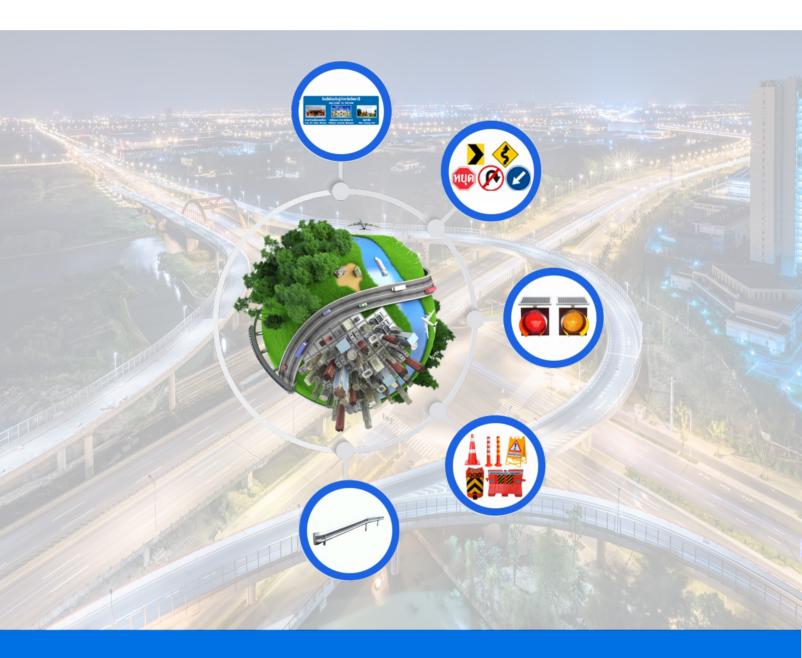




## Pattarawit Traffic (Thailand) Co., Ltd.



We are an authorized distributor of 3M reflective stickers from 3M Thailand Limited



Manufacture and install traffic signs, flashing lights, highway electricity, traffic signal lights, road markings, guard rails, delineators, road studs, and all types of traffic materials according to the standards Department of Highways, Department of Rural Roads, municipalities, expressways, and other agencies in Thailand.