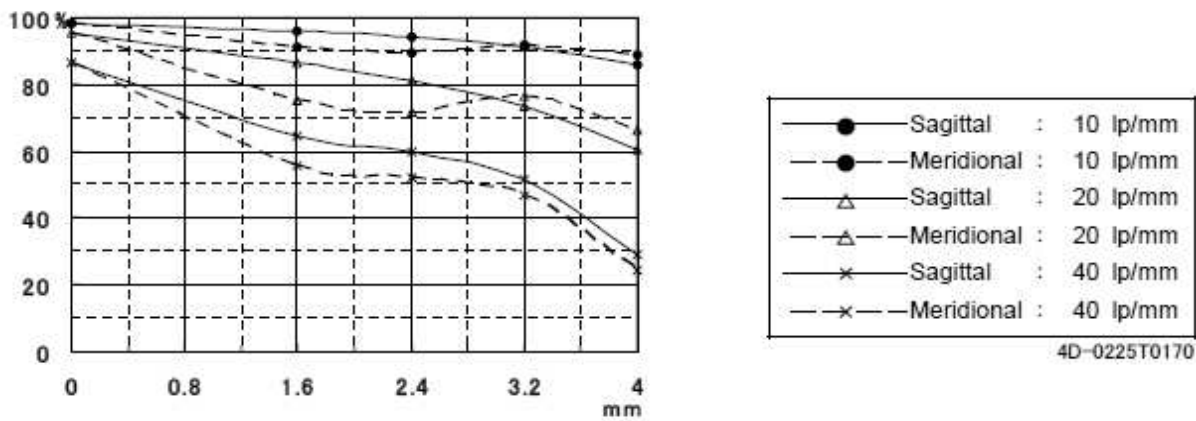
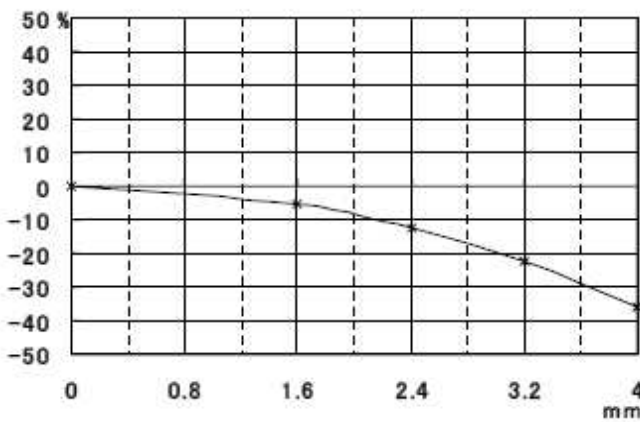


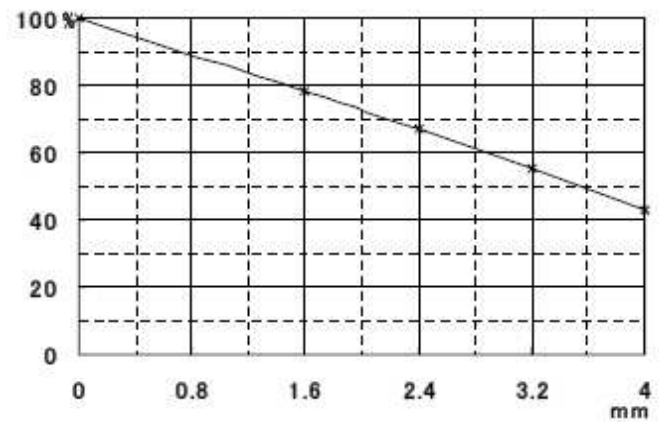
● Modulation Transfer Function (MTF)



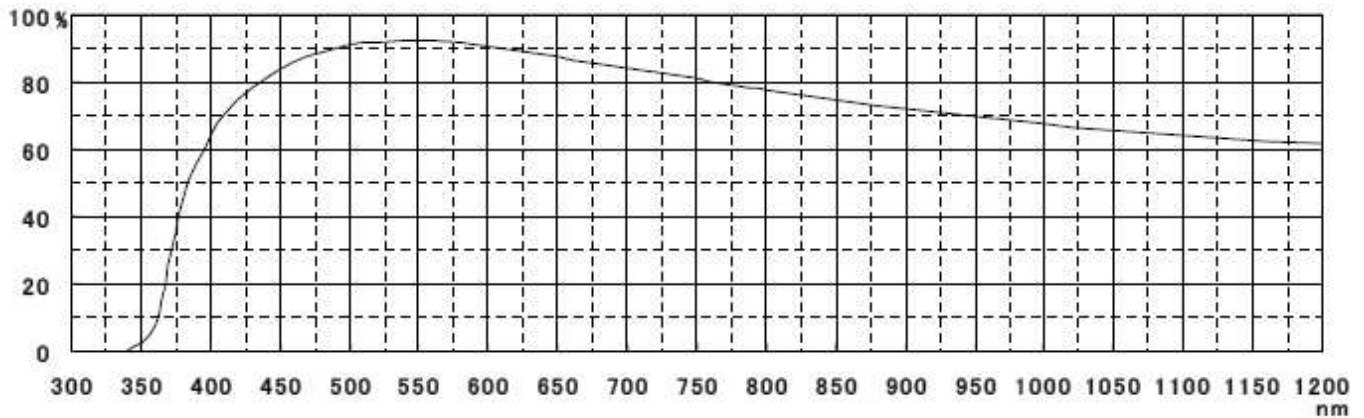
● Distortion (歪曲収差)



● Vignetting (周辺光量)



● Spectral Transmittance (分光透過率)



● Resolving Power (解像力)

| y     | 0   | 2.4 | 3.2 | 4  |  |  |
|-------|-----|-----|-----|----|--|--|
| Rr(S) | 160 | 125 | 80  | 32 |  |  |
| Rt(M) |     | 63  | 50  | 32 |  |  |

● Entrance Pupil Position (入射瞳位置)

-45.95 [mm] \*

● Exit Pupil Position (射出瞳位置)

-47.07 [mm] \*

● 1st Principal Point (第一主点)

-42.00 [mm] \*

● 2nd Principal Point (第二主点)

-4.35 [mm] \* (\*: From Image Plane)

|                   |                               |                     |
|-------------------|-------------------------------|---------------------|
| <b>SPEC. INFO</b> | <b>FL-HC0416X-VG RC SPEC.</b> | 3160402-S001-RC-B13 |
|                   |                               | Sep. 27, 2012       |

1. Model FL-HC0416X-VG
2. Application For 1/2 Format Camera

3. Specification

3-1. Physical (As per the attached drawing)

- (1) Dimensions  $\phi 42\text{mm} \times 43.5\text{ mm}$
- (2) Weight 120g
- (3) Mount C-Mount (1 – 32 UN – 2A)

3-2. Optical

- (1) Focal Length 4.2 mm  $\pm 5\%$
- (2) Max. Aperture Ratio 1: 1.6
- (3) Iris Range F / 1.6 to F / 16 to Close
- (4) Angle of View  
 Diagonal 110.21°  
 Horizontal 86.77°  
 Vertical 64.27°
- (5) Picture format 6.4 mm  $\times$  4.8 mm
- (6) Minimum Object Distance 0.2 m
- (7) Back Focal Length 10.42 mm
- (8) Flange Back Length 17.526 mm  $\pm$  0.05 mm

3-3. Mechanical

- (1) Focusing Mechanism Fixed Focus
- (2) Iris Mechanism Non-click, Close-down  
 Rotation Angle 96°  
 Rotation Torque 0.49N·cm to 2.94 N·cm  
 Iris Ring can be fixed at any positions by 3 fixing screws (A)  
 or 1 thumb screw (refer to external view)

3-4. Vibration & Shock Test Standard

(1) Vibration Conditions

|                       |  |
|-----------------------|--|
| Wave                  | Sine Wave  |
| Acceleration          | 1.96 m/s <sup>2</sup> to 59.78 m/s <sup>2</sup>          |
| Cycle Range           | 10 Hz to 55 Hz   |
| Cycle Period          | 3 Minutes  |
| Duration of Vibration | 120 Minutes Respectively in Three Dimensional Directions |

(2) Shock Conditions

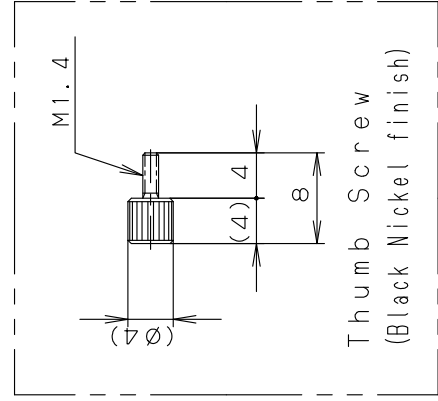
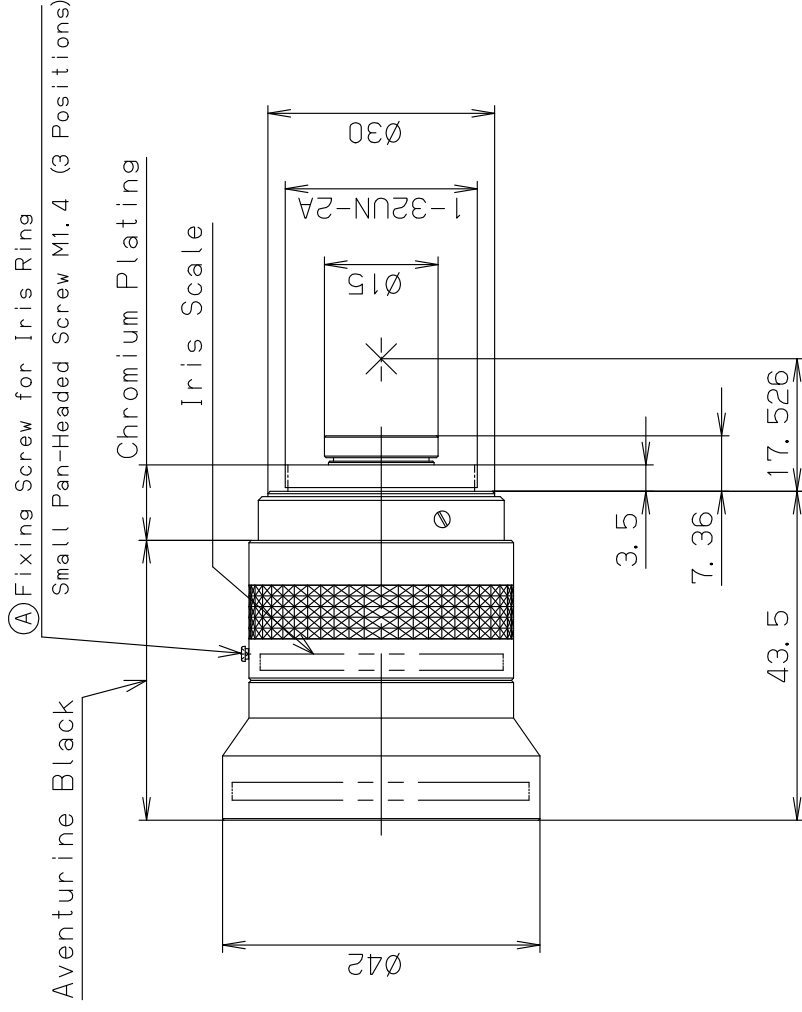
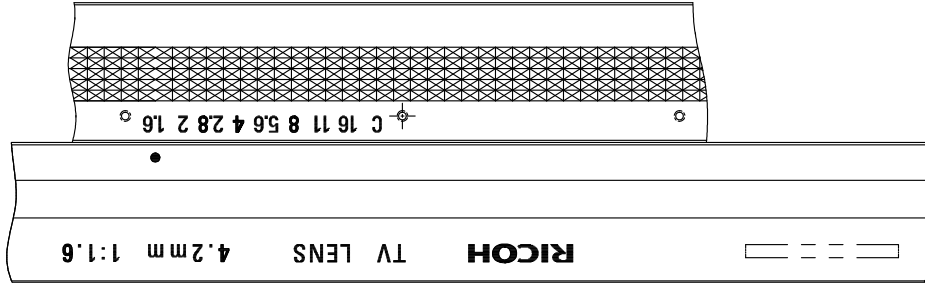
|                              |   |
|------------------------------|---|
| Tester                       | Shock Testing Machine by Dropping                   |
| Impact Force                 | 588 m/s <sup>2</sup>                                |
| Duration of Shock            | 3.5 ms  |
| Directions & Number of Times | 1 Time Respectively in Three Dimensional Directions |

|                   |                               |                     |
|-------------------|-------------------------------|---------------------|
| <b>SPEC. INFO</b> | <b>FL-HC0416X-VG RC SPEC.</b> | 3160402-S001-RC-B23 |
|                   |                               | Sep. 27. 2012       |

3-5. Environmental Temperature Range       $-20^{\circ}\text{C}$  to  $+50^{\circ}\text{C}$

4. Accessories

- |   |          |                      |
|---|----------|----------------------|
| (1) Front Lens Cap                          | 1 piece  |                      |
| (2) Rear Lens Cap                           | 1 piece  |                      |
| (3) Fixing Screw <sup>Ⓐ</sup> for Iris Ring | 3 pieces |                      |
| (4) Thumbscrew for Iris Ring                | 1 piece  | (for Optional Usage) |
| (5) Packing Box                             | 1 piece  |                      |



|                     |       |
|---------------------|-------|
| FL-HC0416X-VG       |       |
| 3160402-S001-RC-B33 |       |
| Sep.28.2012         |       |
| <b>SPEC. INFO</b>   | RICOH |



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