

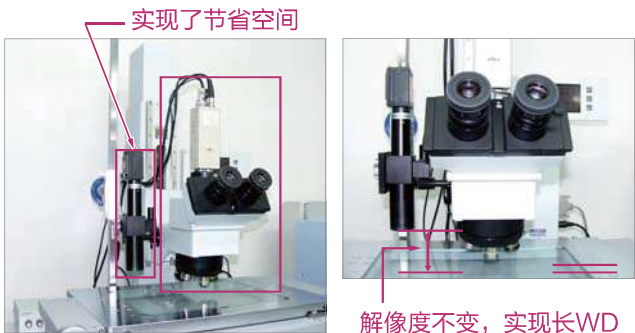
VM Series 2/3" 1/1.8"

拥有与显微镜同等的解像力，实现了55mm的长工作距离。
确保了一般显微镜无法拥有的物距，在安装设备上时，
相对容易的高性能镜头。



突破性的设计

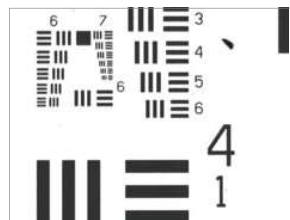
实现比一般的产品更省空间。
因为是耐振性的设计，在装置上搭载时更加容易。



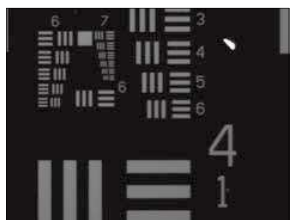
长工作距离55mm

因为长WD，可以进行明暗视野的拍摄。
减少了因拿取物体、水、油等加工时，
所产生的垃圾的影响。

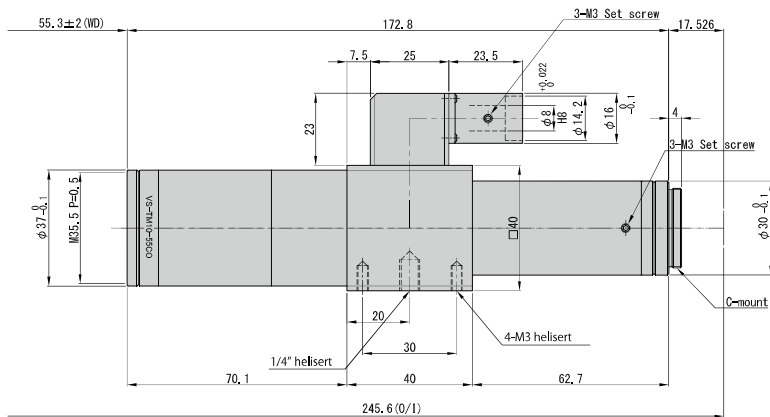
使用同轴落射照明



使用斜光照明



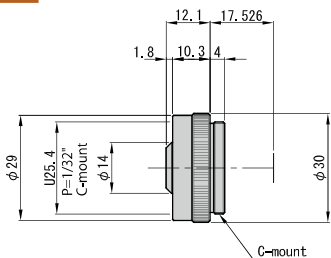
VM10-55CO



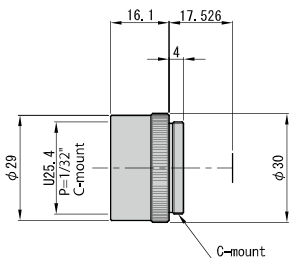
规格	VM10-55CO
光学倍率	10x ± 5 %
视野 (VxH)	2/3" 0.7 x 0.8 mm 1/2" 0.5 x 0.6 mm 1/3" 0.4 x 0.5 mm
WD	55.3 mm ± 2
物像间距离O/I	245.6 mm
实效F	22.0
NA	0.23
景深 允许值乱度φ0.04mm	0.02 mm
TV失真 (2/3")	0.08 %
适合芯片	2/3"
同轴照明方式	Built-in
滤镜口径	M 35.5 P = 0.5
重量	370 g

后倍镜

VM-1.5X



VM-2.0X



TCL-LQL Series

1" 2/3" 可调焦

- 可快速调整焦距
- 若在镜头可变化的工作距离内，可以依据希望的焦距对焦



Technical drawing of the SV-EXR20 camera module. The drawing shows the module with dimensions in millimeters. The total length is 80.1 mm. The distance from the front face to the center of the lens is 43.2 mm. The distance from the front face to the rear face is 17.526 mm. The front face has a diameter of $\phi 25$ mm. The lens has a diameter of $\phi 22.5$ mm and a focal length of $F=0.5$ mm. The module is labeled "C-mount" and "EL-16-40-TC". A "3-M8 Set screw" is shown securing the module to a surface.

Technical drawing of the EL-16-40-TC lens assembly, showing dimensions and components. The drawing includes the following dimensions and labels:

- Overall length: 80.1
- Distance from front flange to rear flange: 43.2
- Distance from front flange to C-mount: 17.526
- Front flange diameter: $\phi 30$
- Front flange inner diameter: $\phi 25$
- Front flange thread: M22.5
- Front flange pitch: P=0.5
- Distance from front flange to 2-M3 Set screw: 20
- Distance from front flange to 3-M3 Set screw: 17.7
- Distance from front flange to 2-M3 Set screw: $\phi 14$
- Distance from front flange to 2-M3 Set screw: $\phi 8$
- 3-M3 Set screw
- Optimum focus
- EL-16-40-TC
- C-mount
- SV-EXR20
- 2-M3 Set screw
- 20mm

Technical drawing of the EL-16-40-TO, SV-EXR15 sensor. The drawing shows the sensor with its dimensions and components. The dimensions are:

- Overall length: 103.7
- Length of the main body: 71.8
- Length of the mounting bracket: 17.526
- Outer diameter of the main body: $\phi 20$
- Outer diameter of the mounting bracket: $\phi 25$
- Thread of the mounting bracket: M22.5
- Pitch of the mounting bracket: P=0.5

The components shown are:

- 3-M3 Set screw
- Wire sensor
- C-mount

EL-16-40-TO, SV-EXR15

Technical drawing of the EL-16-40-70,SV-EXR15 C-mount lens assembly. The drawing shows a side view of the lens with various dimensions and labels.

Key dimensions and labels:

- Overall length: 103.7
- Mounting flange diameter: 17.526
- Front element diameter: 26.8
- Front element thickness: 20
- Front element inner diameter: $\phi 8$
- Front element thread: 2-M3
- Front element set screw: 2-M3 Set screw
- Optimum focus label: Optimum focus
- C-mount label: C-mount
- EL-16-40-70,SV-EXR15 label: EL-16-40-70,SV-EXR15
- Other dimensions: 71.8, 17.526, 26.8, 20, $\phi 8$, 2-M3 Set screw, 3-M3 Set screw, M2.5 P=0.5, $\phi 25$, $\phi 30$

Technical drawing of the EL-16-40-TC lens showing dimensions and components. The drawing includes the following labels and dimensions:

- Dimensions:**
 - Overall length: 127.9
 - Distance from front flange to rear flange: 86
 - Distance from rear flange to C-mount: 17.526
 - Front flange diameter: $\phi 32$
 - Front flange thread: M30.5
 - Front flange pitch: P=0.5
 - Distance from front flange to focus ring: 0
 - Focus ring diameter: 25mm
- Components:**
 - 3-M3 Set screw
 - M2 Lock screw
 - Focus ring (labeled "Focus")
 - EL-16-40-TC
 - SV-EXR25
 - C-mount

Technical drawing of the EL-16-40-TC SV-EXR25 camera module. The drawing shows the front and side views of the module. Key dimensions and components are labeled:

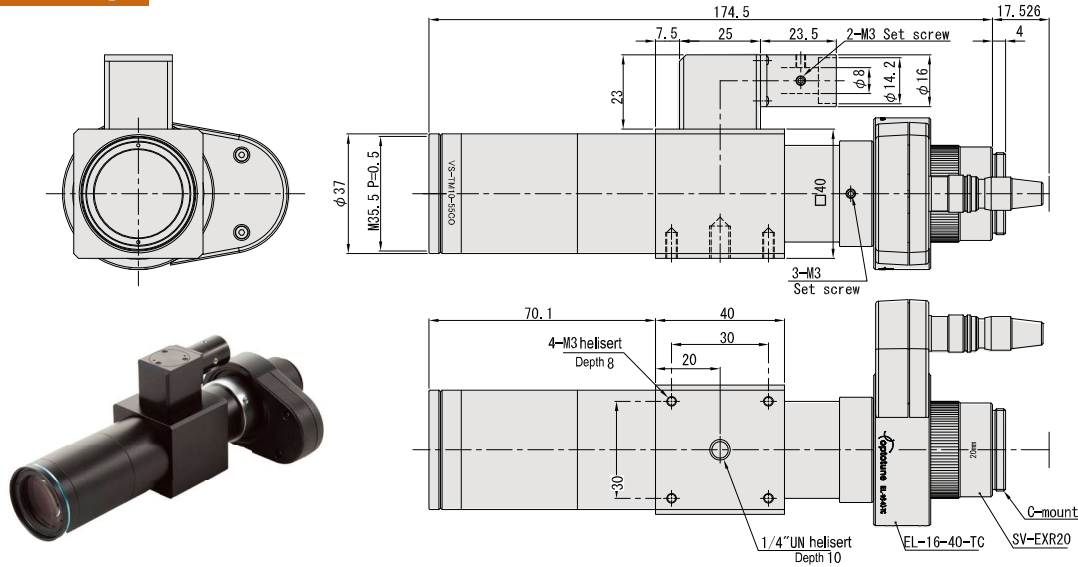
- Front View Dimensions:**
 - Total width: 127.9
 - Distance from mounting flange to center of lens: 86
 - Distance from mounting flange to center of sensor: 17.526
 - Distance from mounting flange to center of sensor (alternative measurement): 36.5
 - Distance from mounting flange to center of sensor (alternative measurement): 22.5
 - Distance from mounting flange to center of sensor (alternative measurement): 8
 - Distance from mounting flange to center of sensor (alternative measurement): 14
 - Distance from mounting flange to center of sensor (alternative measurement): 22.5
 - Distance from mounting flange to center of sensor (alternative measurement): 36.5
- Side View Dimensions:**
 - Distance from mounting flange to center of lens: 17.526
 - Distance from mounting flange to center of sensor: 17.526
- Components and Labels:**
 - Optimum focus**: Label pointing to the lens.
 - EL-16-40-TC**: Label pointing to the lens.
 - SV-EXR25**: Label pointing to the sensor.
 - C-mount**: Label pointing to the mounting flange.
 - 2-M3 Set screw**: Label pointing to the set screw.

Technical drawing of the SV-EXR10/50 camera showing dimensions and mounting options. The drawing includes the following labels and dimensions:

- Dimensions:**
 - Overall length: 162.4
 - Distance from front flange to mounting bracket: 85.5
 - Front flange diameter: $\phi 38$
 - Front flange thread: M35.5 P=0.5
 - Distance from front flange to lens mount: 17.526
 - Distance from lens mount to rear flange: 52mm
 - Rear flange diameter: 19mm
- Mounting Options:**
 - SV-EXR10
 - SV-EXR50
 - C-mount
- Labels:**
 - 3-M2.6 Set screw
 - M2 Lock screw
 - EL-16-40-TC

[illegible]

VM10-55CO-LQL

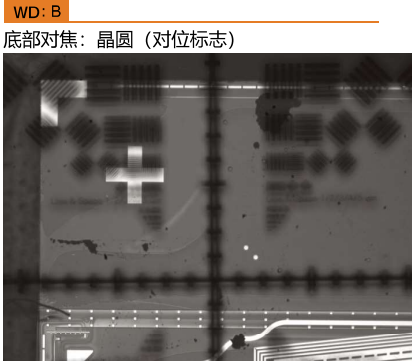
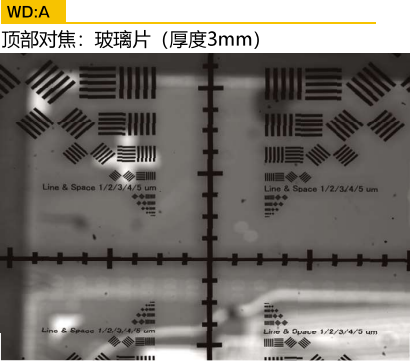
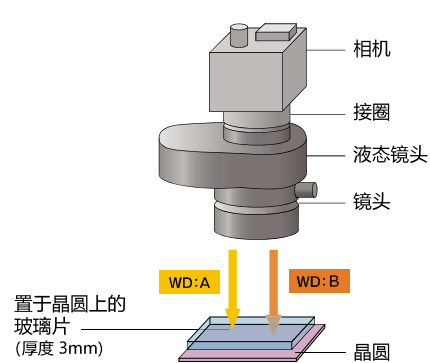


规格	同轴照明	— 配置	TCL2-65LQL		TCL4-65LQL		TFL2-110-LQL		TFL1-110-LQL		—	
			TCL2-65COLQL		TCL4-65COLQL		TFL2-110CO-LQL		TFL1-110CO-LQL		VM10-55CO-LQL	
液控镜头	型号		EL16-40-TC-VIS-5D-C		EL16-40-TC-VIS-5D-C		EL16-40-TC-VIS-5D-C		EL16-40-TC-VIS-5D-C		EL16-40-TC-VIS-5D-C	
Optotune	屈光度		-2 dpt +3 dpt		-2 dpt +3 dpt		-2 dpt +3 dpt		-2 dpt +3 dpt		-2 dpt +3 dpt	
接圈			SV-EXR20		SV-EXR15		SV-EXR50+SV-EXR10		SV-EXR25		SV-EXR20	
光学倍率			×2.03 ×1.91		×4.00 ×3.69		×2.0 ×1.79		×1.0 ×0.9		×11.06 ×9.57	
视野	2/3"		3.6×4.2 mm	3.8×4.5 mm	1.8×2.1 mm	1.9×2.3 mm	5.6×5.6 mm	6.3×6.3 mm	11.3×11.3 mm	12.5×12.5 mm	0.6×0.8 mm	0.7×0.9 mm
	1/2"		2.4×3.2 mm	2.6×3.4 mm	1.2×1.6 mm	1.3×1.7 mm	3.6×4.2 mm	4.0×4.7 mm	7.1×8.4 mm	7.9×9.3 mm	0.4×0.6 mm	0.5×0.7 mm
	1/3"		1.8×2.4 mm	1.9×2.6 mm	0.9×1.2 mm	1.0×1.3 mm	2.4×3.2 mm	2.7×3.6 mm	4.8×6.4 mm	5.3×7.1 mm	0.3×0.4 mm	0.4×0.5 mm
WD			66.1 mm	63.5 mm	65.3 mm	64.7 mm	115.6 mm	105.4 mm	120.2 mm	106.1 mm	55.33 mm	55.38 mm
WD变化量			0.52 mm/dpt		0.12 mm/dpt		2.04 mm/dpt		2.82 mm/dpt		0.01 mm/dpt	
物像间距离			164.5 mm	161.9 mm	187.3 mm	186.7 mm	296.3 mm	286.1	266.4 mm	252.3 mm	248.2 mm	248.2 mm
实行F			13.9	13.0	18.1	16.8	10.2	9.1	10.5	9.5	24.0	20.8
适合芯片			2/3"		2/3"		1"		1"		2/3"	

调焦测试

测试环境：5百万像素 CMOS相机（芯片：2/3", 3.45um），
TFL2-110CO-LQL，点光源（红色）

对焦于不同高度的物体上



LQL系列工作距离表

