

## Component/OEM



### OUTLINE

The XC-HR70 is an ultra-compact monochrome camera module ideal for high speed, high resolution imaging processing applications. The XC-HR70 camera incorporates a 1/3 type progressive scan CCD that can capture high quality, XGA images (1024 x 768) at 29 frames/sec. In addition, the XC-HR70 features a "high scanning" function that increases the camera's vertical scanning frequency so that images can be captured up to 120 frames/sec..

Also, the XC-HR70's compact and lightweight body makes it easy to install in space-restricted areas. With high-speed capturing capability offered in a compact body, the XC-HR70 is ideal for demanding inspection applications such as semiconductor production and high-speed assembly lines.

### FEATURES

- High resolution image capturing
  - XGA resolution (1024 x 768 pixels) image capturing at a speed of 29 frames/s
  - 1/3 type progressive scanning CCD with square pixels  
Effective picture element: 1034 (H) x 779 (V)
- High-rate scanning  
Up to 120 frames/s (Effective line: 152 lines) (at restart/reset ON, Binning OFF)
- Compact and lightweight  
1 <sup>3</sup>/<sub>16</sub> x 1 <sup>3</sup>/<sub>16</sub> x 1 <sup>3</sup>/<sub>16</sub> inches, 1.8 oz (29 (W) x 29 (H) x 30 (D) mm, 50 g)
- External trigger shutter  
1/4 to 1/100,000 s
- Electronic Shutter  
1/100 to 1/20,000 s (8 steps with switches)
- Synchronization  
Internal/External (HD/VD)
- C-mount system
- Compliant with new EIAJ 12-pin connector pin assignments
- High shock and vibration tolerant – 10G/70G
- Lead-free solder board

### ACCESSORIES

#### Compact camera adaptor DC-700

- Compact, lightweight (700 g)
- Two video outputs
- External sync IN/OUT
- Trigger input/WEN output
- New EIAJ standard 12-pin connector
- Dimensions: 110 (W) x 53 (H) x 160 (D) mm



#### 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

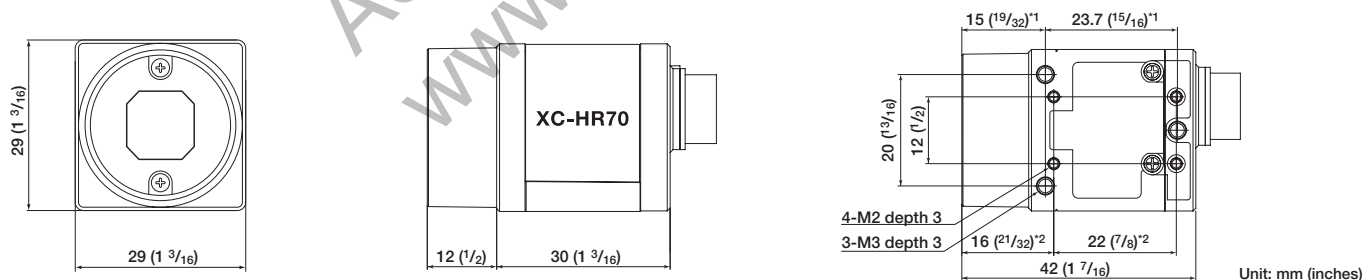
- Isolated type
- Approx. 6.1 g
- Dimensions:  
18 (W) x 6 (H) x 27 (D) mm



## SPECIFICATIONS

XC-HR70	
Image device	1/3 type IT progressive scan CCD
Effective picture elements	1034 (H) x 779 (V)
Effective lines	1024 (H) x 768 (V)
Image size	XGA size : 1024 (H) x 768 (V)
CCD vertical drive frequency	23.23 kHz $\pm$ 1 %
CCD horizontal drive frequency	29.5 MHz
Cell size	4.65 (H) x 4.65 (V) $\mu$ m
Lens mount	C mount
Flange back	17.526 mm
Sync system	Internal/External (auto)
External sync signal	HD/VD (2 to 5 Vp-p)
External sync allowable frequency	$\pm$ 1 % (in horizontal sync frequency)
Jitter	Less than 20 ns
Scanning system	Non-interlace
Output signal frequency	29.2 Hz (normal mode), 58.4 Hz (binning mode)
Video output	1.0 Vp-p, sync negative, 75 $\Omega$ , unbalanced
Horizontal resolution	800 TV lines
Sensitivity	400 lx, F5.6 (with FIX GAIN)
Minimum illumination	1 lx (F1.8, GAMMA OFF, +18 dB GAIN)
S/N ratio	56 dB (0 dB GAIN)
Gain	Manual (0 to 18 dB)/Fix (0 dB) selectable
Gamma	OFF (fixed)
White clip	820 mV $\pm$ 70 mV (F1.8, FIX GAIN)
Shutter	Normal shutter, Restart/Reset, External trigger shutter (Mode 1/Mode 2)
Normal shutter speed	1/100 to 1/20,000 s
External trigger shutter speed	1/4 to 1/100,000 s
High-rate scanning	R/R mode binning off: max 120 frames/s (effective line: 152 lines) binning on: max 180 frames/s (effective line: 89 lines) External trigger shutter mode (MODE 1) binning off: max 120 frames/s (effective line: 153 lines) binning on: max 180 frames/s (effective line: 90 lines)
Power requirements	DC 12 V (+10.5 V to +15 V)
Power consumption	2.0 W
Dimensions	1 <sup>3</sup> / <sub>16</sub> x 1 <sup>3</sup> / <sub>16</sub> x 1 <sup>3</sup> / <sub>16</sub> inches (29 (W) x 29 (H) x 30 (D) mm)
Weight	1.8 oz (50 g)
Operating temperature	-5 to 40 °C (23 to 113 °F)
Storage temperature	-30 to 60 °C (-22 to 140 °F)
Operating humidity	20 to 80 % (no condensation)
Storage humidity	20 to 95 % (no condensation)
Vibration resistance	10 G (20 Hz to 200 Hz)
Shock resistance	70 G
MTBF	88,044 hrs.
Regulation	UL 6500, FCC Class A Digital Device, CE (EN61326/97+A1/98), AS4251.1+A4252.1
Supplied accessories	Lens mount cap (1), Operating instructions (1)

## DIMENSIONS



\*1: for 3-M3 screw \*2: for 4-M2 screw

**SONY**

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