

# Safety starts with Visibility

Reflective road furniture solutions for delineation, lane demarcation and median safety.



KRISHNA ENTERPRISES
MADHUBANI BIHAR

## **Raised Pavement Marker (RPM)**

3M RPM is a unique, easy to apply road safety device, specifically engineered for low-light Indian road conditions. With leading retro-reflective properties, unbeatable all-weather durability and proven performance, 3M RPM gives you excellent visibility in harsh road conditions.





### **Product tested from Govt laboratory**

#### Twin Molded Shank

- Category A road studs as per MoRTH specification
- ► Excellent nighttime visibility
- Capacity to bear extra shear with high durability
- Twin shank that ensures there is no product dislocation
- ▶ 4X more reflective than minimum requirement as per ASTM D4280 & MoRTH specifications
- ▶ Approximately 2X more compressive strength than minimum requirement as per MoRTH specification

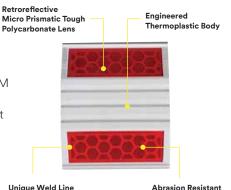
## Weather Resistant Weather Resistant olycarbonate Lens Twin Shank for Longer Road Presence

Height: 16 ± 0.1mm Width: 101.1 ± 0.1mm Length: 88.9 ± 0.1mm Shank Length: 30 ± 2mm Slope: 30.5 ± 0.1 degrees Reflective Area: 16sqcm Lens color: Red, Yellow,

White, Red & White, Green

#### **Next Generation**

- ► Category A road studs as per MoRTH specification
- ► High impact resistance and high compressive strength with good retro-reflectivity
- ▶ Longer road presence and lower life cycle cost
- ▶ 4X more reflective than minimum requirements as per ASTM D4280 & MoRTH specifications
- 1.5X more compressive strength than minimum requirement as per MoRTH specification
- ▶ Meets and exceeds ASTM D4280 & MoRTH performance standards

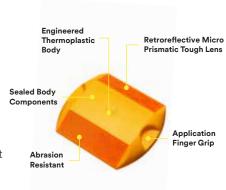


Abrasion Resistant

Height: 18mm ± 0.8mm Width: 80 mm ± 0.5mm Length: 89 mm ± 0.5mm Slope: 30.5 ± 0.1 degrees Reflective Area: 16sqcm Lens color: Yellow, White and Red

#### **ILC Non shank**

- Category A road studs as per MoRTH specification
- ▶ High retro-reflectivity performance for wide range of observation angles
- Excellent nighttime visibility
- ▶ Sustained product performance over longer period
- 4X more reflective than minimum requirements as per ASTM D4280 & MoRTH specifications
- ▶ 1.5X more compressive strength than minimum requirement as per MoRTH specification

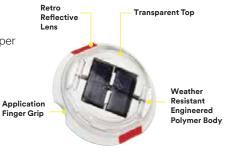


Design for Improved Lens Crack Resistance

> Height: 16 ± 0.1mm Width: 101.1 ± 0.1mm Length: 88.9 ± 0.1mm Slope: 30.5 ± 0.1 degrees Reflective Area: 16sqcm Lens color: Yellow, Red, White, Red & White, Green

#### **Solar Raised Pavement Marker**

- ► Uses 3M light guide technology for 360 degree & 800m minimum visibility as per MoRTH specification
- ▶ 1.5X more compressive strength than minimum requirement as per MoRTH specification
- Improved anchorage to road through double shank and base design
- ► Water/dust ingress protection with IP68 rating
- ▶ Meets and exceeds MoRTH specification
- ► Clear visibility in foggy and rainy conditions
- ▶ Shelf life of 12 months from date of manufacturing
- ▶ Blinking rate more than 1.25 Hertz
- > 3M retro-reflective lens for visibility in passive mode



Height: 65 ± 2mm Diameter: 136 ± 4mm Shank Length: 40mm **Shank Breakage** Strength: 820 kgf Shank Diameter: 25mm Variants: Yellow Body, **White Body** 

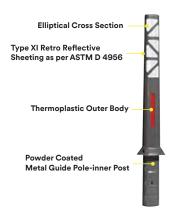
## 3M™ Delineator

3M Delineator is engineered to deliver years of all-weather visibility, safety, durability and elegance. It is an innovative product and gives unmatched visibility and reliable performance.



#### Vertical Delineator

- ► Meets & exceeds IRC 79-2019 standards
- ▶ Longer visibility time for driver and improved safety
- ▶ Longer road presence and good long-term wear
- ► High entrance angle performance
- Powder coated inner-body and thermoplastic outer cover for corrosion resistance



Height: 800mm above ground

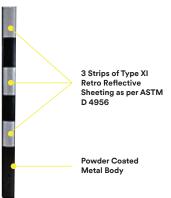
Thickness: 80mm

Base Depth: 300mm

Impact Strength: 600J/m

#### Standard Delineator

- ▶ Meets & exceeds IRC 79-2019 standards
- Robust product design with powder coated body for corrosion resistance
- ► Longer visibility time for driver and improved safety
- Vandal resistance against sheeting peel-off
- ► Ellipsoidal shape with good entrance angle that provides more reflective area and wider angle of visibility
- Alternate band of black paint and white Type XI retro-reflective sheeting for excellent visibility



Height: 800mm
Thickness: 30mm

Base Depth: 300mm

Reflective Area:

150mm\*80mm\*3 strips= 360sqcm

## 3M™ Median Marker

3M Median Marker products are an Indian Innovation to enhance median visibility under extremely harsh condition. This revolutionary product from 3M combines superior material with high visibility retro-reflective sheeting to give medians clearer definition in Indian road conditions.



#### Flexible Median Marker

- ▶ Meets & exceeds IRC 79-2019 standards
- ► High reflectivity, long visibility in day/night, rainy/foggy condition due to fluorescent Type XI sheeting
- Easy installation on any type of median due to narrow shank
- ► Vandal resistance against sheeting peel-off
- 2X more reboundable than minimum requirement as per IRC 79-2019 specification
- Excellent UV and outdoor weathering resistance with flexible thermoplastic material
- ► Tensile strength exceeds IRC specification

## Flexible Thermoplastic Body Fluorescent Type XI Reflective Sheeting as per ASTM D 4956 Based Grouting

Total height: 180mm

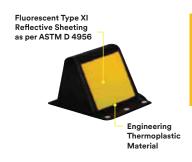
Body Thickness: 6.5mm

Shank Depth: 30mm

Reflective area: 90sqcm

#### **Median Marker**

- Excellent visibility during day/night & dawn/dusk conditions
- Excellent angularity offering highest visibility
- Good long-distance visibility for extended distances, enhancing safety standards on road
- Excellent UV and outdoor weathering resistance



Height: 150mm Width: 100mm Length: 100mm

Impact Strength: 600J/m

## 3M™ Aluminium Backed Flexible Prismatic

3M AFP is a new generation flexible sheeting that is designed for high visibility in harsh road conditions. It can be easily applied on rough concrete surfaces and trees. Also, ensures optimum visibility of critical road elements.

- ▶ Meets & exceeds IRC 79-2019 standards
- ▶ Non-metallic Prismatic Type VI retro-reflective sheeting
- Backed with a 50 micron Aluminium (Al) foil with a pre-coated pressure sensitive adhesive and easily removable liner
- Very high conformability and non-returning dead-fold characteristics required for application on rough and uneven surfaces
- Retro-reflective sheeting shall show no cracking or de-lamination outside of the actual area of impact when subjected to the impact test in accordance with S2.2.1 of ASTM D4956-09
- ▶ Can be applied on any rough surfaces: tree trunks, concrete, metals, etc
- ► Variants: Slant, Arrow, Plain





RPM Installation Process Videos (Scan the QR codes below to watch RPM installation videos)

#### **Twin Molded Shank RPM**



#### **Next Gen RPM**



#### **ILC Non-Shank RPM**



#### **End-End solutions: Road Safety service and support**

- Innovative products and solutions, meeting Indian regulations and warranty requirements
- Design collaboration for custom signage designs
- Traffic engineering team support to prepare comprehensive proposals with drawings, products and specifications
- Application engineering is support for error-free installation and training
- Implementation and quality assurance support through authorized channel

#### **Notes:**

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