

## Product Information



# XC-ST50CE

Small lightweight monochrome analogue machine vision video camera module (1/2" CCIR)



The new XC-ST Series of compact black and white camera modules offers high picture quality and excellent sensitivity. It incorporates the latest generation of CCD image sensors. The XC-ST70/CE features a 2/3-inch IT Hyper HAD CCD, the XC-ST50/CE a 1/2-inch IT HAD CCD and the XC-ST30/CE a 1/3-inch IT HAD CCD.

The XC-ST Series is easy to operate, with all switch settings on the rear panel. Their flexible controls and compact size easily facilitate system integration. Excellent images of fast moving objects can be captured with the built-in electronic trigger shutter. The XC-ST Series is well suited for demanding applications in industry, microscopy and machine vision.

The recommended camera adapter for the XC-ST Series is the compact and lightweight DC-700/CE.

# Features

## Latest interline CCDs

The XC-ST Series utilises Sony's latest interline CCDs (XC-ST70/CE: 2/3" IT CCD; XC-ST50/CE: 1/2" IT CCD and XC-ST30/CE: 1/3" IT CCD).

## Compact and lightweight

The cameras come in a small (44 (W) x 29 (H) x 57.5 (D) mm) and lightweight package (110 g).

## High sensitivity and S/N Ratio

The cameras offer very high sensitivity (0.3 lx at F1.4) and S/N Ratio (up to 60 dB).

## Flexible functions

The XC-ST Series offers many flexible features, such as flexible trigger shutter functions (electronic shutter 1/100 to 1/10,000 s), 2:1 interlace/non-interlace, frame/field exposure, restart/reset function, readout on command, internal/external (HD/VD, VS) synchronisation, camera settings that can be made at rear panel and many more.

## Standard interfacing

System integration is simple because of small size, C mount, EIAJ standard 12-pin connector, single DC 12V power supply requirement and low power consumption of 2.1 (2/3 type), 2.0 (1/2 type), 1.9 (1/3 type) W

## Rugged construction

The XC-ST Series offer high vibration and shock tolerance (10G (20 ~ 200 Hz) and 70G) and an impressive 70,000 hours MTBF.

# Benefits

## Versatile

The XC-ST Series is well suited for general purpose machine vision or microscopy. It offers high sensitivity using 2/3", 1/2" and 1/3" IT CCDs, flexible trigger shutter functions (including simple trigger with internally generated HD/VD and WEN), electronic shutter function (1/100 to 1/10,000 s) and many other features

## Easy to install and operate

The cameras offer easy installation in tight places, industry standard C-mount, EIAJ standard 12 pin cable for signal and power, BNC standard video out, ease of interchange between modules and more. All camera control switches are accessible from the outside of the camera. Low power consumption that generates less heat and full compliance with EU CE/EMC regulations make the XC-ST Series very easy to apply.

## Reliable

The XC-ST Series offer excellent vibration and shock characteristics (10G (20 ~ 200 Hz) / 70G) and an impressive MTBF of 70,000 hours.

## Technical Specifications

Image device	1/2" IT CCD
Effective picture elements	752 (H) x 582 (V)
Signal system	CCIR standard
Horizontal frequency	15.625 kHz $\pm$ 1%
Vertical frequency	50 Hz
Lens mount	C mount
Flange back	17.526 mm
Sync system	Internal / External (auto)
External Sync system	HD / VD (2 ~ 5 Vp-p), VS

External Sync frequency	Horizontal sync frequency $\pm 1\%$
Jitter	less than $\pm 50$ nsec
Scanning system	625 lines, 50 fields/s, 2:1 Interlaced
Video output	1.0 Vp-p, negative, 75 $\Omega$ unbalanced
Horizontal resolution	560 TV lines
Sensitivity	400 lx, F8 (compensation ON, 0 dB)
Minimum illumination	0.3 lx (F1.4, AGC ON, without IR cut filter)
S/N ratio	58 dB
Gain	AGC (0 ~18 dB) / Manual (0 ~18 dB) / Fixed (0 dB) Selectable
Gamma	ON / OFF
Normal shutter	1/120 ~ 1/10,000 s
External trigger shutter	1/4 ~ 1/8,000 s
Power requirements	DC12 V $\pm 10\%$
Power consumption	2.0 W
Dimensions	44 (W) x 29 (H) x 57.5 (D) mm

Mass 110 g

Operation temperature / Humidity -5°C ~ +45°C / 20 ~ 80%

Storage temperature / Humidity -30°C ~ +60°C / 20 ~ 95%

Vibration 10 G (20 ~ 200 Hz)

Shock resistance 70 G

MTBF 70,600 hrs.

Regulations UL1492, FCC Class A Digital Device, CE (EN50081-2 + EN50082-2), AS4251.1 + AS4252.2

## **Supplied Accessories**

Lens mount cap (x 1)

Operation instructions (x 1)

[www.pro.sony.eu/vision](http://www.pro.sony.eu/vision)