


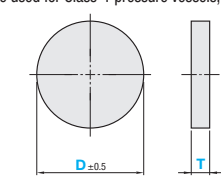
# Round Glass Plates

Heat-resistant Crystallized Glass which has excellent heat resistant and strength is also available. Can be specified in 200 ~ 1mm increment.



| No. | Configurable Type | Fixed Dimension Type | Material                                      | Heat-resistant Temperature Continuous Use | Max.     |
|-----|-------------------|----------------------|---|---|----------|
| ①   | FGLMF             | GLMF                 | Float Transparent Glass (Soda-lime glass)     | 100 deg.                                  | 380 deg. |
| ②   | FGLMH             | GLMH                 | Heat-resistant Glass (TEMPAX Float®)          | 250 deg.                                  | 450 deg. |
| ③   | -                 | GLMK                 | Reinforced Glass                              | 210 deg.                                  | 250 deg. |
| ④   | FGLMR             | -                    | Heat-resistant Crystallized Glass (Nextrema®) | 700 deg.                                  | 850 deg. |

Heat resistant temperature will be largely varied depending on the operating condition. Values are not guaranteed.  
Cannot be used for Class-1 pressure vessels, Class-2 pressure vessels, or equipment specifically for high pressure gas.



Circumference Chamfering C0.3 ~ 1.0

| T Tolerance                    |             |           |
|--------------------------------|-------------|-----------|
| Type                           | T Dimension | Tolerance |
| GLMF<br>GLMK<br>FGLMR<br>FGLMF | 3, 5        | ±0.3      |
|                                | 8           | ±0.6      |
| GLMH<br>FGLMH                  | 3.3, 5      | ±0.2      |
|                                | *10         | ±0.4      |

## Configurable Type

| Part Number                                  | T   | D Selectable |
|--|-----|--------------|
| FGLMF<br>(Float Transparent Glass)           | 3   | 20~300       |
|  | 5   |              |
| FGLMH<br>(Heat-resistant Glass)              | 3.3 |              |
|  | 5   |              |
|  | *10 |              |
| FGLMR<br>(Heat-resistant Crystallized Glass) | 3   |              |
|  | 5   |              |

## Fixed Dimension Type

| Part Number                       | T   | D Selectable       |
|-----------------------------------|-----|--------------------|
| GLMF<br>(Float Transparent Glass) | 3   | 50, 65, 80, 95     |
|                                   | 5   | 130                |
| GLMH<br>(Heat-resistant Glass)    | 3.3 | 50, 65, 80         |
|                                   | 5   | 95, 110            |
|                                   | 10  | 110, 130           |
| GLMK<br>(Reinforced Glass)        | 3   | 50, 65, 80         |
|                                   | 5   | 80, 95, 110, 130   |
|                                   | 8   | 110, 130, 160, 185 |

\* FGLMH (heat resistant glass) with the part number T10 has an actual size of 10.2.

Ordering Example

Part Number - D - T  
GLMH - 95 - 5

Part Number - D  
FGLMF3 - 100

The D dimensions above conform to JIS Flange Standards B2290-1998: O-ring Groove.  
\* Strength not guaranteed for the vacuum resistance.

## Configurable Type

| Part Number                                  | Type | T  | Unit Price      |  |  |  |  |
|--|------|----|-----------------|--|--|--|--|
|  |      |    | D 1mm Increment |  |  |  |  |
| FGLMF<br>(Float Transparent Glass)           | 3    | 3  |                 |  |  |  |  |
|  |      | 5  |                 |  |  |  |  |
| FGLMH<br>(Heat-resistant Glass)              | 3.3  | 5  |                 |  |  |  |  |
|  |      | 10 |                 |  |  |  |  |
|  |      | 5  |                 |  |  |  |  |
| FGLMR<br>(Heat-resistant Crystallized Glass) | 3    | 3  |                 |  |  |  |  |
|  |      | 5  |                 |  |  |  |  |

## Fixed Dimension Type

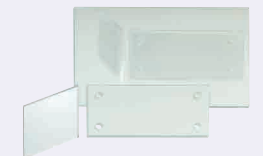
| Part Number                       | Type | T | D   | Unit Price |
|-----------------------------------|------|---|-----|------------|
| GLMF<br>(Float Transparent Glass) | 3    | 3 | 50  |            |
|                                   |      |   | 65  |            |
|                                   |      |   | 80  |            |
|                                   |      |   | 95  |            |
|                                   |      |   | 130 |            |
| GLMH<br>(Heat-resistant Glass)    | 3.3  | 3 | 50  |            |
|                                   |      |   | 65  |            |
|                                   |      |   | 80  |            |
|                                   |      |   | 95  |            |
|                                   |      |   | 110 |            |
|                                   | 5    | 3 | 110 |            |
|                                   |      |   | 130 |            |
|                                   |      |   | 50  |            |
|                                   |      |   | 65  |            |
|                                   |      |   | 80  |            |
| GLMK<br>(Reinforced Glass)        | 5    | 3 | 80  |            |
|                                   |      |   | 95  |            |
|                                   |      |   | 110 |            |
|                                   | 8    | 3 | 110 |            |
|                                   |      |   | 130 |            |
|                                   |      |   | 160 |            |
|                                   |      |   | 185 |            |

Properties of Material P981

# Mirror Plates

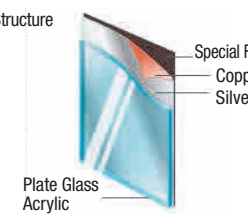
## Glass Type / Acrylic Type

Two types of mirror - Glass and Acrylic - are available for checking workpieces. A through hole or countersink can be specified as the mounting hole.



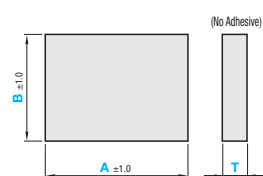
| No Adhesive | Adhesive Type | Material | Heat-resistant Temperature Continuous Use |
|-------------|---------------|----------|---|
| MRG         | MRGA          | Glass    | 80 deg.                                   |
| MRA         | MRAA          | Acrylic  | 50 deg.                                   |

Heat resistant temperature will be largely varied depending on the operating condition. Values are not guaranteed.



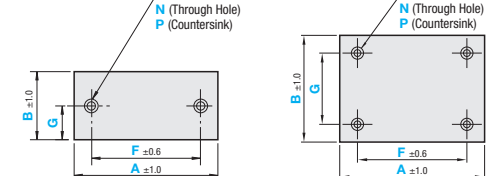
Mirror Structure  
Special Film  
Copper Silver  
Plate Glass  
Acrylic

### Standard Type



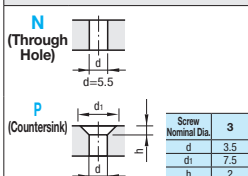
⊙ A ≥ B  
Circumference Chamfering C1.0 ~ 2.0

### Pre-drilled Type



⊙ Keep a dimension of 5mm or more between hole end and glass end.  
⊙ The F Dimension tolerance of MRA and MRAA is ±1.0.

### Hole Machining Details



| Screw Nominal Dia. | h   |
|--------------------|-----|
| 3                  | 3.5 |
| 3.5                | 7.5 |
| 4                  | 2   |

## Standard Type

| Part Number | Type          | T | 1mm Increment |        |
|-------------|---------------|---|---------------|--------|
|             |               |   | A             | B      |
| No Adhesive | With Adhesive | 3 | 10~300        | 10~300 |
| MRG<br>MRA  | MRGA<br>MRAA  |   |               |        |

## Property Comparison between Glass Mirror and Acrylic Mirror

| Type           | Weight                          | Scratch Resistance | Break         | Heat Resistance | Chemical Resistance |
|----------------|---------------------------------|--------------------|---------------|-----------------|---------------------|
| Glass Mirror   | Heavy<br>(Specific Gravity 2.5) | ○                  | Frangible     | 80 deg.         | ○                   |
| Acrylic Mirror | Light<br>(Specific Gravity 1.2) | ×                  | Hard to break | 50 deg.         | ×                   |

## Pre-drilled Type

| Part Number | Type          | Number of Holes | T | 1mm Increment |        |       |       | Screw Nominal Dia. Selection |                 |
|-------------|---------------|-----------------|---|---------------|--------|-------|-------|------------------------------|-----------------|
|             |               |                 |   | A             | B      | F     | G     | N (Through)                  | P (Countersink) |
| No Adhesive | With Adhesive | 2H<br>4H        | 3 | 10~300        | 10~300 | 9~241 | 9~241 | 5                            | 3               |
| MRG<br>MRA  | MRGA<br>MRAA  |                 |   |               |        |       |       |                              |                 |

Ordering Example

Part Number - A - B  
MRG3 - 250 - 100

Part Number - A - B - F - G - Screw Nominal  
MRG4H3 - 200 - 180 - F160 - G140 - N5

## Glass Mirror

| Part Number           | Type | A 1mm Increment | Unit Price      |  |  |  |  |
|-----------------------|------|-----------------|-----------------|--|--|--|--|
|                       |      |                 | B 1mm Increment |  |  |  |  |
| MRG<br>No Adhesive    | 3    | 10~50           |                 |  |  |  |  |
|                       |      | 51~100          |                 |  |  |  |  |
|                       |      | 101~150         |                 |  |  |  |  |
|                       |      | 151~200         |                 |  |  |  |  |
|                       |      | 201~300         |                 |  |  |  |  |
| MRGA<br>With Adhesive | 3    | 10~50           |                 |  |  |  |  |
|                       |      | 51~100          |                 |  |  |  |  |
|                       |      | 101~150         |                 |  |  |  |  |
|                       |      | 151~200         |                 |  |  |  |  |
|                       |      | 201~300         |                 |  |  |  |  |

## Acrylic Mirror

| Part Number           | Type | A 1mm Increment | Unit Price      |  |  |  |  |
|-----------------------|------|-----------------|-----------------|--|--|--|--|
|                       |      |                 | B 1mm Increment |  |  |  |  |
| MRA<br>No Adhesive    | 3    | 10~50           |                 |  |  |  |  |
|                       |      | 51~100          |                 |  |  |  |  |
|                       |      | 101~150         |                 |  |  |  |  |
|                       |      | 151~200         |                 |  |  |  |  |
|                       |      | 201~300         |                 |  |  |  |  |
| MRAA<br>With Adhesive | 3    | 10~50           |                 |  |  |  |  |
|                       |      | 51~100          |                 |  |  |  |  |
|                       |      | 101~150         |                 |  |  |  |  |
|                       |      | 151~200         |                 |  |  |  |  |
|                       |      | 201~300         |                 |  |  |  |  |

## Hole Machining Charge

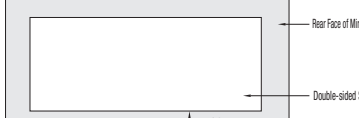
Pre-drilled Type Hole Machining Charge

⊙ Pre-drilled Type Price = Standard Type Unit Price + Hole Machining Charge

(Ex.) Part Number - A - B - F - G - Screw Nominal >>  
MRG4H3 - 200 - 180 - F160 - G140 - N5

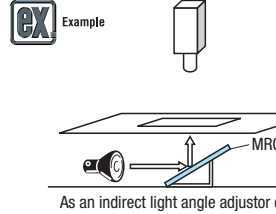
(Standard Type Unit Price) + (Hole Machining Charge) = (Pre-drilled Type Price)

## Seals of With Adhesive Type



Rear Face of Mirror  
Double-sided Seal  
5~10mm

For easy attachment, the size of double-faced adhesive tape is smaller than that of the mirror. (Approx. 5mm ~ 10mm)  
Mirrors are shipped without seal attached. Seal thickness is 2mm.  
It may fall due to its own weight depending on its size. Avoid mounting only by the adhesive sheets.  
Avoid use in the areas splashed with water, which may cause dirt and tarnishing on mirrors.



Example

MRG

As an indirect light angle adjuster of an image processing device