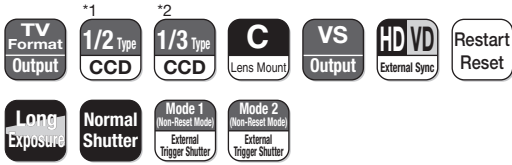


# XC-ES50/ES50CE XC-ES51/ES51CE XC-ES30/ES30CE



\*1 :XC-ES50/ES50CE/ES51/ES51CE  
\*2 :XC-ES30/ES30CE



Switch setting **PB4**

Connection Diagram **PB5**



## Outline

The XC-ES series is a small-sized lightweight monochrome camera module designed as an input device for image processing, realized through the newest high-density packaging. The downsized main body allows to set the XC-ES series easily at the places where is difficult to set the existing devices.

## Features

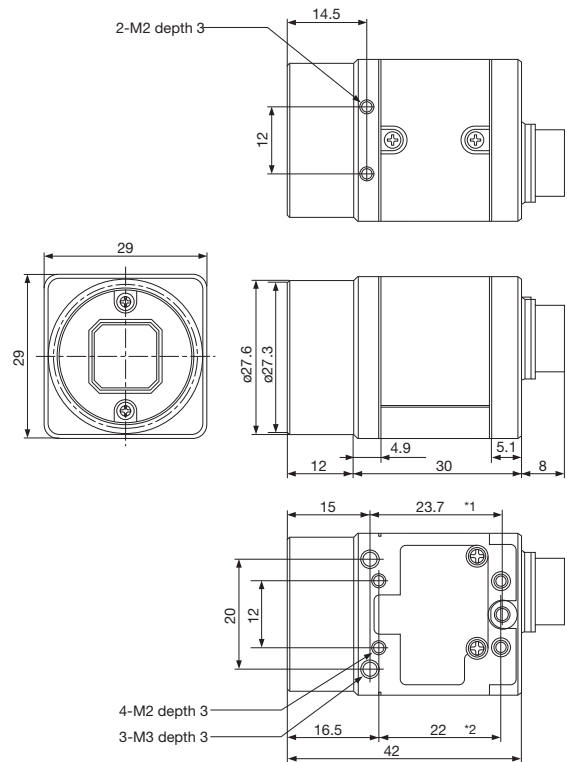
- XC-ES50/ES50CE: 1/2-type IT CCD
- XC-ES51/ES51CE: 1/2-type IT CCD (High sensitivity)
- XC-ES30/ES30CE: 1/3-type IT CCD
- High SN ratio: 60 dB
- External trigger shutter  
XC-ES50/ES51/ES30: 1/4 s to 1/10,000 s  
XC-ES50CE/ES51CE/ES30CE: 1/4 s to 1/8,000 s
- Electronic shutter  
XC-ES50/ES51/ES30: 1/100 s to 1/10,000 s  
XC-ES50CE/ES51CE/ES30CE: 1/120 s to 1/8,000 s
- 2:1 Interlaced/Non-Interlaced
- Frame/Field accumulation
- Restart/Reset
- Sync system: Internal/External (HD/VD)
- High Shock and Vibration Resistance

## Accessories

- Compact camera adaptor
  - DC-700/700CE
- 12-pin camera cable (CE standard)
  - CCXC-12P02N (2 m)
  - CCXC-12P05N (5 m)
  - CCXC-12P10N (10 m)
  - CCXC-12P25N (25 m)
- Tripod adaptor
  - VCT-333I

## Dimensions

Camera body of all XC-E models



\*1: M3 screw size  
\*2: M2 screw size

Unit: mm

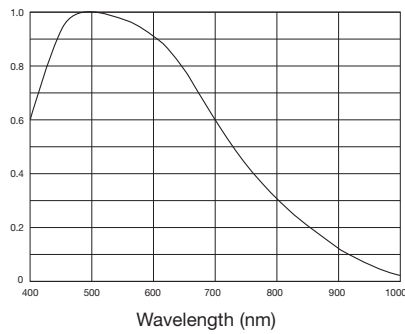
### Notice

From January 2005, the outside dimensions of XC-E series consoles will be changed to the same dimensions of XC-HR series consoles.

## Spectral Sensitivity Characteristics

### • XC-ES50/XC-ES51/XC-ES30 (Typical Values)

Relative sensitivity

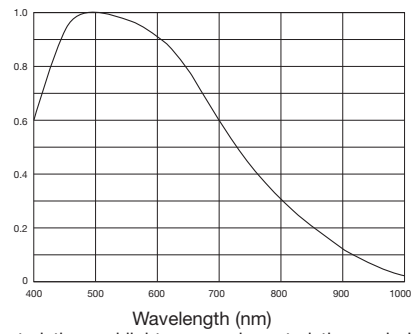


Wavelength (nm)

(Lens characteristics and light source characteristics excluded.)

### • XC-ES50CE/XC-ES51CE/XC-ES30CE (Typical Values)

Relative sensitivity

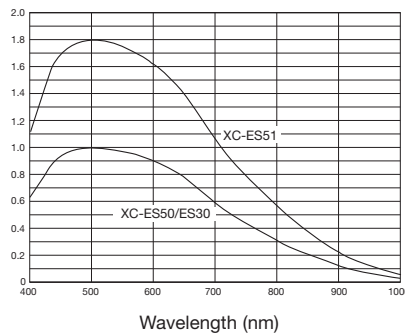


Wavelength (nm)

(Lens characteristics and light source characteristics excluded.)

### • XC-ES51, XC-ES50/XC-ES30 (Comparison sensitivity)

Relative sensitivity

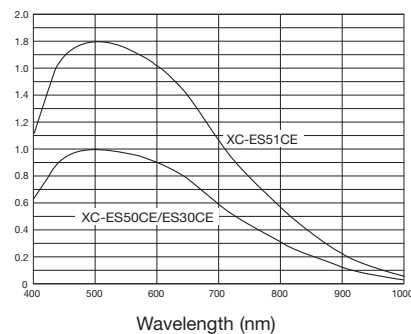


Wavelength (nm)

(Lens characteristics and light source characteristics excluded.)

### • XC-ES51CE, XC-ES50CE/XC-ES30CE (Comparison sensitivity)

Relative sensitivity



Wavelength (nm)

(Lens characteristics and light source characteristics excluded.)

## Specifications

	XC-ES50	XC-ES51	XC-ES30	XC-ES50CE	XC-ES51CE	XC-ES30CE
Image device	1/2-type IT CCD		1/3-type IT CCD	1/2-type IT CCD		1/3-type IT CCD
Signal system	EIA			CCIR		
Effective picture elements (H × V)	768 × 494			752 × 582		
Effective lines (H × V)	752 × 485			736 × 575		
Cell size (H × V)	8.4 μm × 9.8 μm		6.35 μm × 7.4 μm	8.6 μm × 8.3 μm		6.5 μm × 6.25 μm
Horizontal frequency	15.734 kHz			15.625 kHz		
Vertical frequency	59.94 Hz			50 Hz		
Lens mount	C-mount					
Sync system	Internal/External (Automatically switched according to input signal)					
External sync signal input	HD/VD (HD/VD level: 2 V to 5 Vp-p)					
External sync frequency	±1% (in horizontal sync frequency)					
H Jitter	less than ±20 nsec					
Scanning system	525 lines: 2:1 Interlaced (Automatic switching according to input signal)			625 lines: 2:1 Interlaced (Automatic switching according to input signal)		
Video output	1.0 Vp-p, negative, 75 Ω unbalanced					
Horizontal resolution	570 TV lines			560 TV lines		
Sensitivity	400 lx F5.6	400 lx F8	400 lx F4	400 lx F5.6	400 lx F8	400 lx F4
	(γ = ON, MIN GAIN)					
Minimum illumination*	0.3 lx	0.2 lx	0.3 lx	0.3 lx	0.2 lx	0.3 lx
SNR	60 dB					
Gain	AGC/Manual (Adjustable on the rear panel)					
Gamma	ON/OFF (Adjustable on the rear panel)					
Normal shutter	1/100 s to 1/10,000 s			1/120 s to 1/8,000 s		
External trigger shutter	1/4 s to 1/10,000 s			1/4 s to 1/8,000 s		
Power requirements	DC 12 V (9 V to 16 V)					
Power consumption	1.6 W		1.4 W	1.6 W		1.4 W
Dimension (W × H × D)	29 × 29 × 30 mm (excluding protrusions)					
Mass	Approx. 50 g					
Operating temperature	-5°C to +45°C					
Storage temperature	-30°C to +60°C					
Performance guarantee temperature	0°C to 40°C					
Operating humidity	20% to 80% (no condensation)					
Storage humidity	20% to 95% (no condensation)					
Vibration resistance	10 G (20 Hz to 200 Hz 20 minutes for each direction-x, y, z)					
Shock resistance	70 G					
MTBF	126,469 hours (Approx. 14.4 years)					
Regulatory compliance	UL1492, FCC/ICES-003: Class B, CE: EN61326, AS/NZ: EN61326, KC: KN22/KN24: Class A					
Supplied accessories	Lens mount cap (1), Operating instructions (1)					

\* F1.4, r=ON, MAX GAIN