

An all-new 3D D-ILA projector for professional use
that provides unparalleled picture quality.

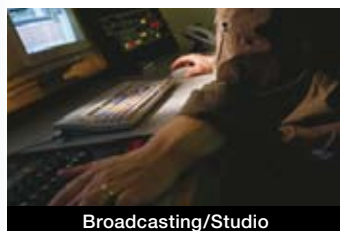


Professional 3D D-ILA projector from JVC delivers remarkable image reproduction and answers any installation requirement.

The DLA-F110 is an all-new professional 3D projector that ensures remarkable image reproduction when used for a variety of applications such in museums, post-production studios, academic institutions, planetariums, and simulators. It is also ideal for videoconferencing needs and creating virtual reality images, which can only be made possible by the D-ILA method.



Museum



Broadcasting/Studio



Academic/Multi-purpose Hall



Simulator



Planetarium



Medical



Design/R&D/Virtual Reality

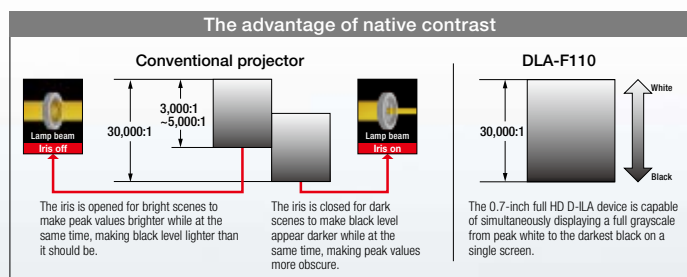


Aquarium/Museum

Dynamic high-quality images

■ Native contrast of 30,000:1

A native contrast ratio of 30,000:1 is realised by incorporating JVC's original D-ILA device with a new optical engine and newly developed lens system. Thanks to truer black levels, darker images such as the night sky can be more precisely reproduced to make the DLA-F110 suitable for displaying content with considerable depth such as that shown at museums, laboratories, planetariums, etc.



Conventional projector



DLA-F110

■ 1,700-lumen brightness

The optical engine utilises a newly developed 220W ultra-high pressure mercury lamp to achieve a brightness level of 1,700 lumens. And the high-performance 2X motorised zoom lens features an all-glass lens system with 17 elements in 15 groups, including an ED (extra-low dispersion) lens. The combination of this lamp and lens system improves focusing performance while drastically reducing chromatic aberration and colour bleeding to realise the projection of very precise images with exceptional depth. The lens system is also equipped with a 16-step lens aperture function that enables brightness adjustment to not only suit user preferences but also usage environment, helping to ensure deeper and truer black levels.



■ Equipped with JVC's originally developed D-ILA device

The projector is equipped with a 0.7-inch D-ILA device that is originally developed by JVC. This full HD resolution (1,920 x 1,080 dot) device is capable of fully projecting at UXGA (1,920 x 1,080 pixel) screen resolution like that found on notebook PCs. The D-ILA method* is renowned for its smooth video projection without the "screen-door" effect even for large screen sizes, meaning that when combined with the high-definition capability of D-ILA devices, text and numerals in subtitles or on the screen are reproduced clearly without any bleed. D-ILA device is also known for its minimum pixel burn-in that helps to ensure long operating life and stable performance.

*The D-ILA method is a device originally developed by JVC and is also known as the LCOS (liquid crystal on silicon) method.



D-ILA devices



Conventional method



D-ILA method

■ New Colour Management System with 7-axis matrix

In addition to the ordinary 6-axis matrix of red, green, blue, cyan, magenta, and yellow, the new Colour Management System features a seventh matrix of orange to ensure the precise adjustment of hue, saturation, and intensity. The addition of the orange axis also helps in enhancing the selection of the colour spectrum for skin tones. And for improved operability, only the colour being adjusted will be shown on the screen while the others are displayed in black and white.



Displays only the colour being adjusted; others are displayed in black and white.

■ Customised gamma control

Manual adjustment of gamma curve is possible via an on-screen display, allowing the viewer to adjust projector luminance levels by either increasing contrast in scenes that are too dark or dimming washed-out scenes to ensure precise brightness levels suited to individual preferences. Up to three settings can be adjusted and stored for future use.





D-ILA projection in 3D*

It is now possible to enjoy the excitement of 3D stereoscopic images in the comfort of your living room without using a special screen. The DLA-F110 employs a Frame Sequential 3D method to display left and right images simultaneously, which when viewed with a pair of 3D Active Shutter glasses that darken alternately for each eye, enables 3D images to be viewed. Additionally, the fast response characteristics and picture quality offered by D-ILA technology allow viewers to enjoy vivid and colourful 3D images with far less crosstalk or image ghosting. This D-ILA projector is compatible with a variety of 3D formats including Frame Packing for Blu-ray 3D, Side-by-Side (used mainly for broadcasting), and Top-and-Bottom.

*Optional 3D Glasses (PK-AG1) and 3D Synchro Emitter (PK-EM1) are required for viewing images in 3D. Note: Keystone, anamorphic mode, and certain other functions cannot be used while projecting in 3D mode.

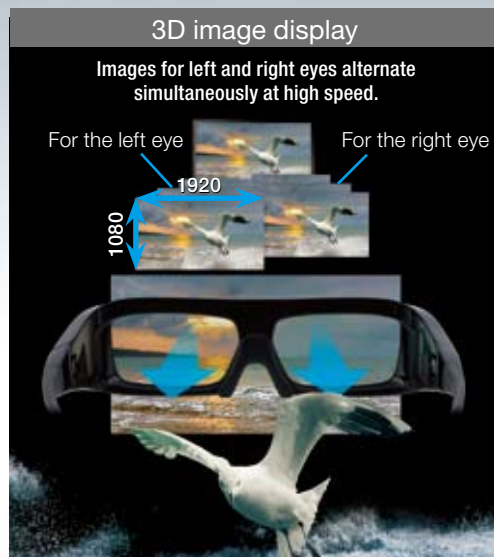
Optional Equipment



3D Glasses
PK-AG1-B



3D Synchro Emitter
PK-EM1



Notes about viewing 3D video content

- The optional 3D Synchro Emitter and 3D glasses are required to view 3D images from the DLA-F110. 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. occur.
- 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.

Flexible installation and easy maintenance

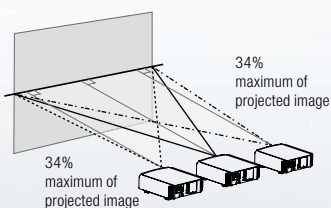
Powered lens shift and 2X zoom lens

As standard equipment, the DLA-F110 features a 2X motorised zoom lens with motorised focus that can project images on a large 100-inch screen at distances of between 3.1 and 6.2 meters. Additionally, setting up the projector in locations best suited for projection is facilitated by the $\pm 80\%$ vertical and $\pm 34\%$ horizontal powered lens-shift function with remote control.

NOTE: Shift range values are used to set vertical and horizontal shifts individually. The maximum shift value will differ when vertical and horizontal lens shift are adjusted together.

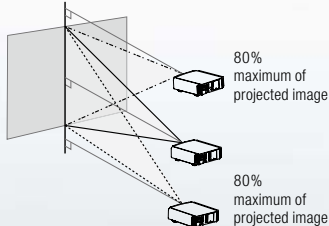
Horizontal position

Note: Vertical position is set at 0% (centre)



Vertical position

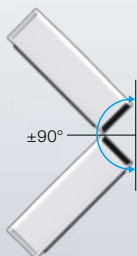
Note: Horizontal position is set at 0% (centre)



Tilted installation up to 90° vertically

The projector can be installed vertically on any surface by tilting it up to 90 degrees, making the DLA-F110 suitable for use in confined spaces or otherwise difficult installation requirements.

Note that a special bracket is needed if installing the projector pointing downward at an angle of up to 45 degrees from the vertical.



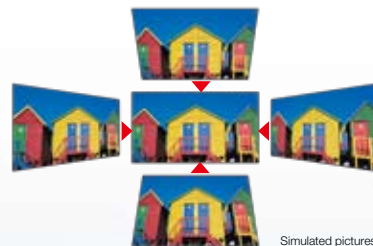
Lamp replacement after 3,000 hours (Normal mode)

A highly efficient and economical 220W ultra-high pressure mercury lamp is used to realize an extended operating time of up to 3,000 hours in Normal mode.



Keystone function

Distorted images that are caused by vertical tilt on the projector can be adjusted via the Keystone function. When the projector is positioned outside of its lens shift coverage area, the Keystone function digitally adjusts distorted images to make them look more natural.



Simulated pictures

A wide range of input and output terminals

In addition to two HDMI terminals, the DLA-F110 is equipped with two analog RGB inputs and is also compatible with PC analogue signals. Other terminals making the projector seamless with various systems and applications include RC-232C, a LAN terminal for projector control, remote terminals for remote operation via connection of an extended IR sensor, and a trigger terminal for an anamorphic lens.



DLA-F110

D-ILA Projector



■ 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

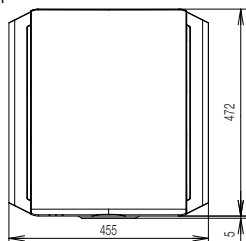
*Projection distances are design specifications, so there is ±5% variation.

■ Specifications

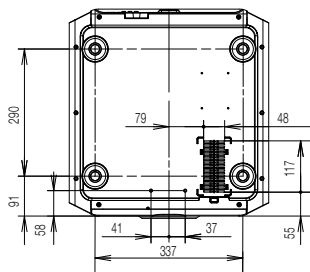
DLA-F110		
Device	0.7-inch D-ILA x3	
Resolution	Full HD D-ILA device (1,920 x 1,080)	
Lens	2 x motorised zoom / focus f=21.4mm - 42.8mm F=3.2 - 4	
Lens shift function	±80% vertical and ±34% horizontal (motorised)	
Projection size	60 - 200 inches (screen diagonal)	
Light source lamp	220W ultra-high pressure mercury lamp (lamp life: approx. 3000 hours with lamp used in standard mode)	
Brightness	1,700lm	
Contrast ratio	Native: 30,000:1	
Input terminals	Component	1 (RCA)
	HDMI	2 (ver.1.4a, 3D, Deep Colour CEC compatible) featuring lock function
	Analogue RGB (PC)	1 (D-sub 15-pin)
Output terminals	Trigger	1 (mini jack, DC12V/100mA)
	3D sync	1 (mini DIN 3-pin)
Control terminals	RS232C	1 (D-sub 9-pin)
	Remote	1 (mini jack)
	LAN (RJ-45)	1
Analogue video input signal formats	480i/p, 576i/p, 720p 50/60, 1080i 50/60	
Digital video input signal formats	480i/p, 576i/p, 720p 50/60, 1080i 50/60, 1080p 24/50/60	
PC input signal	HDMI	VGA, SVGA, XGA, WXGA, WXGA+, SXGA, WSXGA+, WUXGA
	Analogue RGB (D-sub 15-pin)	VGA, SVGA, XGA, WXGA, WXGA+, SXGA, SXGA+, WSXGA+, 1920 x 1080, MAC 13", 16", 19"
3D format	Frame packing	1080p 24, 1080i 50/60, 720p 50/60
	Side-by-side	1080p 50/60, 1080i 50/60
	Top and bottom	1080p 24, 720p 50/60
Noise level	20dB (with lamp in standard mode)	
Consumption current	3.5A	
Heat generation	1,260KJ/h (301kcal/h)	
Allowable operating temperature range	5° to 35° C	
Allowable operating humidity range	20% to 80%	
Allowable storage temperature range	-10° to 60° C	
Power requirement	AC 110V - 240V, 50/60 Hz	
Power consumption	350W (stand-by: 0.9W)	
Dimensions: W x H x D, mm	455 x 179 x 472	
Weight, kg (including lens)	15.1	

■ External Dimensions (unit: mm)

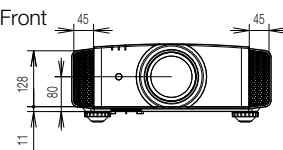
Top



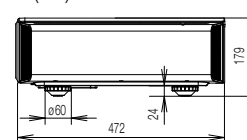
Bottom



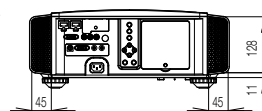
Front



Side (left)



Rear



■ Optional Accessories



User-replaceable Lamp
PK-L2210U



3D Glasses
PK-AG1-B



3D Synchro Emitter
PK-EM1

Design and specifications are subject to change without notice.

The projector is equipped with a 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. The owner of the projector is responsible for all costs related to the replacement of the lamp.

• The projector lamp requires periodic replacement and is not covered by warranty.

• Please note that as 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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