

# **Magnetic Guide Tape** **INSTRUCTIONS**

## 1. Summary

MGL, MGR and MG-611A series are magnetic guide tape for MACOME guide sensors.

Magnet: Anisotropic strontium ferrite

(Binder; Chlorinated polyethylene polymer alloy)

Residual magnetic flux density;  $B_r$  230~255mT (2300~2550G)

Coercivity;  $bH_c$  159~183kA/m (2000~2300Oe)

$iH_c$  207~262kA/m (2600~3300Oe)

Maximum energy product;  $B \cdot H$  (max) 10.3~12.3kJ/m<sup>3</sup>

(1.3~1.55MGOe)

Operation temperature: -20~+60°C

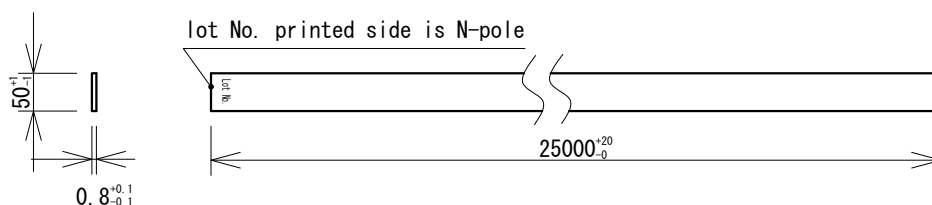
Storage temperature: -30~+70°C

## 2. Model number, outer dimensions and installation

**MGL series** Straight magnetic guide tape (flat type)

■ **MGL-50-25**  
└─ 25m length  
└─ 50mm width

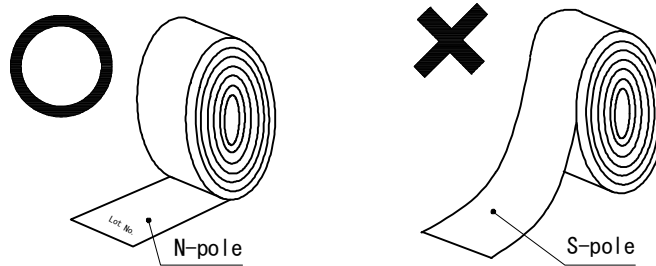
Magnet only (50mm wide x 1mm thick x 25m long / wound in a roll)



**MGL-50D-L25**; Self-adhesive tape is stuck on the back side (on S-pole side)

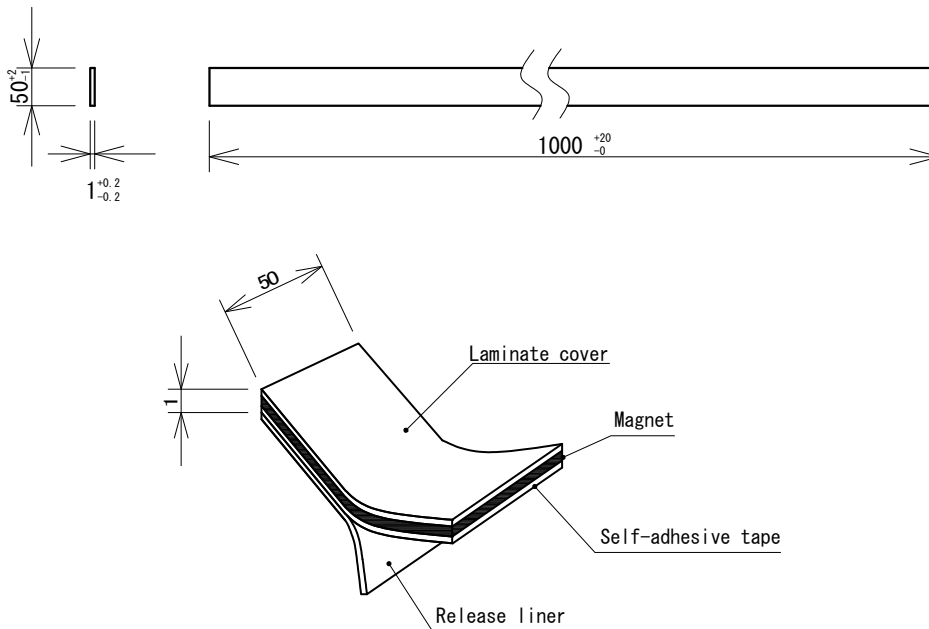
## Installation

- Remove dust, water or oil from floor.
- Apply bonding agent or self-adhesive tape to attach MGL-50-25 on floor.
- Lot number printed side is N-pole and MGL-50-25 is wound this N-pole side comes inside. Install MGL-50-25 always N-pole side up.



- MGL-50L-□
  - Laminate color  
B=blue G=green Y=yellow
  - Laminate covered
  - 50mm width

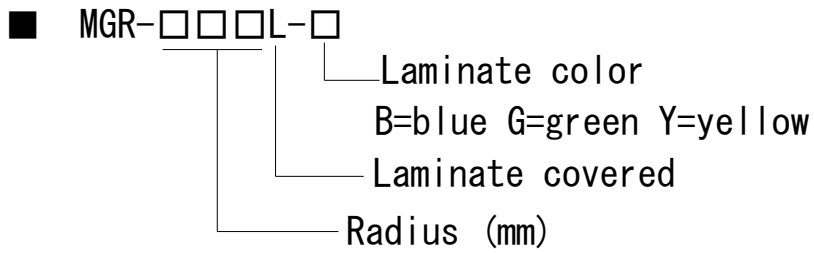
Laminate covered straight magnet (50mm wide x 1mm thick x 1m long)



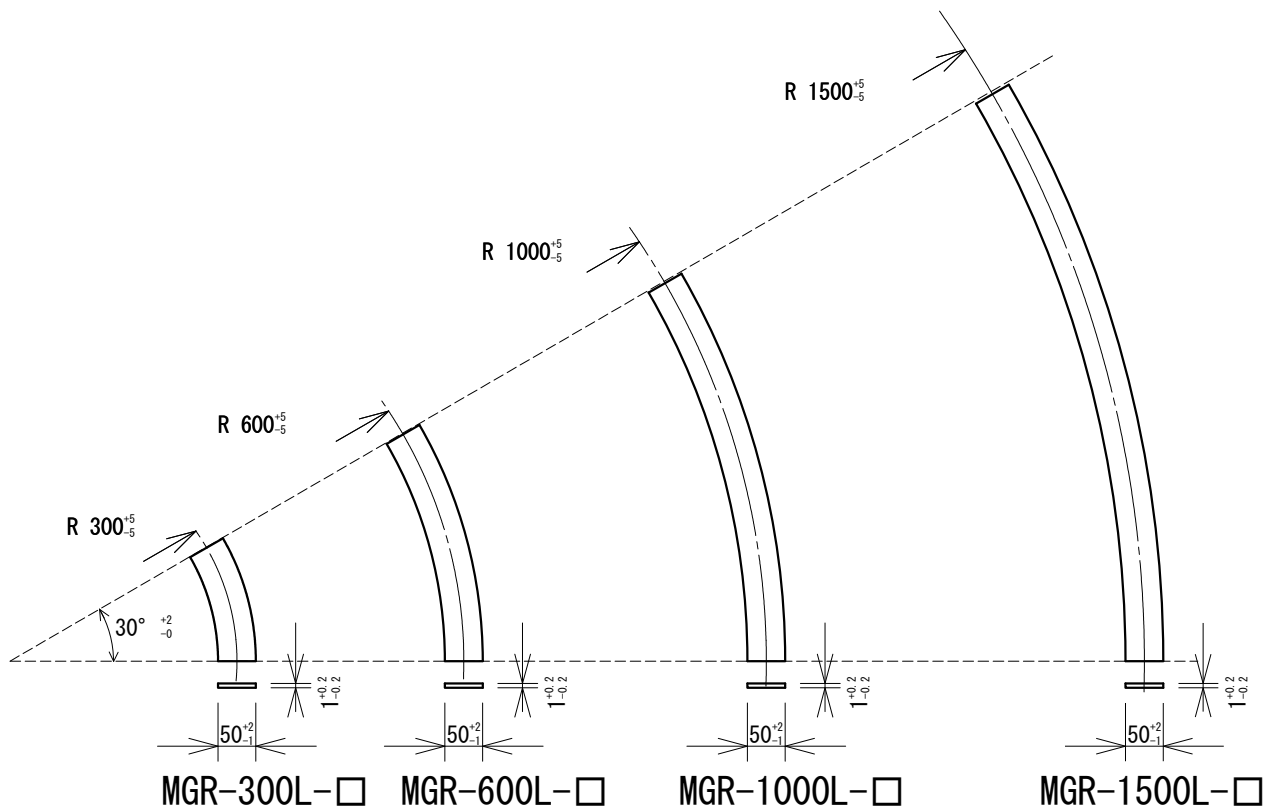
### Installation

- Remove dust, water or oil from floor surface.
- Peel off the release liner and stick it on the floor along AGV route.

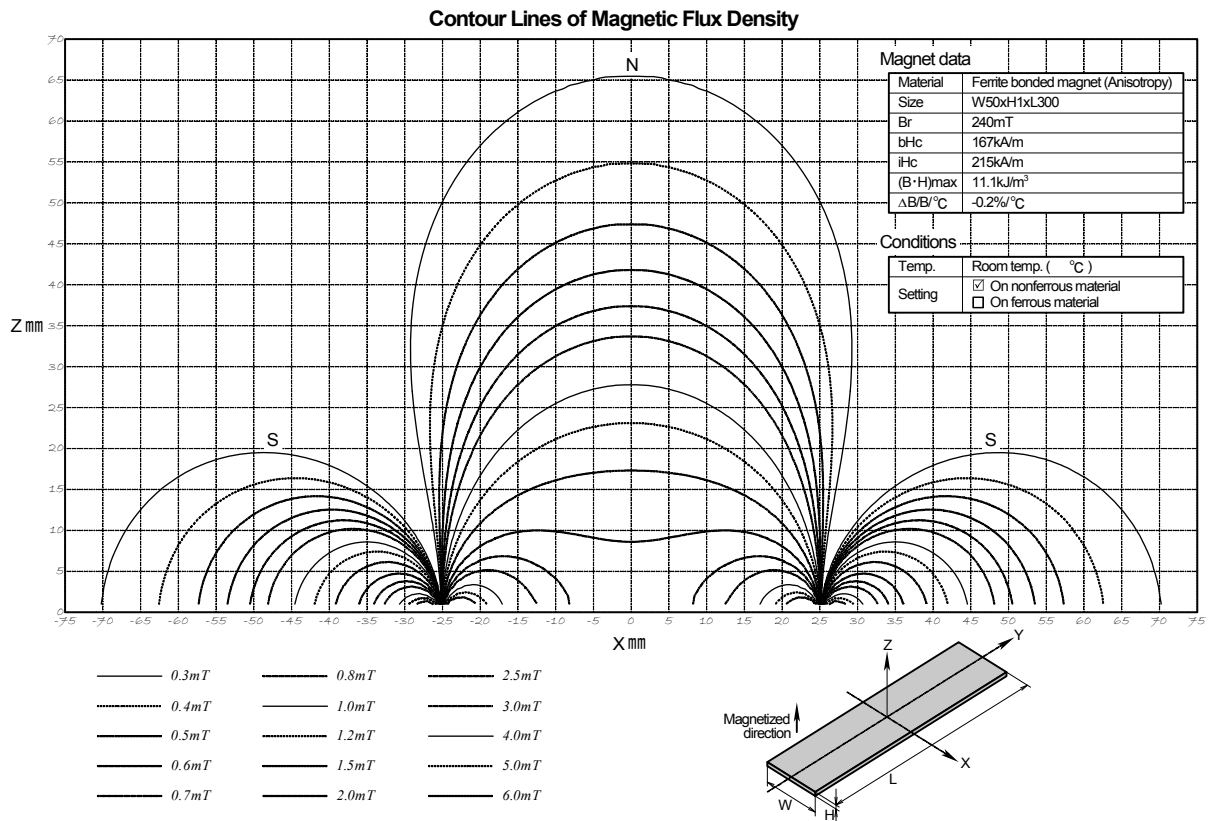
### **MGR series** Curved magnetic guide tape (flat type)



Laminate covered curved magnet (50mm wide x 1mm thick x 30° )



Magnetic flux density and characteristics of MGL and MGR series



Laminate cover: Polyvinyl chloride

Self-adhesive tape: nonwoven textile with non-solvent acrylic adhesive

Adhesion force; Stick on material      Force

SUS                      12.0N/20mm (1.22kg/20mm)

ABS                      10.0N/20mm (1.02kg/20mm)

PP                        10.0N/20mm (1.02kg/20mm)

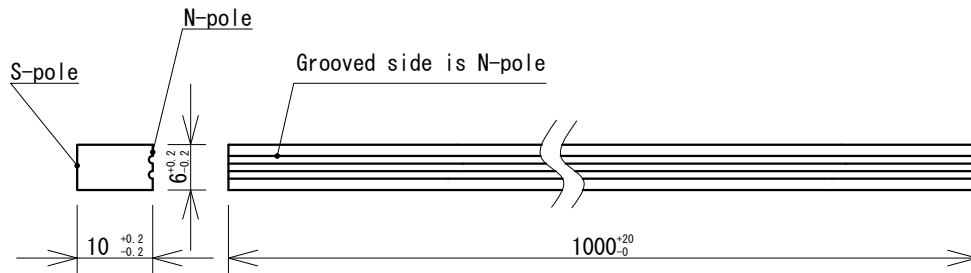
Acrylic                12.9N/20mm (1.32kg/20mm)

(Pulling speed; 300mm/min, Direction; 180°

Tape width; 20mm, Temperature; 23°C

/ conformity to JIS Z0237)

**MG-611A** Embedding in floor magnetic tape (bar type)



Magnet only (6mm wide x 10mm thick x 1m long)

MG-611A is suitable for a route where a heavy AGV runs across the track.

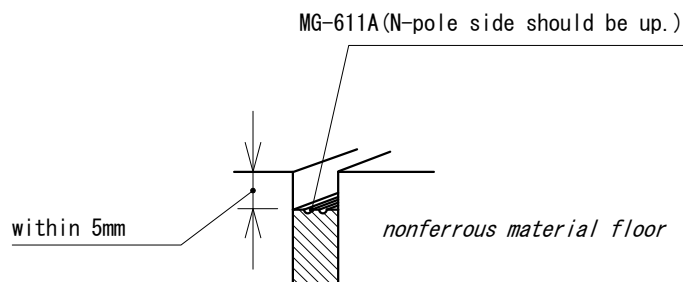
Installation

(1) Ditching along a route

Fix an AGV route and ditch a floor with suitable equipment such as a road cutter. The depth and width of the ditch should be watched carefully during the ditching execution.

(2) Embedding MG-611A

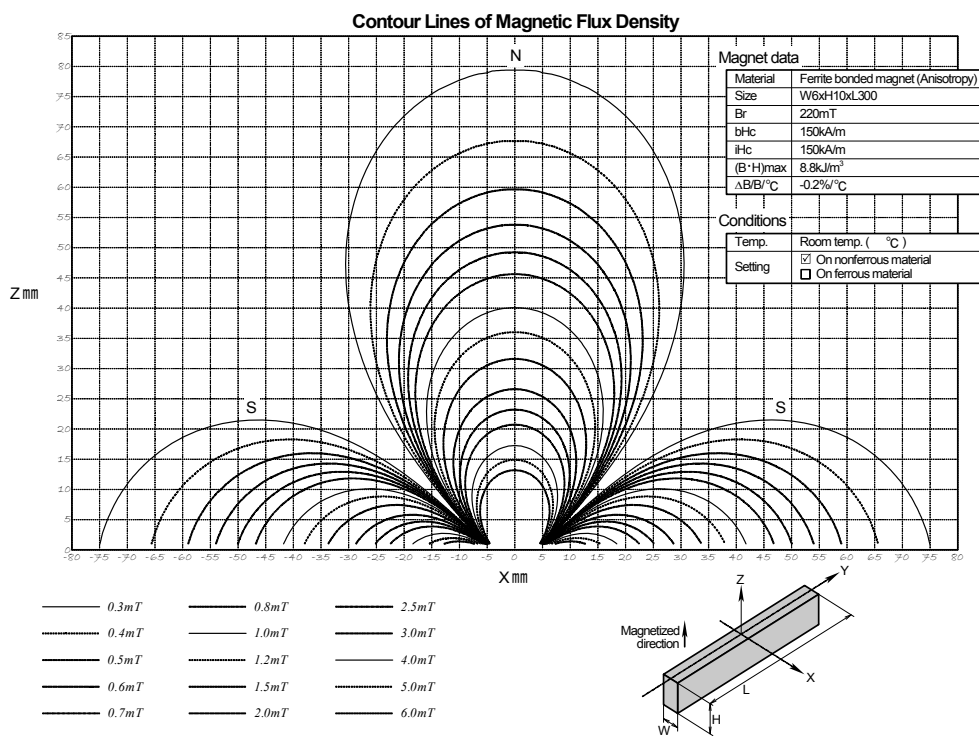
Embed MG-611A into a ditch by setting grooved face of MG-611A upward.



(3) Surface Protection

Silicon resin can be applied on the surface of MG-611A for protection.

## Magnetic flux density and characteristics of MG-611A.



### 3. Notices

- Magnetic guide tape can be attached on ferrous material floor but should not be embedded in ferrous material floor, since the magnetic flux from the guide tape is greatly reduced.
- Magnets at vicinity of magnetic guide tape may cause turbulence of magnetic flux distribution. Proximity of strong magnet (approx. 1KG and more) to magnetic guide tape may change the magnetic flux distribution of guide tape.
- Normal running routes should keep distance more than 500 each other.
- Address mark (SMG-100N, SMR-100S, SMG-2352S, etc.) should be installed more than 100mm from a magnetic guide tape.
- Adhesion of ferrous powder (iron, etc.) on magnetic guide tape may cause reduction of magnetic flux density. Remove the adhesive ferrous powder from guide tape regularly.
- Each end of magnetic guide tape should be connected within 2 mm slit.
- Keep chemicals and solvent (acetone, thinner, etc.) away, since it may change the shape and characteristics of magnetic guide tape.

- Nonferrous material (aluminum, SUS-304, etc.) can cover magnetic guide tape for protection. But ferrous material (iron, SUS-303, etc.) should not cover magnetic guide tape since magnetic flux from magnetic guide tape is shielded at the area where is covered by ferrous material.

\* Specifications are subject to change without notice. \*