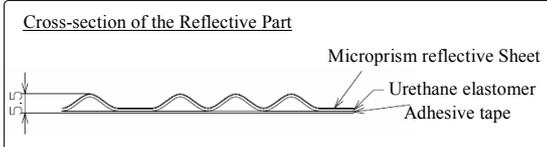
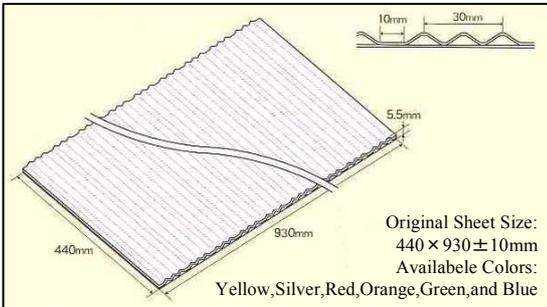


Mini Wave Reflector®



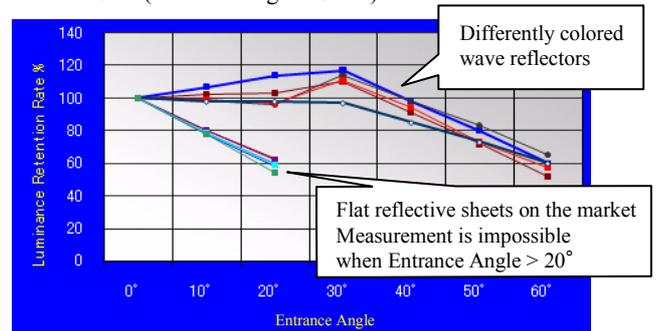
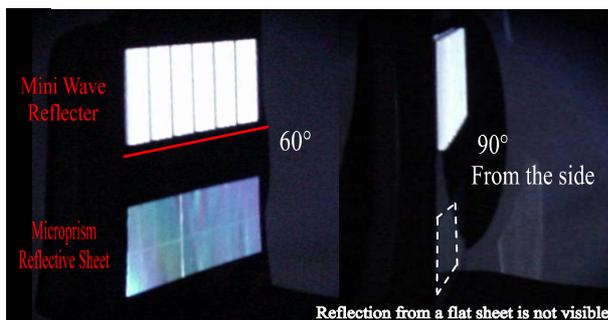
Story of Wave Reflector's development :

In 1995, we developed the Wave Reflector, ultra-wide-angle (wave-shaped) reflective product, as the fastest in the world and innovated the reflective material industry. The human eyes perceive the light of specific wavelength as a certain color. This is called the visible spectrum. The properties of light have reflection or refraction if there were obstacle substance. One of the properties of light is the retro reflective means the light returns from the light source. When the light is retro reflected, the wider angles from diagonal and side from the light source are difficulty seen compared with the narrow angle for the figure of tapes or sheets. Wave Reflectors enabled innovative improvement to form the reflective materials into an appropriate sine curve, commonly known as a wave shape, to maximize the retro reflection of the light from any angles.

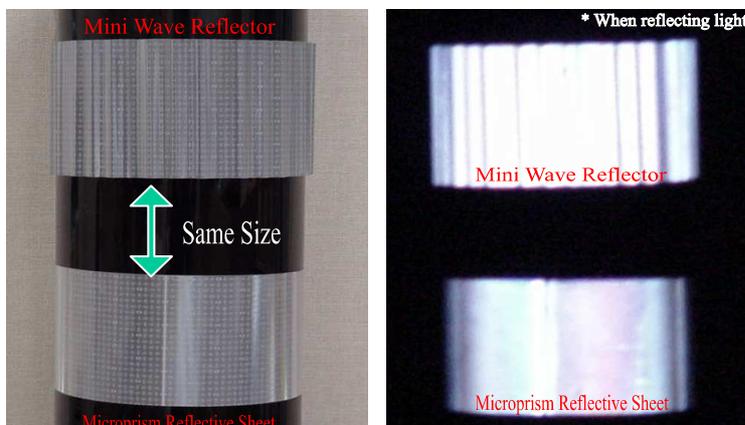
Wave Reflectors are currently being developed for a variety of applications from road safety equipment to delineators. We make a point of relentless technological innovation for emphasis on safety, environment, and landscape to launch higher performance products.

Features of Mini Wave Reflector

➤ **Excellent Ultra-wide-angle Reflection:** Wave Reflector reflects light from the side (Entrance angle = 90°)

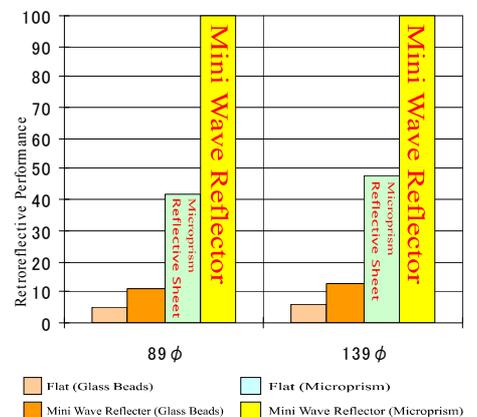


Reflective performance when the reflective material is equipped around a guard fence post



Mini Wave Reflector is Seen larger!!
Reflects light in all direction!!

Comparison of reflective performance
(When equipped around a guard fence post)



➤ Excellent Reflective Performance :High-density microprism reflective material makes the world’s highest reflective performance.

*Larger reflecting surface means that over 70 % of the entrance light is reflected. The product is highly weather- and shock-resistant.

*Guaranteed high performance during night time, as well as under poor-visibility conditions, such as thick fog. Visibility from long distance is particularly outstanding.

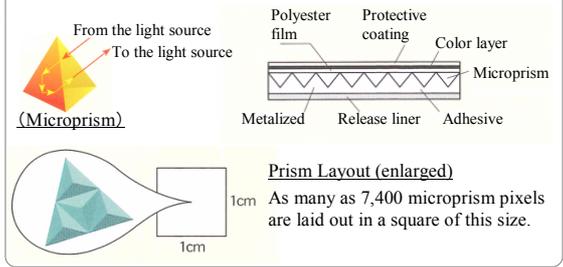
◆ Reflective Typical Performance ◆

Unit of measure: cd/lux/m² JIS Z 9117

Observation Angle	Entrance Angle	White	Yellow	Orange	Red	Green	Blue	Fluorescent Lime Yellow	Dark Brown	Dark Gray	Gray Beige
0.2	5	1000	800	400	180	180	100	450	400	700	600
	30	600	360	240	100	100	60	300	200	350	300
0.33	5	500	230	200	90	90	50	150	150	350	240
	30	400	200	160	75	75	40	120	100	200	160

Microprism Reflective Structure

Light reflects from the surface of the prisms.



➤ Combination of Excellent Materials

*The eco-friendly backing board is made of highly cold, heat, and weather resistant flexible and strong elastomer.

*This flexible material absorbs impact and resists splintering and shattering, to prevent a secondary incident. The wavy structure has the ability to regain its original shape if crushed after installation.

➤ Outstanding Safety and Easy to hands

*It can be installed with a double-sided adhesive tape or other adhesives, without metal bolts, nuts, or screws.

*The protrusion from the substrate is minimal (12mm in case of Wave Reflector, 5.5mm in case of Mini Wave Reflector) to minimize the danger of vehicles or people hitting/scraping it.

*In case of a smash, the product does not shatter to pieces of metal or hard plastic. The danger of secondary incident is minimal.

Standard Installation Procedure

1. Remove dirt, muck, dust, or grime off the surface of the supporting structure to which the reflector will be attached.
2. Ensure the surface of the substrate is dry. (The reflector does not stick to a wet surface.)
3. Smoothen the surface of the substrate by sanding etc.
4. Peel off the release paper on the backside of the reflector, and attach it to the substrate without stretching the reflector.
5. After loosely attaching the product, press down the flat parts of Mini Wave Reflector hard to secure the adhesion.
6. If the product needs to be cut down to size, make sure to cut at the midline of a flat part (10mm) with a sharp cutting tool, such as a pair of scissors.

If you cut at a top or trough, it will cause the reflector part to start peeling off from the double-sided adhesive tape.

* If the reflector must be attached to a warped or ragged surface, select the aluminum-backed type of products.

Squeeze out a string of Cemedine PM165 in the thickness of a cigarette from a caulking gun, and immediately attach the product.

➤ Rich Selection of Colors

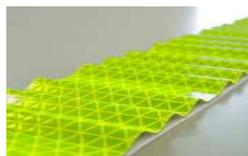
*You can choose the right color to suit the purpose and surrounding landscape. (12 colors are available.)

*The fluorescent lime yellow is particularly visible during daytime and twilight time, as well as in cloudy/rainy/snowy weather.

*Landscape colors (dark brown, dark gray, gray beige) comply with the townscape design guidelines by the Ministry of Land, Infrastructure, Transport and Tourism (MLITT) of Japan. These colors are harmonious with the surrounding landscape in the daylight, and reflect lights in bright white at night.



General Colors
White, Yellow, Orange, Red, Green, Blue



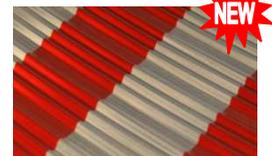
Fluorescent Lime Yellow



Landscape Colors
Dark brown, dark gray, gray beige



For ETC (Electronic Toll Collection System) Purple



Red-and-white stripe

Standard Sizes (in mm)

Type I Product Code	W x L x H	Recommended for
MW I 200-920	200 x 920 x 5.5	side walls
MW I 140-920	140 x 920 x 5.5	side walls
MW I 100-920	100 x 920 x 5.5	side walls
MW I 50-920	50 x 920 x 5.5	side walls, guardrail beams
MW I 100-455	100 x 455 x 5.5	side walls
MW I 50-455	50 x 455 x 5.5	side walls, guardrail beams
MW I 100-225	100 x 225 x 5.5	posts, columns
MW I 50-225	50 x 225 x 5.5	posts, columns

Standard Sizes (Lime Yellow) (in mm)

Product Code	W x L x H
MW I 100-940	100 x 940 x 5.5
MW I 50-940	50 x 940 x 5.5
MW I 100-470	100 x 470 x 5.5
MW I 50-470	50 x 470 x 5.5
MW I 100-235	100 x 235 x 5.5
MW I 50-235	50 x 235 x 5.5

* The products may be manufactured to sizes other than the above. The standard sizes are subject to change.

Manufacturer of Wave Reflectors:

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E-mail : anzen@ntw-wave.co.jp

Website : http://www.ntw-wave.co.jp/

Made in JAPAN