JVC

D-ILA PROJECTORS

DLA-X900R
DLA-X700R
DLA-X500R
DLA-X35

4K
e-shift3

The Next Stage in 4K

4K

e-shift3

DLA-X900R

4K-resolution D-ILA Projector

- Industry's highest dynamic contrast ratio: 1,500,000:1*
- Industry's highest native contrast ratio: 150,000:1*
- Brightness: 1,300 lumens

*As of November 1, 2013 JVC data.

DLA-X700R

4K-resolution D-ILA Projector

- Dynamic contrast ratio: 1,200,000:1
- Native contrast ratio: 120,000:1
- Brightness: 1,300 lumens

DLA-X500R

4K-resolution D-ILA Projector

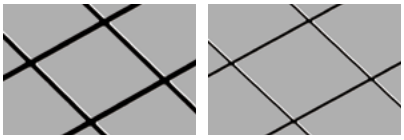
- Dynamic contrast ratio: 600,000:1
- Native contrast ratio: 60,000:1
- Brightness: 1,300 lumens

Original technologies to realise high-precision and high-definition 4K images

Newly Developed Proprietary D-ILA Device

The exceptional picture quality of JVC projectors is achieved by the precision technology behind the company's original D-ILA devices. The latest device, which has an even narrower gap between pixels and is planarised, achieves brighter images rich with contrast. The device is optimally designed to complement ultra-high 4K resolution for precision image expression with virtually no screen-door effect.

New 6th generation
0.7-in. D-ILA device

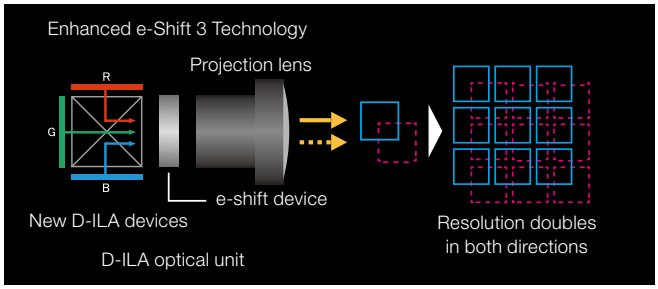


Conventional device | New D-ILA device

Simulated picture

New e-Shift 3 Technology

JVC's e-Shift technology shifts sub-frames by 0.5 pixel both vertically and horizontally to achieve 4 times the pixel density of the original content. Optimised for the new D-ILA device, the latest e-Shift 3 Technology boosts definition to a higher level.



Multiple Pixel Control

High-performance image processing technology is necessary for the precise reproduction of full HD sources on a 4K projector. JVC improved its Multiple Pixel Control technology featured on new models. In addition to wide-range picture detection and high-performance 8-band filtering, Auto Mode has been added that performs frame adaptive filtering and picture generation to achieve a high-definition image optimal for a variety of scenes. Multiple Pixel Control lets the user experience immersive 4K images without complicated picture adjustments.

2K image

Input

Multiple Pixel Control equipped with improved high-performance 4K scaling engine

Wide-range picture element detection

Each pixel is analyzed with wide range (21 x 21) detection.

High-performance filtering

Video signal is automatically analyzed frame by frame using 8-band filtering

Generate character optimised images

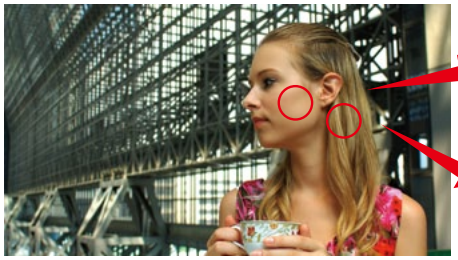
Based on the detection and filtering results, dynamic controls are applied to the background and foreground separately for a richer 4K image.

Output

4K resolution

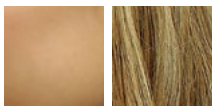
JVC's advanced Multiple Pixel Control reproduces 4K images that look more natural and dimensional.

Original Image



Conventional

Multiple Pixel Control



Facial texture is smooth and natural. Each stand of hair is reproduced with more precision.

Contrast and colour imaging technologies to recreate images with realistic sensation.

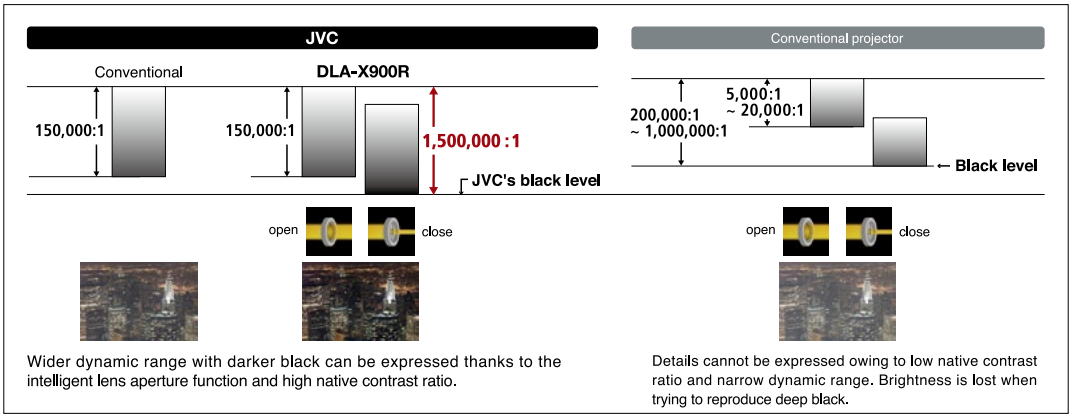
The Industry's Highest Dynamic Contrast Ratio of 1,500,000:1* Achieved with the Industry's Highest 150,000:1 Native Contrast Ratio*

The combination of JVC's original D-ILA device and an optical engine equipped with new wire grid to improve polarisation performance results in the industry's highest native contrast ratio of 150,000:1*. What's more, the industry's highest 1,500,000:1* dynamic contrast range is realised with the newly developed Intelligent Lens Aperture that optimally adjusts black level using an original algorithm to analyze the input video source, and Clear Black that boosts the contrast between light and dark. Enjoy high-definition video full of reality that can only be achieved with such a high native contrast ratio.

* As of Nov. 1, 2013, JVC data

Conventional projector

DLA-X900R



Wider dynamic range with darker black can be expressed thanks to the intelligent lens aperture function and high native contrast ratio.

Details cannot be expressed owing to low native contrast ratio and narrow dynamic range. Brightness is lost when trying to reproduce deep black.

Brightness of 1,300 lumens to Reproduce High Chromatic Purity

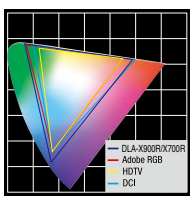
1,300 lumens brightness is achieved by virtue of a new optical engine equipped with new device that uses light more efficiently.
A bright picture with high chromatic purity is realised thanks to optic design that excels in real-life usage situations.

JVC's Unique Real Colour Imaging Technology (DLA-X900R/X700R)

JVC original-development Real Colour Imaging Technology realises wider colour reproducibility and dramatically improves colour rendition with settings for Xenon lamp colour temperature and new dedicated colour profiles. Combined use of picture quality modes and dedicated colour profiles results in 23 different ways to enjoy high quality images.

• Supports x.v.Colour for Wide Colour Space Reproduction

Featuring a colour space wider than that of Adobe RGB or DCI, the D-ILA projectors vividly reproduce a fuller spectrum of colours such as the green of trees, the blue of oceans, etc., which is difficult to recreate accurately. Even wider "x.v.Colour" colour space is supported, enabling viewers to enjoy 4K video with rich colours incorporated in the original 4K source.



• Featuring a Photo Mode that Reproduces the Texture of Photographs

Picture Mode now features a new Photo Mode. Subtle textures and colours contained in still photos are precisely reproduced to enable dynamic pictures to be enjoyed on the big screen.

• Xenon-lamp Colour Temperature Setting

Supports a colour temperature setting Xenon Mode, which is equivalent to that of a Xenon lamp, a popular light source used in cinemas. This setting allows for the authentic reproduction of colours similar to those of film in cinemas, while using highly efficient and economical ultra-high pressure mercury lamps.

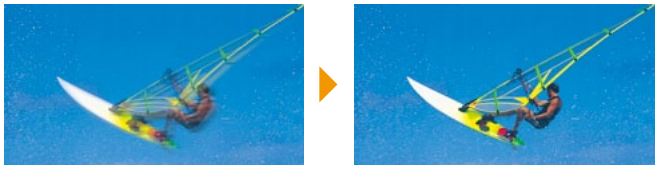
Conventional colour temperature setting

Xenon Mode colour temperature setting

Picture adjustment functions and convenient features

Clear Motion Drive 3

Dramatic improvement has been applied to JVC's original Clear Motion Drive, including the adoption of a motion detection algorithm and high-speed LSI to drastically reduce ghosting or afterimage in high-speed scenes. This function works for 4K and 3D images to recreate clear and smooth movement in the picture.



Clear Motion Drive: Off　　Clear Motion Drive: On

Colour Management System with 7-Axis Matrix

A 7-axis matrix of red, green, blue, cyan, magenta, yellow, and orange ensures the precise adjustment of hue, saturation, and intensity. Selection of the colour spectrum such as skin tones can be easily performed.

Screen Adjustment Modes

The projector selects the best mode to match the screen being used for images with natural colour balance*.

Screen adjustment mode Off　　Screen adjustment mode On

* Please refer to JVC website for a comparison table of primary screens and adjustment modes.

Pixel Adjust Function

The Pixel Adjust function allows users to precisely correct colour deviation in 1/16-pixel increments. It is also capable of segmenting the entire screen into 121 points and adjusting them individually to realise clearer video without colour deviation. Two settings can be stored in the memory.

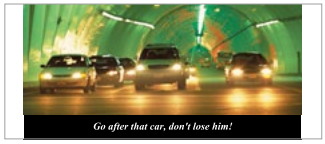
Lens Memory Function

This function stores ten separate lens adjustments for zoom, shift and focus that can be easily recalled when needed. Memory settings can be switched between each setup via the remote controller.

Lens memory examples (when using CinemaScope screen)

Memory 1: Standard 16:9

Memory 2: CinemaScope size



Memory 3: CinemaScope size with subtitles outside of the screen

High Quality 3D Images of D-ILA

In addition to JVC's original Frame Addressing method to reproduce 3D images with vivid colours, the optical engine featuring a set of new D-ILA devices is capable of achieving more brightness. Furthermore, 3D image adjustment functions such as Crosstalk Cancelling are featured to offer the kind of realistic and exciting 3D images that only D-ILA can provide.

RF (Radio Frequency) Method

PK-AG3
RF 3D Glasses

PK-EM2
RF 3D Synchro Emitter

Notes about viewing 3D video content

- The optional 3D Synchro Emitter and 3D glasses are required to view 3D images from the D-ILA projectors. 3D video software (3D media or output of 3D broadcasts) and a 3D-compatible video player are also required.
- Perception of 3D images will vary with individual viewers.
- Stop viewing 3D images immediately if any discomfort such as headaches, dizziness, eye fatigue, etc. occurs.
- Viewing of 3D images by children under the age of five is not recommended.
- Read the Safety Precautions in the User Manual carefully before viewing any 3D source.

Smoothly Control the Projector via a Smart Device

JVC D-ILA projectors can be controlled from smart devices such as smartphones and tablets. The smart device remote control app features an intuitive graphical UI and exclusive controls not found on the projector's supplied remote control for easy operation. Additionally, there are built-in help functions for smoother operation.

Auto-calibration Function*

Using an optical sensor, precise calibration can be performed in just a few easy steps, to match the installation situation of the projector such as its location, lens shift/zoom position, etc.

* Exclusive JVC software installed on a PC connected to the projector via a LAN connection and optical sensor are required to set viewing configurations and auto calibration. Please visit the JVC website for the details.

Industry Certified Projectors (DLA-X900R/X700R)

THX 3D Display Certification*

THX 3D DISPLAY

* Ideal screen-size performance is 90 inches diagonal (16:9).

Equipped with ISF (Imaging Science Foundation) Certified Calibration Controls (C3) mode

isf ccc

3D entry class projector enables high quality viewing even in bright living rooms by virtue of 1,300 lumens brightness and 50,000:1 native contrast.

DLA-X35

D-ILA Projector with 3D Viewing

- Bright picture realised with brightness of 1,300 lumens and native contrast ratio of 50,000:1
- Bright 3D viewing with reduced crosstalk only possible with D-ILA
- 6 Picture Modes and 3 Colour Spaces
- Environmental Setting
- 5-mode Lens Memory
- 3 Screen Adjustment Modes
- Pixel Adjust by 1 pixel increment

Feature Comparison

Model	DLA-X900R	DLA-X700R	DLA-X500R	DLA-X35
4K capability*1	●	●	●	–
4K signal input*2	●	●	●	–
3D capability	●	●	●	●
2D-3D converter	●	●	●	●
Multiple Pixel Control	●	●	●	–
Environmental setting	●	●	●	●
Auto calibration*3	●	●	●	–
Picture Data In/Out*4	●	●	●	–
Picture Tone	●	●	●	–
Pixel Adjust	● (by 1/16-pixel increment, 2 memories)	● (by 1/16-pixel increment, 2 memories)	● (by 1/16-pixel increment, 2 memories)	● (by 1-pixel increment, 1 memory)
Lens Memory	● (10 memories)	● (10 memories)	● (5 memories)	● (5 memories)
Clear Motion Drive	Ver.3	Ver.3	Ver.3	Ver.2
THX 3D Display Certification	●	●	–	–
ISF C3 mode	●	●	–	–
MPC Analyser	●	●	●	–
Real Colour Imaging Technology	●	●	–	–
Colour Management	7-axis	7-axis	7-axis	–
Colour Temperature (Xenon-lamp mode)	●	●	–	–
Screen Adjustment Mode	106 Modes (up to 255 modes)	106 Modes (up to 255 modes)	106 Modes (up to 255 modes)	3 modes
Clear Black	●	●	●	–
Darkness and Lightness Correction	●	●	●	–
Digital Keystone*1	Vertical direction	Vertical direction	Vertical direction	Both directions
Anamorphic Mode	●	●	●	●
Intelligent Lens Aperture	●	●	●	–
Lens Aperture	–	–	–	●(16 steps)
Automatic Lens Cover	●	●	–	–

*1 This function cannot be used while projecting in 3D mode. *2 50p/60p compatible with 4:2:0 colour base. *3 Requires a commercially available optical sensor and dedicated software as well as PC and LAN cables.
*4 Requires dedicated software as well as PC and LAN cables.

Projection Distance Chart

Display size (16:9)			Projection distance	
Screen diagonal (inch)	W (mm)	H (mm)	Wide (m)	Tele (m)
60	1,328	747	1.78	3.66
70	1,549	872	2.09	4.28
80	1,771	996	2.40	4.89
90	1,992	1,121	2.70	5.51
100	2,214	1,245	3.01	6.13
110	2,435	1,370	3.31	6.75
120	2,656	1,494	3.62	7.36
130	2,878	1,619	3.92	7.98
140	3,099	1,743	4.23	8.60
150	3,320	1,868	4.53	9.22
160	3,542	1,992	4.84	9.84
170	3,763	2,117	5.14	10.45
180	3,984	2,241	5.45	11.07
190	4,206	2,366	5.75	11.68
200	4,427	2,490	6.06	12.30

*Projection distances are design specifications, so there is ±5% variation.

Optional Equipment

PK-L2312U
User-replaceable Lamp

Not suitable for household room illumination

PK-AG3
RF Method
3D Glasses

PK-EM2
RF Method
3D Synchro Emitter

Connectors

DLA-X900R/X700R/X500R

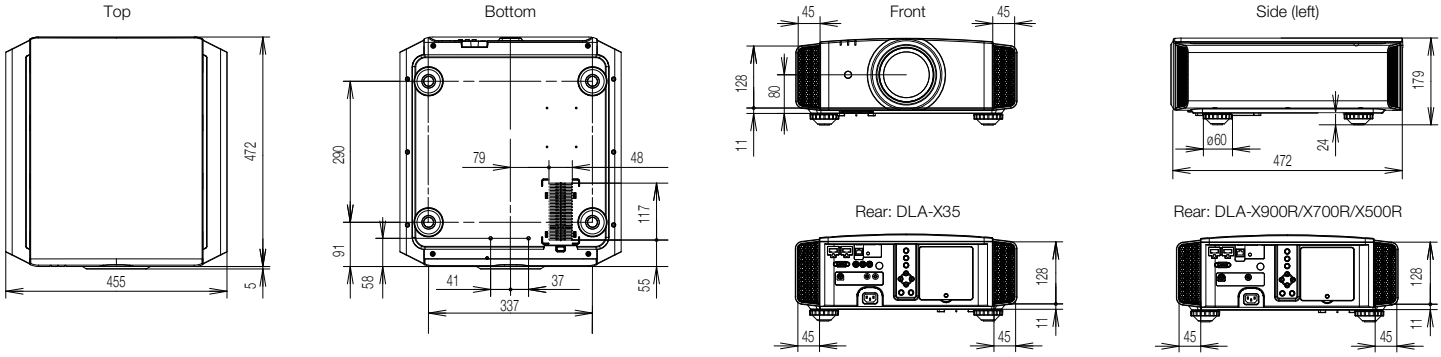
DLA-X35

Specifications

		DLA-X900R	DLA-X700R	DLA-X500R	DLA-X35
Device		0.7 inch Full HD D-ILA (1920 x 1080) x3			
4K e-shift3 Technology		●			–
Resolution		3840 x 2160*1			1920 x 1080
Lens		x2 Zoom & Focus: Motorised; f=21.4-42.8mm / F3.2-4			
Lens Shift		±80% Vertical and ±34% Horizontal (motorised)			
Projection Display Size		60 inch – 200 inch (diagonal)			
Light Source Lamp		NSH 230W (lamp life: approx. 4,000 hours when the lamp is in Low mode)			
Brightness		1,300 lumens*2			
Contrast Ratio	Dynamic	1,500,000:1	1,200,000:1	600,000:1	–
	Native	150,000:1	120,000:1	60,000:1	50,000:1
Input Terminal	Component	–			1 (RCA;Y,Pb/Cb,Pr/Cr)
	HDMI	2 (3D/Deep Colour/CEC compatible)			
Output Terminals	Trigger	1 (Mini jack, DC12V/100mA)			
	3D Sync	1 (Mini DIN 3pin)			
Control Terminals	RS-232C	1 (D-sub 9pin)			
	Remote	–			1 (Mini jack)
	LAN (RJ-45)	1			
Video Input Signal Format	Digital	480p, 576p, 720p 60/50, 1080i 60/50, 1080p 60/50/24, 3840 x 2160p 60/50/30/25/24, 4096 x 2160p*3 24			480i/p, 576i/p, 720p 60/50, 1080i 60/50, 1080p 60/50/24
	Analogue	–			480i/p, 576i/p, 720p 60/50,1080i 60/50
PC Input Signal Format (HDMI)		VGA/SVGA/XGA/WXGA/FWXGA/WXGA+/SXGA/WXGA++/ WSXGA+/WUXGA			VGA/SVGA/XGA/WXGA/ WXGA+/ SXGA/WSXGA+/ WUXGA
3D Format	Frame Packing	720p 60/50, 1080p 24, 1080i 60/50			
	Side-by-Side (half)	720p 60/50, 1080p 60/50/24, 1080i 60/50			
	Top & Bottom	720p 60/50, 1080p/24			
Power Consumption		360W (Normal standby: 7W, Eco-mode standby: 0.4W)			330W (Normal standby: 0.8W, Eco-mode standby: 0.4W)
Fan Noise		21dB (When the lamp is in Low mode)			23dB (When the lamp is in Low mode)
Power Requirement		AC110V-240V, 50/60Hz			
Dimensions (W x H x D)		455mm x 179mm x 472mm			
Weight (net)		15.0kg		14.7kg	14.8kg

*1 Resolution is 1920x1080 at 3D mode.
*2 Measurement, measuring conditions, and method of notation all comply with ISO 21118.
*3 When the video input signal is at 4096 x 2160p, data above 3,840 is not displayed equally on the left and right.

External Dimensions (unit: mm)



• D-ILA is a registered trademark of JVC KENWOOD Corporation. • e-shift is a registered trademark of JVC KENWOOD Corporation. • The projector is equipped with an ultra-high pressure mercury lamp, which may break, emitting a loud noise, when it is subjected to shock or after it has been used for some length of time. • Please note that, depending on how the projector is used, there can be considerable difference between individual lamps regarding how many hours they will operate before requiring replacement. • An additional payment is required for installation of a new lamp, if necessary. • The projector lamp requires periodic replacement and is not covered by warranty. • Please be aware that, because the D-ILA device is manufactured using highly advanced technologies, 0.01% or fewer of the pixels may be non-performing (always on or off).

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