

## Telecentric Lens

HR Series WD=65mm

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### Model No:

Maximum support

2/3' (11mm)

HR Series WD=65mm

Maximum support  
2/3'(11mm)

Target camera



Professional customization of multiples and depth of field

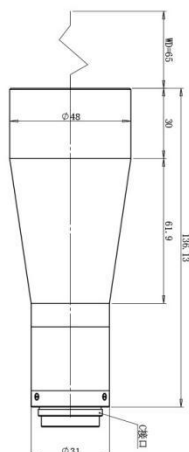
Object-side telecentric design Standard C interface

High definition  
High resolution

Multiples change from 0.3-8.0X field of view from 29.3-1.1mm

| Type        | Lens Model     | Mag  | WD | DOF  | Resolution | Telecen | Optical    | 1/3"CCD     | 1/2"CCD     | 2/3"CCD     |
|-------------|----------------|------|----|------|------------|---------|------------|-------------|-------------|-------------|
|             |                |      |    | mm   | (um)       | tricity | distortion | (4.8*3.6)mm | (6.4*4.8)mm | (8.4*7.1)mm |
| Non-Coaxial | NV65-03F23 HR  | 0.3X | 65 | 7.1  | 13.4       | <0.1    | <0.1       | 16*12       | 21.3*16     | 28*23.6     |
|             | NV65-05F23 HR  | 0.5X | 65 | 1.3  | 7.5        | <0.1    | <0.1       | 9.6*7.2     | 12.8*9.6    | 16.8*14.2   |
|             | NV65-08F23 HR  | 0.8X | 65 | 1.3  | 8.4        | <0.1    | <0.1       | 6*4.5       | 8*6         | 10.5*8.8    |
|             | NV65-1F23 HR   | 1.0X | 65 | 1.0  | 8.4        | <0.1    | <0.1       | 4.8*3.6     | 6.4*4.8     | 8.4*7.1     |
|             | NV65-15F23 HR  | 1.5X | 65 | 0.5  | 5.6        | <0.1    | <0.1       | 3.2*2.4     | 4.3*3.2     | 5.6*4.7     |
|             | NV65-2F23 HR   | 2.0X | 65 | 0.3  | 4.5        | <0.1    | <0.1       | 2.4*1.8     | 3.3*2.4     | 4.2*3.5     |
|             | NV65-3F23 HR   | 3.0X | 65 | 0.2  | 4.5        | <0.1    | <0.1       | 1.6*1.2     | 2.1*1.6     | 2.8*2.3     |
|             | NV65-4F23 HR   | 4.0X | 65 | 0.1  | 3.4        | <0.1    | <0.1       | 1.2*0.9     | 1.6*1.2     | 2.1*1.7     |
|             | NV65-5F23 HR   | 5.0X | 65 | 0.1  | 3.1        | <0.1    | <0.1       | 1*0.7       | 1.3*1       | 1.7*1.4     |
|             | NV65-6F23 HR   | 6.0X | 65 | 0.1  | 3.1        | <0.1    | <0.1       | 0.8*0.6     | 1.1*0.8     | 1.4*1.1     |
|             | NV65-7.5F23 HR | 7.5X | 65 | 0.05 | 2.8        | <0.1    | <0.1       | 0.64*0.48   | 0.85*0.64   | 1.12*0.9    |
|             | NV65-8F23 HR   | 8.0X | 65 | 0.04 | 2.8        | <0.1    | <0.1       | 0.6*0.5     | 0.8*0.6     | 1*0.8       |
| Coaxial     | NV65-03T23 HR  | 0.3X | 65 | 7.1  | 13.4       | <0.1    | <0.1       | 16*12       | 21.3*16     | 28*23.6     |
|             | NV65-05T23 HR  | 0.5X | 65 | 1.3  | 7.5        | <0.1    | <0.1       | 9.6*7.2     | 12.8*9.6    | 16.8*14.2   |
|             | NV65-08T23 HR  | 0.8X | 65 | 1.3  | 8.4        | <0.1    | <0.1       | 6*4.5       | 8*6         | 10.5*8.8    |
|             | NV65-1T23 HR   | 1.0X | 65 | 1.0  | 8.4        | <0.1    | <0.1       | 4.8*3.6     | 6.4*4.8     | 8.4*7.1     |
|             | NV65-15T23 HR  | 1.5X | 65 | 0.5  | 5.6        | <0.1    | <0.1       | 3.2*2.4     | 4.3*3.2     | 5.6*4.7     |
|             | NV65-2T23 HR   | 2.0X | 65 | 0.3  | 4.5        | <0.1    | <0.1       | 2.4*1.8     | 3.3*2.4     | 4.2*3.5     |
|             | NV65-3T23 HR   | 3.0X | 65 | 0.2  | 4.5        | <0.1    | <0.1       | 1.6*1.2     | 2.1*1.6     | 2.8*2.3     |
|             | NV65-4T23 HR   | 4.0X | 65 | 0.1  | 3.4        | <0.1    | <0.1       | 1.2*0.9     | 1.6*1.2     | 2.1*1.7     |
|             | NV65-5T23 HR   | 5.0X | 65 | 0.1  | 3.1        | <0.1    | <0.1       | 1*0.7       | 1.3*1       | 1.7*1.4     |
|             | NV65-6T23 HR   | 6.0X | 65 | 0.1  | 3.1        | <0.1    | <0.1       | 0.8*0.6     | 1.1*0.8     | 1.4*1.1     |
|             | NV65-7.5T23 HR | 7.5X | 65 | 0.05 | 2.8        | <0.1    | <0.1       | 0.64*0.48   | 0.85*0.64   | 1.12*0.9    |
|             | NV65-8T23 HR   | 8.0X | 65 | 0.04 | 2.8        | <0.1    | <0.1       | 0.6*0.5     | 0.8*0.6     | 1*0.8       |

### DH65-03F23 HR



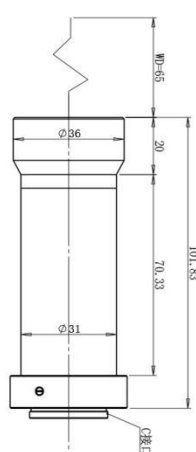
### Main parameters

|                    |      |
|--------------------|------|
| Mag                | 0.3X |
| WD                 | 65   |
| DOF(mm)            | 7.1  |
| Resolution(um)     | 13.4 |
| Telecentricity     | <0.1 |
| Optical distortion | <0.1 |

### Field of view

|                    |         |
|--------------------|---------|
| 1/3"CCD(4.8*3.6)mm | 16*12   |
| 1/2"CCD(6.4*4.8)mm | 21.3*16 |
| 2/3"CCD(8.4*7.1)mm | 28*23.6 |

### DH65-05F23 HR



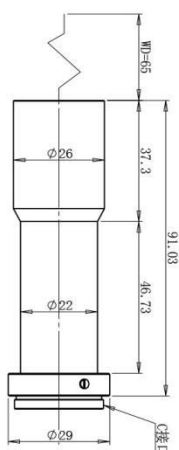
### Main parameters

|                    |      |
|--------------------|------|
| Mag                | 0.5X |
| WD                 | 65   |
| DOF(mm)            | 1.3  |
| Resolution(um)     | 7.5  |
| Telecentricity     | <0.1 |
| Optical distortion | <0.1 |

### Field of view

|                    |           |
|--------------------|-----------|
| 1/3"CCD(4.8*3.6)mm | 9.6*7.2   |
| 1/2"CCD(6.4*4.8)mm | 12.8*9.6  |
| 2/3"CCD(8.4*7.1)mm | 16.8*14.2 |

### DH65-08F23 HR



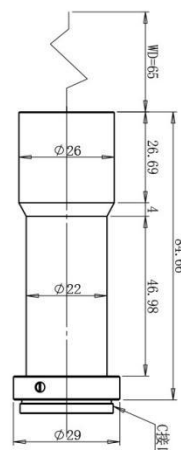
### Main parameters

|                    |      |
|--------------------|------|
| Mag                | 0.8X |
| WD                 | 65   |
| DOF(mm)            | 1.3  |
| Resolution(um)     | 8.4  |
| Telecentricity     | <0.1 |
| Optical distortion | <0.1 |

### Field of view

|                    |          |
|--------------------|----------|
| 1/3"CCD(4.8*3.6)mm | 6*4.5    |
| 1/2"CCD(6.4*4.8)mm | 8*6      |
| 2/3"CCD(8.4*7.1)mm | 10.5*8.8 |

### DH65-1F23 HR



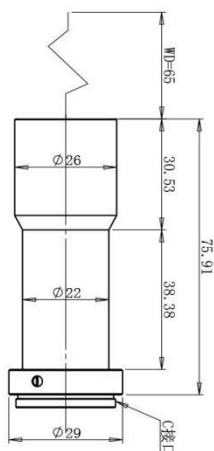
### Main parameters

|                    |      |
|--------------------|------|
| Mag                | 1.0X |
| WD                 | 65   |
| DOF(mm)            | 1.0  |
| Resolution(um)     | 8.4  |
| Telecentricity     | <0.1 |
| Optical distortion | <0.1 |

### Field of view

|                    |         |
|--------------------|---------|
| 1/3"CCD(4.8*3.6)mm | 4.8*3.6 |
| 1/2"CCD(6.4*4.8)mm | 6.4*4.8 |
| 2/3"CCD(8.4*7.1)mm | 8.4*7.1 |

### DH65-15F23 HR



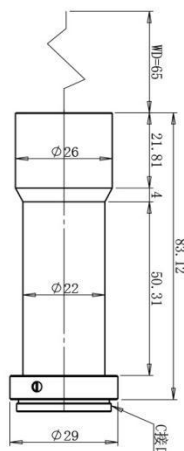
### Main parameters

|                    |      |
|--------------------|------|
| Mag                | 1.5X |
| WD                 | 65   |
| DOF(mm)            | 0.5  |
| Resolution(um)     | 5.6  |
| Telecentricity     | <0.1 |
| Optical distortion | <0.1 |

### Field of view

|                    |         |
|--------------------|---------|
| 1/3"CCD(4.8*3.6)mm | 3.2*2.4 |
| 1/2"CCD(6.4*4.8)mm | 4.3*3.2 |
| 2/3"CCD(8.4*7.1)mm | 5.6*4.7 |

### DH65-2F23 HR



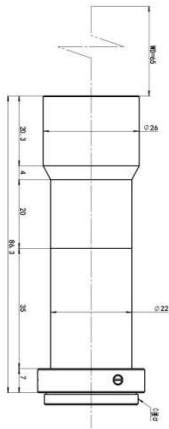
### Main parameters

|                    |      |
|--------------------|------|
| Mag                | 2.0X |
| WD                 | 65   |
| DOF(mm)            | 0.3  |
| Resolution(um)     | 4.5  |
| Telecentricity     | <0.1 |
| Optical distortion | <0.1 |

### Field of view

|                    |         |
|--------------------|---------|
| 1/3"CCD(4.8*3.6)mm | 2.4*1.8 |
| 1/2"CCD(6.4*4.8)mm | 3.3*2.4 |
| 2/3"CCD(8.4*7.1)mm | 4.2*3.5 |

### DH65-3F23 HR



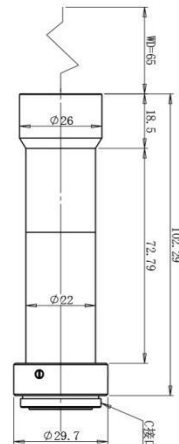
#### Main parameters

|                    |      |
|--------------------|------|
| Mag                | 3.0X |
| WD                 | 65   |
| DOF(mm)            | 0.2  |
| Resolution(um)     | 4.5  |
| Telecentricity     | <0.1 |
| Optical distortion | <0.1 |

#### Field of view

|                    |         |
|--------------------|---------|
| 1/3"CCD(4.8*3.6)mm | 1.6*1.2 |
| 1/2"CCD(6.4*4.8)mm | 2.1*1.6 |
| 2/3"CCD(8.4*7.1)mm | 2.8*2.3 |

### DH65-4F23 HR



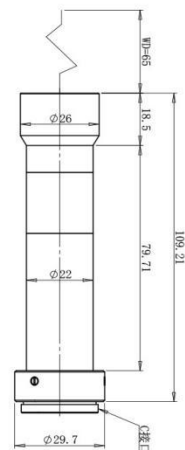
#### Main parameters

|                    |      |
|--------------------|------|
| Mag                | 4.0X |
| WD                 | 65   |
| DOF(mm)            | 0.1  |
| Resolution(um)     | 3.4  |
| Telecentricity     | <0.1 |
| Optical distortion | <0.1 |

#### Field of view

|                    |         |
|--------------------|---------|
| 1/3"CCD(4.8*3.6)mm | 1.2*0.9 |
| 1/2"CCD(6.4*4.8)mm | 1.6*1.2 |
| 2/3"CCD(8.4*7.1)mm | 2.1*1.7 |

### DH65-5F23 HR



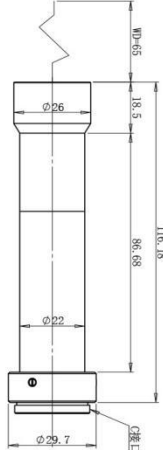
#### Main parameters

|                    |      |
|--------------------|------|
| Mag                | 5.0X |
| WD                 | 65   |
| DOF(mm)            | 0.1  |
| Resolution(um)     | 3.1  |
| Telecentricity     | <0.1 |
| Optical distortion | <0.1 |

#### Field of view

|                    |         |
|--------------------|---------|
| 1/3"CCD(4.8*3.6)mm | 1*0.7   |
| 1/2"CCD(6.4*4.8)mm | 1.3*1   |
| 2/3"CCD(8.4*7.1)mm | 1.7*1.4 |

### DH65-6F23 HR



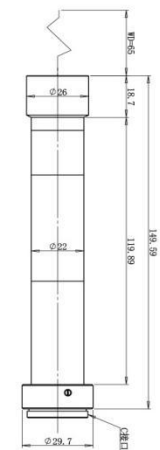
#### Main parameters

|                    |      |
|--------------------|------|
| Mag                | 6.0X |
| WD                 | 65   |
| DOF(mm)            | 0.1  |
| Resolution(um)     | 3.1  |
| Telecentricity     | <0.1 |
| Optical distortion | <0.1 |

#### Field of view

|                    |         |
|--------------------|---------|
| 1/3"CCD(4.8*3.6)mm | 0.8*0.6 |
| 1/2"CCD(6.4*4.8)mm | 1.1*0.8 |
| 2/3"CCD(8.4*7.1)mm | 1.4*1.1 |

### DH65-7.5F23 HR



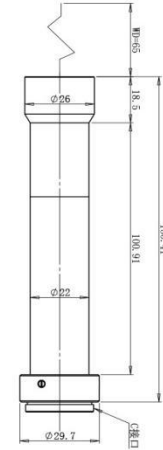
#### Main parameters

|                    |      |
|--------------------|------|
| Mag                | 7.5X |
| WD                 | 65   |
| DOF(mm)            | 0.05 |
| Resolution(um)     | 2.8  |
| Telecentricity     | <0.1 |
| Optical distortion | <0.1 |

#### Field of view

|                    |           |
|--------------------|-----------|
| 1/3"CCD(4.8*3.6)mm | 0.64*0.48 |
| 1/2"CCD(6.4*4.8)mm | 0.85*0.64 |
| 2/3"CCD(8.4*7.1)mm | 1.12*0.9  |

### DH65-8F23 HR



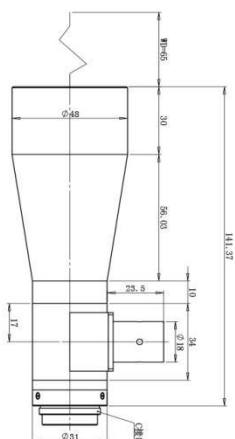
#### Main parameters

|                    |      |
|--------------------|------|
| Mag                | 8.0X |
| WD                 | 65   |
| DOF(mm)            | 0.04 |
| Resolution(um)     | 2.8  |
| Telecentricity     | <0.1 |
| Optical distortion | <0.1 |

#### Field of view

|                    |         |
|--------------------|---------|
| 1/3"CCD(4.8*3.6)mm | 0.6*0.5 |
| 1/2"CCD(6.4*4.8)mm | 0.8*0.6 |
| 2/3"CCD(8.4*7.1)mm | 1*0.8   |

### DH65-03T23 HR



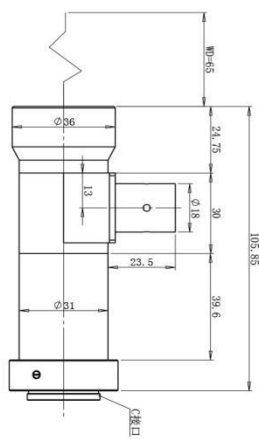
### Main parameters

|                    |      |
|--------------------|------|
| Mag                | 0.3X |
| WD                 | 65   |
| DOF(mm)            | 7.1  |
| Resolution(um)     | 13.4 |
| Telecentricity     | <0.1 |
| Optical distortion | <0.1 |

### Field of view

|                    |         |
|--------------------|---------|
| 1/3"CCD(4.8*3.6)mm | 16*12   |
| 1/2"CCD(6.4*4.8)mm | 21.3*16 |
| 2/3"CCD(8.4*7.1)mm | 28*23.6 |

### DH65-05T23 HR



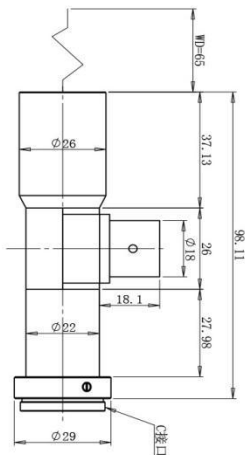
### Main parameters

|                    |      |
|--------------------|------|
| Mag                | 0.5X |
| WD                 | 65   |
| DOF(mm)            | 1.3  |
| Resolution(um)     | 7.5  |
| Telecentricity     | <0.1 |
| Optical distortion | <0.1 |

### Field of view

|                    |           |
|--------------------|-----------|
| 1/3"CCD(4.8*3.6)mm | 9.6*7.2   |
| 1/2"CCD(6.4*4.8)mm | 12.8*9.6  |
| 2/3"CCD(8.4*7.1)mm | 16.8*14.2 |

### DH65-08T23 HR



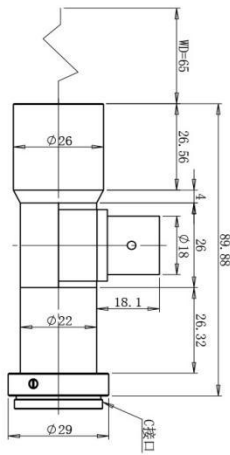
### Main parameters

|                    |      |
|--------------------|------|
| Mag                | 0.8X |
| WD                 | 65   |
| DOF(mm)            | 1.3  |
| Resolution(um)     | 8.4  |
| Telecentricity     | <0.1 |
| Optical distortion | <0.1 |

### Field of view

|                    |          |
|--------------------|----------|
| 1/3"CCD(4.8*3.6)mm | 6*4.5    |
| 1/2"CCD(6.4*4.8)mm | 8*6      |
| 2/3"CCD(8.4*7.1)mm | 10.5*8.8 |

### DH65-1T23 HR



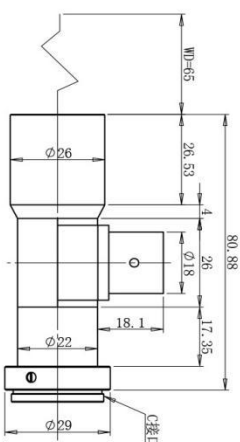
### Main parameters

|                    |      |
|--------------------|------|
| Mag                | 1.0X |
| WD                 | 65   |
| DOF(mm)            | 1.0  |
| Resolution(um)     | 8.4  |
| Telecentricity     | <0.1 |
| Optical distortion | <0.1 |

### Field of view

|                    |         |
|--------------------|---------|
| 1/3"CCD(4.8*3.6)mm | 4.8*3.6 |
| 1/2"CCD(6.4*4.8)mm | 6.4*4.8 |
| 2/3"CCD(8.4*7.1)mm | 8.4*7.1 |

### DH65-15T23 HR



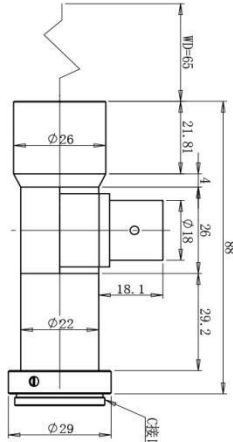
### Main parameters

|                    |      |
|--------------------|------|
| Mag                | 1.5X |
| WD                 | 65   |
| DOF(mm)            | 0.5  |
| Resolution(um)     | 5.6  |
| Telecentricity     | <0.1 |
| Optical distortion | <0.1 |

### Field of view

|                    |         |
|--------------------|---------|
| 1/3"CCD(4.8*3.6)mm | 3.2*2.4 |
| 1/2"CCD(6.4*4.8)mm | 4.3*3.2 |
| 2/3"CCD(8.4*7.1)mm | 5.6*4.7 |

### DH65-2T23 HR



### Main parameters

|                    |      |
|--------------------|------|
| Mag                | 2.0X |
| WD                 | 65   |
| DOF(mm)            | 0.3  |
| Resolution(um)     | 4.5  |
| Telecentricity     | <0.1 |
| Optical distortion | <0.1 |

### Field of view

|                    |         |
|--------------------|---------|
| 1/3"CCD(4.8*3.6)mm | 2.4*1.8 |
| 1/2"CCD(6.4*4.8)mm | 3.3*2.4 |
| 2/3"CCD(8.4*7.1)mm | 4.2*3.5 |

Technical drawing of a mechanical part (Fig. 1) showing front and side views with dimensions. The front view (top) shows a part with a total length of 201, a central section of length 4, and a right section of length 28. The central section has a diameter of  $\varnothing 28$ . The right section has a diameter of  $\varnothing 38$  and a length of 18.1. The side view (bottom) shows a part with a total length of 34.2, a central section of length 7, and a right section of length 28. The central section has a diameter of  $\varnothing 22$ . The right section has a diameter of  $\varnothing 38$  and a length of 18.1. The part has a maximum width of 80.65. The drawing includes a scale of 1:1 and a note indicating that the part is made of steel.

|                    |      |
|--------------------|------|
| Mag                | 3.0X |
| WD                 | 65   |
| DOF(mm)            | 0.2  |
| Resolution(um)     | 4.5  |
| Telecentricity     | <0.1 |
| Optical distortion | <0.1 |

|                    |         |
|--------------------|---------|
| 1/3"CCD(4.8*3.6)mm | 1.6*1.2 |
| 1/2"CCD(6.4*4.8)mm | 2.1*1.6 |
| 2/3"CCD(8.4*7.1)mm | 2.8*2.3 |

Technical drawing of a mechanical part, likely a shaft or rod, showing various diameters and dimensions. The drawing includes a cross-section at the top, a central section with a hole, and a bottom section with a thread. Dimensions are given in millimeters.

Key dimensions and features:

- Top section:  $\Phi 65$  (outer diameter),  $18.5$  (length),  $7.89$  (length),  $26$  (length),  $13$  (length).
- Central section:  $\Phi 26$  (outer diameter),  $\Phi 18$  (inner diameter),  $26$  (length),  $18.1$  (length).
- Bottom section:  $\Phi 22$  (outer diameter),  $\Phi 29.7$  (outer diameter),  $43.19$  (length).
- Thread:  $M20 \times 1.5$  (bottom section).
- Feature: C接口 (C-connection) (bottom section).

|                    |      |
|--------------------|------|
| Mag                | 4.0X |
| WD                 | 65   |
| DOF(mm)            | 0.1  |
| Resolution(um)     | 3.4  |
| Telecentricity     | <0.1 |
| Optical distortion | <0.1 |

|                    |         |
|--------------------|---------|
| 1/3"CCD(4.8*3.6)mm | 1.2*0.9 |
| 1/2"CCD(6.4*4.8)mm | 1.6*1.2 |
| 2/3"CCD(8.4*7.1)mm | 2.1*1.7 |

Technical drawing of a mechanical part, likely a shaft or pin, showing dimensions in millimeters. The drawing includes a cross-section view at the top and a side view below. Key dimensions include: total length 130.64, section length 48.6, diameter 26, diameter 22, diameter 18.1, diameter 18.5, diameter 9.54, diameter 25, diameter 18, diameter 29.7, and a hole diameter 13. A break line is shown on the left side of the shaft.

|                    |      |
|--------------------|------|
| Mag                | 5.0X |
| WD                 | 65   |
| DOF(mm)            | 0.1  |
| Resolution(um)     | 3.1  |
| Telecentricity     | <0.1 |
| Optical distortion | <0.1 |

|                    |         |
|--------------------|---------|
| 1/3"CCD(4.8*3.6)mm | 1*0.7   |
| 1/2"CCD(6.4*4.8)mm | 1.3*1   |
| 2/3"CCD(8.4*7.1)mm | 1.7*1.4 |

[illegible]

|                    |      |
|--------------------|------|
| Mag                | 6.0X |
| WD                 | 65   |
| DOF(mm)            | 0.1  |
| Resolution(um)     | 3.1  |
| Telecentricity     | <0.1 |
| Optical distortion | <0.1 |

|                    |         |
|--------------------|---------|
| 1/3"CCD(4.8*3.6)mm | 0.8*0.6 |
| 1/2"CCD(6.4*4.8)mm | 1.1*0.8 |
| 2/3"CCD(8.4*7.1)mm | 1.4*1.1 |

[illegible]

|                    |      |
|--------------------|------|
| Mag                | 7.5X |
| WD                 | 65   |
| DOF(mm)            | 0.05 |
| Resolution(um)     | 2.8  |
| Telecentricity     | <0.1 |
| Optical distortion | <0.1 |

|                    |           |
|--------------------|-----------|
| 1/3"CCD(4.8*3.6)mm | 0.64*0.48 |
| 1/2"CCD(6.4*4.8)mm | 0.85*0.64 |
| 2/3"CCD(8.4*7.1)mm | 1.12*0.9  |

Technical drawing of a mechanical part, likely a shaft or rod, showing various dimensions and features. The drawing includes a cross-section at the top with a diameter of 26 mm, a central section with a diameter of 18 mm and a length of 18.1 mm, and a bottom section with a diameter of 29.7 mm. The total length is 135.48 mm. Other dimensions include 71.65 mm, 18.5 mm, 7.82 mm, 36 mm, 13 mm, and 72.16 mm. A feature labeled "C槽" (C-groove) is shown on the bottom section.

|                    |      |
|--------------------|------|
| Mag                | 8.0X |
| WD                 | 65   |
| DOF(mm)            | 0.04 |
| Resolution(um)     | 2.8  |
| Telecentricity     | <0.1 |
| Optical distortion | <0.1 |

|                    |         |
|--------------------|---------|
| 1/3"CCD(4.8*3.6)mm | 0.6*0.5 |
| 1/2"CCD(6.4*4.8)mm | 0.8*0.6 |
| 2/3"CCD(8.4*7.1)mm | 1*0.8   |