Mirror Plates

Glass Type / Acrylic Type

Two types of mirror, glass and Acrylic, to check work are available. Mounting holes are selectable from through hole or countersink.

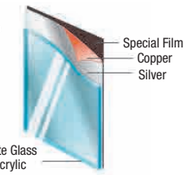
Mirror Plates – Glass Type / Acrylic Type

RoHS10

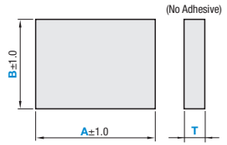
No Adhesive Type	With Adhesive Type	Material	Heat-Resistant Temperature Continuous Use
MRG	MRGA	Glass	80°C
MRA	MRAA	Acrylic	50°C

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

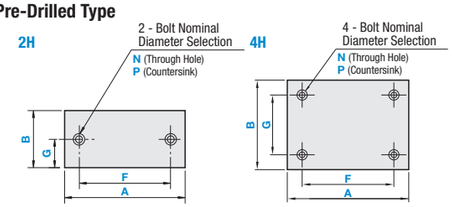
Mirror Structure



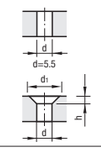
Standard Type



Pre-Drilled Type



Drilling Details



Bolt Nominal Dia.	3
d	3.5
d_1	7.5
h	2

A≥B Circumference Chamfering C0.3-1.0 Keep a dimension of 5mm or more between hole end and glass end.

Standard

Part Number Type			T	1mm Increment A	B
No Adhesive	With Adhesive				
MRG	MRGA	(Glass Mirror)	3	10–300	10–300
MRA	MRAA	(Acrylic Mirror)			

Comparison of Glass and Acrylic Mirror Features

	Weight	Scratch Resistance	Break	Heat Resistance	Chemical Resistance
Glass Mirror	Heavy (Specific Gravity 2.5)	O	Frangible	80°C	O
Acrylic Mirror	Light (Specific Gravity 1.2)	X	Irrefrangible	50°C	X (Organic solvents resistance)

Pre-Drilled

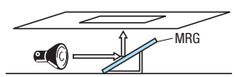
Part Number Type			T	1mm Increment A	B	F	G	Select Mounting Holes N (Through Hole)	P (Countersink)
No Adhesive	With Adhesive								
MRG	MRGA	(Glass Mirror)	2H 4H	3	10–300	10–300	9–241	9–241	5	3
MRA	MRAA	(Acrylic Mirror)								

Part Number Example

Part Number	A	B
MRG3	250	100

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

Application Example



As an indirect light angle adjustor of an image processing device

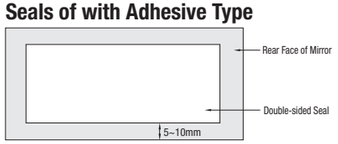
For easy attachment, the size of double-faced adhesive tape is smaller than that of the mirror. (Approx. 5–10 mm)

Mirrors are shipped without seal attached. Seal thickness is 2 mm.

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.

Seals of with Adhesive Type



Fused Silica Plates

Square / Round

Quartz Glass highly excels in light transmittance in ultraviolet region. Can be specified in 1 mm increments.

Fused Silica Plates – Square / Round

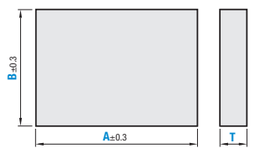
RoHS10

Type	Shape	Material	Heat-resistant Temperature Continuous Use	Max.
FGLKS	Square	Fused Transparent Quartz Glass	900°C	1,100°C
FGLMS	Round			

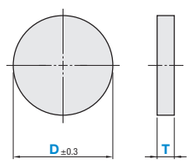
Heat resistant temperature will be largely varied depending on the operating condition. Values are not guaranteed.

Cannot be used for Class-1 pressure vessels, Class-2 pressure vessels, or equipment specifically for high pressure gas.

Square



Round



A≥B Circumference Chamfering C0.3–1.0 Circumference Chamfering C0.3–1.0 T Dimension Tolerance ±0.3

Square

Part Number Type	T	A 1mm Increment	Available Types B 1 mm Increment 20~100	101~150	151~200	201~250	251~300
FGLKS	1	20~50	•	—	—	—	—
		51~100	•	—	—	—	—
		101~150	•	•	•	•	•
	2 3 5	20~100	•	—	—	—	—
		101~150	•	•	—	—	—
		151~200	•	•	•	—	—
		201~250	•	•	•	•	—
		251~300	•	•	•	•	•

Round

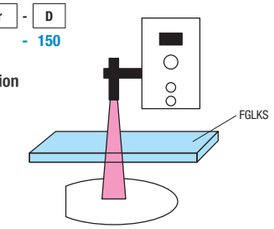
Part Number Type	T	Available Types D 1 mm Increment 20~100	101~150	151~200	201~250	251~300
FGLMS	1	•	—	—	—	—

Part Number Example

Part Number	A	B
FGLKS2	200	154

Part Number	D
FGLMS1	150

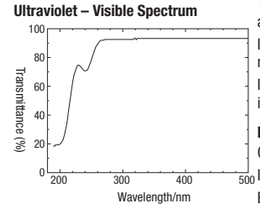
Application Example



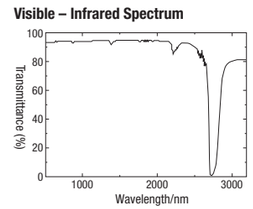
As a cover for the UV irradiation device

Optical Transparency of Quartz Glass

Ultraviolet – Visible Spectrum



Visible – Infrared Spectrum



Features of Quartz Glass

Transparent quartz glass highly excels in light transmittance at all wavelengths as compared to other general glasses (silicate glasses).

In the infrared region, it has better transmission and transparency range than normal glasses except for special glasses for the infrared.

In ultraviolet region, especially short wavelength ultraviolet region, it shows excellent transparency.

Features of Oxy-Hydrogen Fused Transparent Quartz Glass

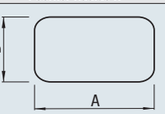
Quartz glasses made by melting crystals with Oxyhydrogen flame.

It has high purity and little air bubbles.

Best suited as the material for tools for semiconductor manufacturing and physicochemical equipments.

Precaution for Use

- Make sure that plates are clean before use.
- Transparent quartz glasses have to be kept away from water and impurities.
  Do not place them in high-temperature atmosphere if they are wet.
  When using in high temperature, dry them well before use.
- Note that the glasses may be devitrified depending on the operating atmosphere.
- More resistant to quick heating and cooling and ten times stronger than normal glasses. However, not resistant to extreme temperature changes.
- Has low thermal conductivity and may have cracks due to local, quick heating or cooling.
  The heat and impact resistance becomes lower as glasses get thicker.
- If temperature increases (decreases) with other objects attached to the quartz glasses, they may break due to thermal expansion differentials. Be careful when increasing (decreasing) temperature with other objects attached.
- If quartz glasses are used at high temperature for a long period of time, they may be deformed little by little due to their own weight or other loads. Their life span may become longer if support methods or conditions of use are designed specific to the application.

Alteration	4 Corner Radius R 
Code	CR
Spec.	Adds a round radius to the 4 corners of the square type. Ordering Code Ex. CR10 R = 5mm increments 5≤CR≤100 Available for only FGLKS 10 ≤ A (B) - R (2R)

Mechanical Characteristics of Quartz Glass

Purity (%)	≥99.9
OH (ppm)	200
Density (gcm³)	2.2
Vickers Hardness (Mpa)	8,900
Young's Modulus (Gpa)	74
Rigidity Modulus (Gpa)	31
Poisson Ratio	0.17
Bending Strength (Mpa)	94.3
Compression Strength (Mpa)	1,130
Tensile Strength (Mpa)	49
Torsion Strength (Mpa)	29