

## Holder Attached Surface Accuracy Guaranteed Mirrors

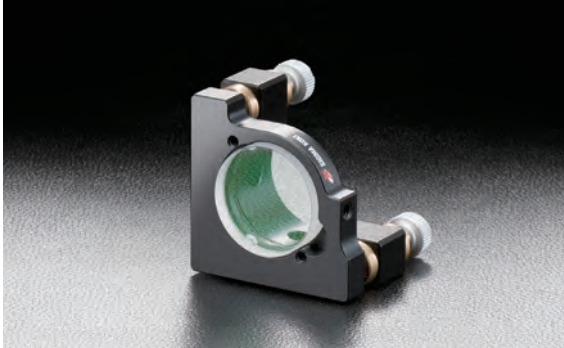
HTFM-MHG

RoHS

By bonding the coated surface to our Kinematic Mirror Holders, a  $\lambda/10$  surface flatness is guaranteed!

This product is suitable for high accuracy wavefront optical systems and interferometer requirements.

- 2 types of performance mirror holders are offered: high stability mirror holder (MHG-HS) or production model (MHG-MP).



## Specifications

## Holder

Movable axis	HTFM-MHG-HS: 3 axes HTFM-MHG-MP: 2 axes (HTFM-12.7C08-MHG-MP: 3axes)
Main Material	Aluminum (Brass: MHG-MP12.7 only)
Finishing	Black anodized (Only MHG-MP12.7 is Super black chrome)

## Mirror

Material	Synthetic fused silica
Coating	Dielectric multi-layer coating
Incident angle	$45^\circ \pm 3^\circ$
Surface Flatness	After holder is attached $\lambda/10$
Surface Quality (Scratch-Dig)	10-5
Clear aperture	80% of Actual Aperture
Rear Surface	Polished

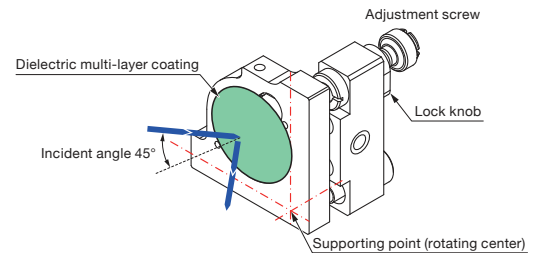
## Guide

- ▶ The Production model (MHG-MP) is equipped with locking mechanisms on the adjustment screw.
- ▶ This product can be attached to a rod (RO-\*\*-\*\*): separately available [▶ WEB Reference Catalog Code W6052](#) or a post stand (PS-\*\*-\*\*): separately available. [▶ WEB Reference Catalog Code W6039](#)
- ▶ The mirror reflection wavelength characteristic are noted with the graph of the surface accuracy guaranteed mirror (HTFM). [▶ Reference ▶ B017](#)

## Attention

- ▶ The mirror surface will protrude by 2mm beyond the front surface of the holder after attachment.
- ▶ Surface flatness data is not provided standard with the product. Please contact our Sales Division for this data at an additional charge.
- ▶ Surface flatness will not be guaranteed when the mirror is detached.
- ▶ Any impacted shock to the holder or mirror may result in poor surface flatness.
- ▶ For production model (MHG-MP), the rotation center is at the external side of the mirror (support point of the holder)
- ▶ When fixing the high stability model (MHG-HS) to a flat surface, please use supplied plate for attaching posts.
- ▶ The optical axis will be 10mm higher after attaching the supplied plates.

## Schematic



## 248 – 308nm

Part Number	Wavelength Range [nm]	Compatible Optics Diameter $\phi D$ [mm]	Reflectance [%]	Holder part number	Adjustment Range		Resolution		Weight [kg]
					Elevation [°]	Rotation [°]	Elevation [°/rotation]	Rotation [°/rotation]	
HTFM-12.7C08-248-MHG-MP	248	$\phi 12.7$	>99.2	MHG-MP12.7	$\pm 3$	$\pm 3$	about 0.74	about 0.74	0.04
HTFM-25.4C08-248-MHG-MP	248	$\phi 25.4$	>99.2	MHG-MP25	$\pm 3$	$\pm 3$	about 0.39	about 0.39	0.12
HTFM-25.4C08-248-MHG-HS	248	$\phi 25.4$	>99.2	MHG-HS25	$\pm 3$	$\pm 3$	about 0.39	about 0.39	0.12
HTFM-30C08-248-MHG-MP	248	$\phi 30$	>99.2	MHG-MP30	$\pm 3$	$\pm 3$	about 0.39	about 0.39	0.12
HTFM-30C08-248-MHG-HS	248	$\phi 30$	>99.2	MHG-HS30	$\pm 3$	$\pm 3$	about 0.39	about 0.39	0.12
HTFM-50C11-248-MHG-MP	248	$\phi 50$	>99.2	MHG-MP50	$\pm 2$	$\pm 2$	about 0.26	about 0.26	0.24
HTFM-50.8C11-248-MHG-MP	248	$\phi 50.8$	>99.2	MHG-MP50.8	$\pm 2$	$\pm 2$	about 0.26	about 0.26	0.24
HTFM-12.7C08-266-MHG-MP	266	$\phi 12.7$	>99.2	MHG-MP12.7	$\pm 3$	$\pm 3$	about 0.74	about 0.74	0.04
HTFM-25.4C08-266-MHG-MP	266	$\phi 25.4$	>99.2	MHG-MP25	$\pm 3$	$\pm 3$	about 0.39	about 0.39	0.12
HTFM-25.4C08-266-MHG-HS	266	$\phi 25.4$	>99.2	MHG-HS25	$\pm 3$	$\pm 3$	about 0.39	about 0.39	0.12
HTFM-30C08-266-MHG-MP	266	$\phi 30$	>99.2	MHG-MP30	$\pm 3$	$\pm 3$	about 0.39	about 0.39	0.12
HTFM-30C08-266-MHG-HS	266	$\phi 30$	>99.2	MHG-HS30	$\pm 3$	$\pm 3$	about 0.39	about 0.39	0.12
HTFM-50C11-266-MHG-MP	266	$\phi 50$	>99.2	MHG-MP50	$\pm 2$	$\pm 2$	about 0.26	about 0.26	0.24
HTFM-50.8C11-266-MHG-MP	266	$\phi 50.8$	>99.2	MHG-MP50.8	$\pm 2$	$\pm 2$	about 0.26	about 0.26	0.24
HTFM-12.7C08-308-MHG-MP	308	$\phi 12.7$	>99.5	MHG-MP12.7	$\pm 3$	$\pm 3$	about 0.74	about 0.74	0.04
HTFM-25.4C08-308-MHG-MP	308	$\phi 25.4$	>99.5	MHG-MP25	$\pm 3$	$\pm 3$	about 0.39	about 0.39	0.12
HTFM-25.4C08-308-MHG-HS	308	$\phi 25.4$	>99.5	MHG-HS25	$\pm 3$	$\pm 3$	about 0.39	about 0.39	0.12
HTFM-30C08-308-MHG-MP	308	$\phi 30$	>99.5	MHG-MP30	$\pm 3$	$\pm 3$	about 0.39	about 0.39	0.12
HTFM-30C08-308-MHG-HS	308	$\phi 30$	>99.5	MHG-HS30	$\pm 3$	$\pm 3$	about 0.39	about 0.39	0.12
HTFM-50C11-308-MHG-MP	308	$\phi 50$	>99.5	MHG-MP50	$\pm 2$	$\pm 2$	about 0.26	about 0.26	0.24
HTFM-50.8C11-308-MHG-MP	308	$\phi 50.8$	>99.5	MHG-MP50.8	$\pm 2$	$\pm 2$	about 0.26	about 0.26	0.24



Part Number	Wavelength Range [nm]	Compatible Optics Diameter $\phi$ D [mm]	Reflectance [%]	Holder part number	Adjustment Range		Resolution		Weight [kg]
					Elevation [°]	Rotation [°]	Elevation [°/rotation]	Rotation [°/rotation]	
HTFM-12.7C08-355-MHG-MP	355	$\phi$ 12.7	>99.5	MHG-MP12.7	$\pm$ 3	$\pm$ 3	about 0.74	about 0.74	0.04
HTFM-25.4C08-355-MHG-MP	355	$\phi$ 25.4	>99.5	MHG-MP25	$\pm$ 3	$\pm$ 3	about 0.39	about 0.39	0.12
HTFM-25.4C08-355-MHG-HS	355	$\phi$ 25.4	>99.5	MHG-HS25	$\pm$ 3	$\pm$ 3	about 0.39	about 0.39	0.12
HTFM-30C08-355-MHG-MP	355	$\phi$ 30	>99.5	MHG-MP30	$\pm$ 3	$\pm$ 3	about 0.39	about 0.39	0.12
HTFM-30C08-355-MHG-HS	355	$\phi$ 30	>99.5	MHG-HS30	$\pm$ 3	$\pm$ 3	about 0.39	about 0.39	0.12
HTFM-50C11-355-MHG-MP	355	$\phi$ 50	>99.5	MHG-MP50	$\pm$ 2	$\pm$ 2	about 0.26	about 0.26	0.24
HTFM-50.8C11-355-MHG-MP	355	$\phi$ 50.8	>99.5	MHG-MP50.8	$\pm$ 2	$\pm$ 2	about 0.26	about 0.26	0.24
HTFM-12.7C08-532-MHG-MP	532	$\phi$ 12.7	>99.5	MHG-MP12.7	$\pm$ 3	$\pm$ 3	about 0.74	about 0.74	0.04
HTFM-25.4C08-532-MHG-MP	532	$\phi$ 25.4	>99.5	MHG-MP25	$\pm$ 3	$\pm$ 3	about 0.39	about 0.39	0.12
HTFM-25.4C08-532-MHG-HS	532	$\phi$ 25.4	>99.5	MHG-HS25	$\pm$ 3	$\pm$ 3	about 0.39	about 0.39	0.12
HTFM-30C08-532-MHG-MP	532	$\phi$ 30	>99.5	MHG-MP30	$\pm$ 3	$\pm$ 3	about 0.39	about 0.39	0.12
HTFM-30C08-532-MHG-HS	532	$\phi$ 30	>99.5	MHG-HS30	$\pm$ 3	$\pm$ 3	about 0.39	about 0.39	0.12
HTFM-50C11-532-MHG-MP	532	$\phi$ 50	>99.5	MHG-MP50	$\pm$ 2	$\pm$ 2	about 0.26	about 0.26	0.24
HTFM-50.8C11-532-MHG-MP	532	$\phi$ 50.8	>99.5	MHG-MP50.8	$\pm$ 2	$\pm$ 2	about 0.26	about 0.26	0.24
HTFM-12.7C08-1064-MHG-MP	1064	$\phi$ 12.7	>99.5	MHG-MP12.7	$\pm$ 3	$\pm$ 3	about 0.74	about 0.74	0.04
HTFM-25.4C08-1064-MHG-MP	1064	$\phi$ 25.4	>99.5	MHG-MP25	$\pm$ 3	$\pm$ 3	about 0.39	about 0.39	0.12
HTFM-25.4C08-1064-MHG-HS	1064	$\phi$ 25.4	>99.5	MHG-HS25	$\pm$ 3	$\pm$ 3	about 0.39	about 0.39	0.12
HTFM-30C08-1064-MHG-MP	1064	$\phi$ 30	>99.5	MHG-MP30	$\pm$ 3	$\pm$ 3	about 0.39	about 0.39	0.12
HTFM-30C08-1064-MHG-HS	1064	$\phi$ 30	>99.5	MHG-HS30	$\pm$ 3	$\pm$ 3	about 0.39	about 0.39	0.12
HTFM-50C11-1064-MHG-MP	1064	$\phi$ 50	>99.5	MHG-MP50	$\pm$ 2	$\pm$ 2	about 0.26	about 0.26	0.24
HTFM-50.8C11-1064-MHG-MP	1064	$\phi$ 50.8	>99.5	MHG-MP50.8	$\pm$ 2	$\pm$ 2	about 0.26	about 0.26	0.24

Application Systems

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Frameless

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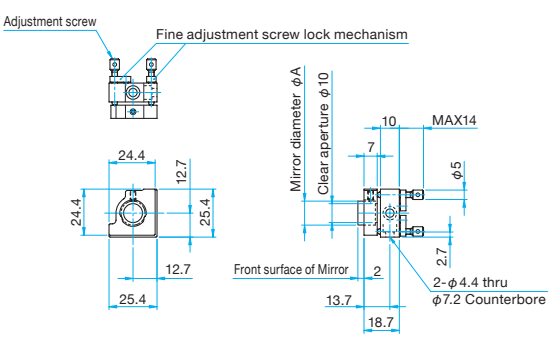
Aluminum Coating

Gold Coating

**Outline Drawing** (in mm)

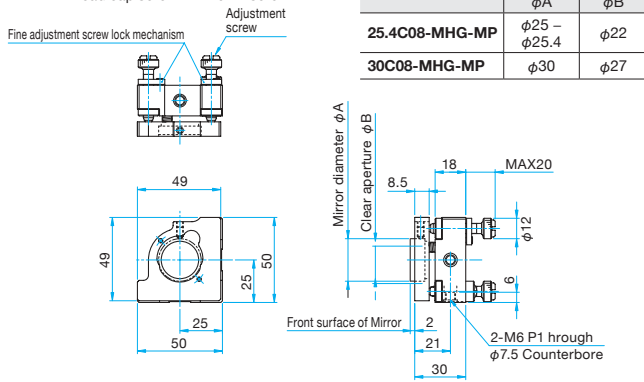
**HTFM-12.7C08-MHG-MP**

Hexagon socket head cap screw M4x...1 screw



**HTFM-25.4C08-MHG-MP**  
**HTFM-30C08-MHG-MP**

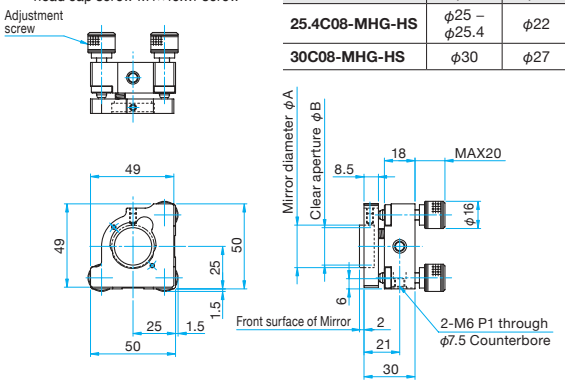
Hexagon socket head cap screw M4x10...1 screw



Part Number	Mirror diameter $\phi$ A	Clear aperture $\phi$ B
25.4C08-MHG-MP	$\phi$ 25 - $\phi$ 25.4	$\phi$ 22
30C08-MHG-MP	$\phi$ 30	$\phi$ 27

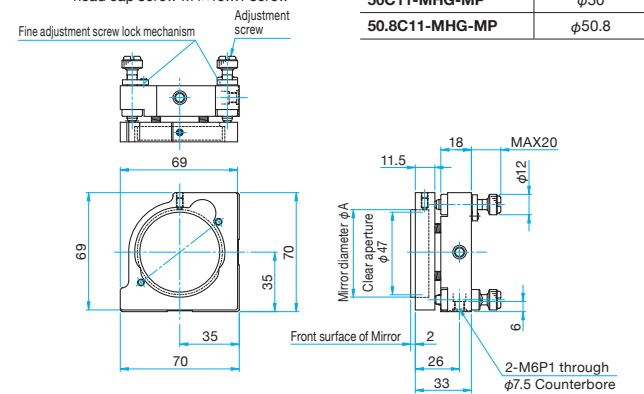
**HTFM-25.4C08-MHG-HS**  
**HTFM-30C08-MHG-HS**

Hexagon socket head cap screw M4x10...1 screw



**HTFM-50C11-MHG-MP**  
**HTFM-50.8C11-MHG-MP**

Hexagon socket head cap screw M4x10...1 screw



Part Number	Mirror diameter $\phi$ A
50C11-MHG-MP	$\phi$ 50
50.8C11-MHG-MP	$\phi$ 50.8