LunaVision+ LV-336

650 TVL Analogue True Day/Night Camera (near-IR)
Datasheet

Features

- 650 TVL resolution
- High sensitivity
- True Day/Night operation
- Wide temperature range, -30°C to +70°C
- Expanded Hi-Dynamic Range
- Fog penetration
- Digital Noise Reduction

Description

The LunaVision+ LV-336 is a 650 TVL 1/3" camera for true day/night operation, with movable IR-cut filter.
The LV-336 is designed to operate in temperatures ranging from -30°C to +70°C and is therefore suitable for installation in e.g. areas with very warm climate without the expense of installing a cooling system.

Day/Night operation

The integrated movable IR-cut filter allows the camera to operate optimally in daylight conditions, rendering perfect colour images. For night-time operation the IR-cut filter is moved out of the optical path and the colour component is suppressed. This allows the camera to capture high contrast monochrome images, including the Near-IR spectrum, with increased sensitivity.
In the night mode the back-focus adjustment is maintained, thanks to a compensation glass with the same refractive index as the IR-cut filter.

Passive cooling

The LunaVision+ camera uses conducted, passive cooling to remove heat from the CCD sensor. The main benefit of this is that it reduces the noise from the CCD thereby providing a better video image, particularly in low-light conditions.

Expanded Hi-Dynamic Range (XDR)

XDR is useful in conditions where there are large variations in brightness in the picture, i.e. when there are very dark and very bright areas in the picture. XDR amplifies the signal level in dark areas and reduces it in very bright areas thereby improving the visibility in the picture.

Fog penetration

The fog penetration function is designed to automatically increase visibility under conditions such as fog, haze and smoke. The camera continuously analyses the picture and once it detects a low-contrast condition, it will automatically enhance the contrast.

Digital Noise Reduction (DNR)

The Digital Noise Reduction function in the LunaVision+ camera analyses the video image and reduces the noise, particularly in low-light conditions. The analysis is based on 2 and 3-dimensional algorithms.

Continuous Digital Zoom

The Lunavision+ LV-336 provides continuous digital zoom with 2x range, selectable from the On Screen Menu (OSM) or via the serial interface.

Copenhagen Sensor Technology A/S
Symfonivej 15
DK-2730 Herlev
Denmark

Phone +45 44 92 18 55
Fax +45 44 92 18 56
Web www.copst.com

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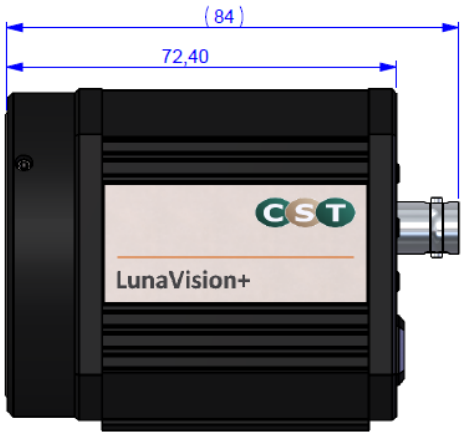
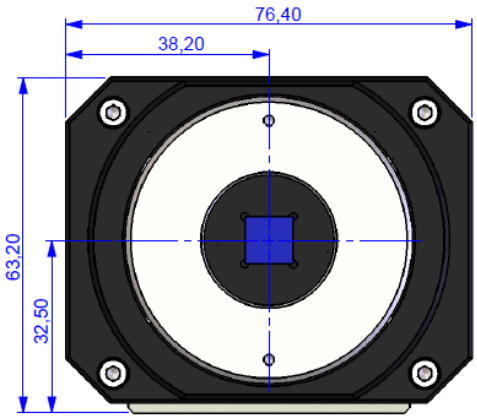
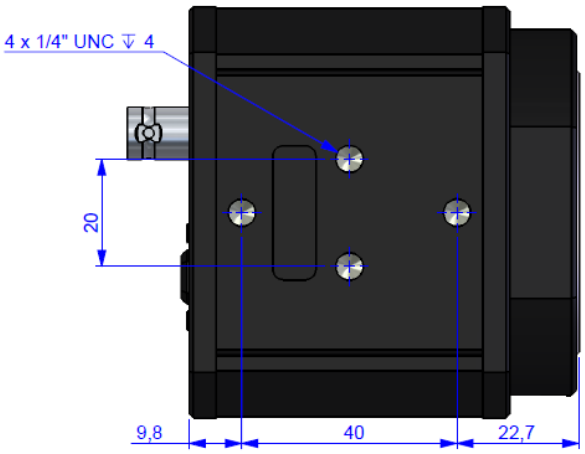
Mechanical outline and dimensions



Side View



Front View



Bottom View

Rear View

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Symfonivej 15	Phone	+45 44 92 18 55
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Specifications

	PAL	NTSC
Image system		
Sensor	High sensitivity colour CCD with complementary mosaic	
Effective pixels (H x V)	976 x 582	976 x 494
Image format	4:3	
Scanning system	2:1 Interlace	
Horizontal frequency	15.625 kHz	15.734 kHz
Vertical frequency	50 Hz	59.94 Hz
Electrical specifications and functions		
Video output	Composite video, 1 Vpp, 75 ohm	
Horizontal resolution	650 TVL	
Sensitivity (typical)	0.007 lx, 25% video, F1.4, AGC on	
Spectral response	Day mode: Visible / Night mode: Visible + Near-IR	
Signal to noise ratio	> 52 dB, AGC Off	
Electronic shutter - Automatic - Fixed	 1/50 to 1/120,000 sec. 1/50 to 1/10,000 sec.	 1/60 to 1/120,000 1/60 to 1/10,000 sec.
Gamma correction	0.45 / 1.0	
Automatic Gain control - AGC range	On / Off 36 dB analogue, 24 dB digital	
Frame integration - Range	On / Off Up to 4 sec.	
IR Sensitive	Yes (night mode)	
Day/night switching	External input. Movable IR-cut filter (with back-focus compensation glass)	
Fog penetration	Off, Low, Mid, High	
White balance	ATW and AWB	
Noise reduction	2D and 3D Digital Noise Reduction	
Backlight Compensation (BLC)	On / Off	
Continuous Digital Zoom	2 x range / Zoom window position / Off	
Configuration	OSD menu with rear panel buttons and serial RS-232	
Mechanical		
Lens mount	CS-mount with back-focus adjustment	
Overall dimensions (W x H x L)	76.4 x 63.2 x 84 mm (incl. connectors)	
Net weight	410 g	
Video connector	75 ohm BNC	
Power & data connector	7-pin terminal block	
Iris control connector	4-pin plug (DC iris)	
Environmental		
Operating voltage	12 VDC ±10%	
Current consumption	200 mA	
Operating temperature	-30°C to +70°C	
Operating humidity	Max. 80%	
Storage temperature	-30°C to +70°C	
Storage humidity	Max. 80%	

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About Us

CST - Copenhagen Sensor Technology A/S is a privately held Danish company specialising in the design and manufacture of high-performance electro-optical solutions for demanding battlefield and surveillance applications.

Founded in 2001, CST has rapidly grown to a mature organisation, capable of serving a global customer base. In modern facilities on the outskirts of Copenhagen, Denmark, CST houses R&D, production, QA and sales and marketing functions. With a collective experience in CCD camera, optics, electronics and software development, the highly skilled staff at CST is committed to creating rugged, durable and innovative electro-optical solutions.

CST is certified to ISO 9001:2008, which applies to the whole process flow of design, development, manufacturing and testing. Furthermore, design and development activities operate in accordance with the ISO 10007:2003 configuration management standard. CST products are not restricted by ITAR.

Customer and OEM solutions

CST has a long tradition of working closely with its customers, identifying unmet needs and creating solutions with sustainable value for the users.

With a strong R&D base at the headquarters in Denmark, CST is able to provide mechanical, optical, software and hardware customisations while meeting the toughest requirements for military, homeland security and high-end surveillance applications.

Whether the need calls for a ruggedized high-precision zoom lens or a highly sensitive CCD camera, or a complete system comprising lens, camera and advanced video processing, CST can offer a fast-track design process. Contact us to discuss your specific requirements. Together we can create a solution that provides the best price and performance ratio.