

JVC
PROFESSIONAL

D-ILA™ PROJECTOR
DLA-M4000L

Taking It To The Next Level

4000
ANSI Lumens



SXGA



Breakthrough D-ILA™ technology pushes projection performance to new limits

Full-size, big-screen images have never looked so good. Incorporating JVC's breakthrough D-ILA™ (Direct Drive Image Light Amplifier), the DLA-M4000L delivers true S-XGA images with unprecedented sharpness and clarity on screens up to 15 m (50 ft) across (measured diagonally). Even more impressive is the DLA-M4000L's ultra-high brightness of 4000 ANSI lumens which ensures super-sharp, crystal-clear images with excellent contrast — images that rival the intensity and brilliance of a film projector even when projected in a large, brightly lit room. Better yet, this high-performance projector boasts a compact, lightweight design for easy installation virtually anywhere and is capable of being stacked for even more powerful big-screen performance.



4000 ANSI Lumens



D-ILA™ — A Breakthrough In Projection Technology

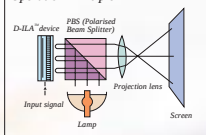
D-ILA™ device for ultra-high resolution

The core of JVC's D-ILA™ projector device is a high-density reflective type LCD able to project high-resolution images of up to 1,365 x 1,024 pixels. With three separate panels provided for R, G, and B signals, JVC's D-ILA™ projector can easily handle the enhanced detail and clarity of S-XGA images, projecting extra-bright, high-contrast, high-resolution images onto screens up to 15m (50ft) (diagonally).



D-ILA™ technology — the secrets of superior quality

Operation Principle



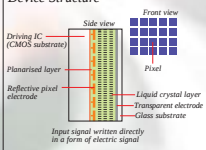
Higher brightness and resolution

LCD panels are composed of a dense array of pixels which are illuminated individually to produce patterns and images. In conventional "transmissive" LCD panels, the driving transistor which activates the pixels is mounted on the same surface as the pixels, so limiting the inherent degree of brightness and resolution. With JVC's D-ILA™ device, on the other hand, the driving IC substrate is located *behind* the liquid crystal layer, so making it possible to achieve much higher levels of brightness and resolution than conventional devices.

Large-screen projection with compact design

The D-ILA™'s high light efficiency maximises the light output power for large screen projection without requiring a large, bulky projection unit. In combination with an advanced system that makes it possible to write the input signal directly on the D-ILA™ device in the form of electric signal, this super-efficient technology has enabled us to simplify the projector's design and incorporate small 0.9" devices. The result is outstanding projection power in a remarkably compact, lightweight unit.

Device Structure



Sharp, noiseless image

By minimising the space between pixels, the D-ILA™'s high-density structure and extra high aperture ratio of 93% effectively eliminates stripe noise and produces crisp, clear images from edge to edge with well-defined details and vivid, true-to-life colours.

Higher contrast

Another advantage of the D-ILA™ device is the vertical alignment ("homeotropic" structure) of the liquid crystal layer. This ensures that projected images have extra high contrast and makes it possible to accurately reproduce even very subtle gradation differences between the lighter and darker parts of the projected image.



Powerful next-generation projection and multi-application versatility

High-Brightness 4000 ANSI Lumens

The D-ILA™'s high light efficiency is supported by a powerful 1.6kW Xenon lamp that makes it possible for the DLA-M4000L to generate an amazing 4000 ANSI lumens of brightness. This powerful light output makes it possible to project clear, bright, highly visible images even in a bright room. Exclusive light condensing technology is also incorporated which increases the ratio of peripheral light to 80%, ensuring uniform brightness in all areas of the screen.

• Brightness is ensured in all areas of screen.

• Poor brightness in peripheral



4000

ANSI Lumens

Xenon Lamp for Natural Colour Reproduction

The powerful 1.6kW Xenon lamp incorporated in the DLA-M4000L assures true colour reproduction and natural realistic images — with quality comparable to those seen in movie theatres. Unlike the metal halide lamps used in conventional projectors, which tend to produce colours with a bluish tinge, the Xenon lamp accurately reproduces the original image colours, so assuring natural, unmediated colour reproduction.

10-Bit Digital Gamma Correction

For more accurate gray scale reproduction, the DLA-M4000L features newly developed 10-Bit Digital Gamma Correction circuitry capable of precisely reproducing even minor tone differences. In combination with the natural emission spectrum of the Xenon lamp, this further enhances the natural characteristics of the projected colour.



• Poor gradation reproduction



• Accurate gradation reproduction

True S-XGA Resolution

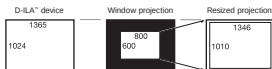
When projected onto a large-size screen, the DLA-M4000L's high-density LCD panels provide true S-XGA resolution without scaling or loss of quality. With a total of 4,193,280 image dots, even the small characters and icons typical of computer displays can be reproduced clearly. This makes the DLA-M4000L the perfect choice for projection of high-resolution 3D graphics or detailed CAD images.



SXGA

Resizing Function with Adaptive DPC Circuitry

You may not always want or need to project S-XGA images. To ensure the DLA-M4000L is versatile enough to meet your projection requirements, we have also included our innovative Adaptive DPC (Digital Pixel Conversion) circuitry which enables the D-ILA™ projector to project XGA (1024 x 768 pixels), S-VGA (800 x 600 pixel), and VGA (640 x 480 pixels), as well as true S-XGA (1280 x 1024 pixels). Optimum pixel conversion is performed by the Adaptive DPC according to the characteristics of the source signal to ensure a clear, undistorted image.



Ex.: S-VGA image projection

When the number of pixels used in the image data being projected differs from the built-in device, you can use either the "Window projection" or "Resizing projection" method.

performance



600" Large-Screen Projection

600-inch

Thanks to its super-high brightness and advanced DILA™ device, the DLA-M4000L can project bright, high-contrast images onto to full-size theatre-size screens. At the 4:3 aspect ratio, possible screen sizes range (diagonal) from 60" – 300" (recommended), all the way up to 600" (max.).*

*When using zoom lens

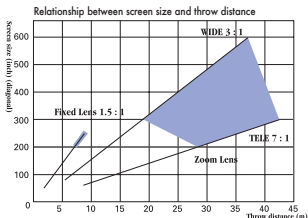
With GL-M4015S 1.5:1 Fixed lens Recommended screen size 70"–200" (4:3 aspect ratio)

Screen size (inch)	65	70	80	90	100	110	120	130	140	150
Throw distance (m)	1.97	2.13	2.44	2.76	3.08	3.39	3.71	4.03	4.34	4.66
Throw distance (ft)	6.46	6.99	8.01	9.06	10.10	11.12	12.17	13.22	14.24	15.29
Screen size (inch)	160	170	180	190	200	210	220	230	240	250
Throw distance (m)	4.98	5.29	5.61	5.93	6.24	6.56	6.88	7.20	7.51	7.83
Throw distance (ft)	16.34	17.36	18.41	19.46	20.47	21.52	22.57	23.62	24.64	25.69

With GL-M4023SZ 2.3x (5.1–7.1) Zoom lens Recommended screen size 80"–300" (4:3 aspect ratio)

Screen size (inch)	60	80	100	120	140	160	180
Wide (shortest)	~8.65	5.06–11.59	6.30–14.34	7.51–17.19	8.75–20.01	10.00–22.87	11.24–25.72
Wide (longest)	~28.38	16.60–37.73	20.67–47.05	24.70–56.40	28.77–65.72	32.81–75.05	36.88–84.38
Screen size (inch)	200	220	240	260	280	300	350
Wide (shortest)	12.47–25.72	12.47–25.72	12.47–28.56	16.18–37.10	17.42–39.42	18.64–42.79	21.74–
Wide (longest)	40.91–84.38	40.91–84.38	40.91–93.70	53.08–121.72	57.15–129.53	61.19–140.39	71.51–
Screen size (inch)	400	450	500	550	600		
Wide (shortest)	24.83–	27.92–	31.01–	34.10–	37.19–		
Wide (longest)	81.46–	91.60–	101.74–	111.88–	122.01–		

For GL-M4010G 1:1 Fixed lens, refer to the chart on back cover.



In the shaded areas in the graph, the projected image may be partially distorted or missed out depending on the distance between the projector and the screen. To project an image with no image distortion or missing, we recommend you to use the projector in the areas defined with solid lines in the graph.

Stackable Design For Enhanced Projection Power

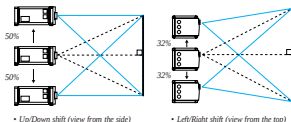
For maximum versatility, the DLA-M4000L has been designed for easy integration into a stacked configuration. By mounting one projector on top of another projector, you can project a combined image onto a single screen, allowing you to achieve even higher levels of brightness than is possible with a single projector. This makes the DLA-M4000L suitable for use even in very large rooms with bright ambient light such as event halls.



Lens Shift Function

The DLA-M4000L features a convenient Lens Shift function that is ideal for use in stacked configurations or off-centre installations. This allows you to easily align the lenses of two projectors by moving the lens up or down and left or right. Up/down shift is $\pm 50\%$ (motorised) and left/right shift is $\pm 32\%$ (manual). As a result, you can install the projector virtually anywhere in a room and still produce a clear, undistorted picture on the screen.

Note: The shift range is narrowed when the up/down and left/right shift are engaged simultaneously. Shift percentage estimates are based on the screen height which is regarded as 100%.



Versatile Multi-Sync Signal Input Capability

To assure compatibility with the widest range of multimedia applications and signal formats, the DLA-M4000L's sync frequency covers 15 to 82kHz (horizontal) and 50 to 78Hz (vertical). Two PC inputs are provided to let you simultaneously input signals from two different computers and switch between them as required.



Easy Handling & Setup

Thanks to its simple, uncomplicated design and small-scale 0.9" projection device, the DLA-M4000L is surprisingly compact and lightweight for a machine of this class. At 70kg, this projector also comes with a host of user-friendly functions for "hassle-free" operation, including a quick alignment function for automatic adjustment of tracking, phase and position, remote-operated power zoom and power focus for adjustment of screen size, and a handy multi-function remote control.



Other Features

- Up-down/left-right inversion
- Selectable colour temperature (High/Mid/Low)
- Selectable background colour (when no signal is input)
- Lamp life warning indicator
- Warning indicator
- On-Screen Menu



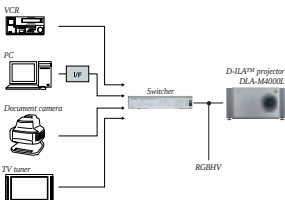
Systems flexibility makes this unit professional applications

Conference/Lecture

Clear, easy-to-see image makes sure your audience gets your message.

When you want to provide information to a large audience (for example, in a lecture hall at a university), you'll find the DLA-M4000L's big, bright image makes it ideal for the task. The sharp, detailed image is bright and clear in all areas of the big screen and is easy to view even from a distance. Since there's no need to turn the lights down, images can be projected as needed without interrupting the flow or structure of the lecture.

System Configurations

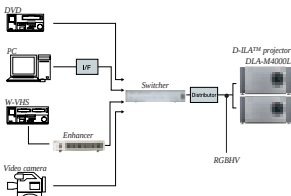


Events/Shows

Attract a crowd with high-quality, big-screen demo.

Draw the crowds to your booth at large-scale events and exhibitions with the dazzling, big-screen images of the DLA-M4000L. Its stackable design makes it possible for you to use more than one unit to display images on larger screens even in really big, bright spaces, while its flexible design and superior operability ensure quick, easy setup and trouble-free operation.

System Configurations

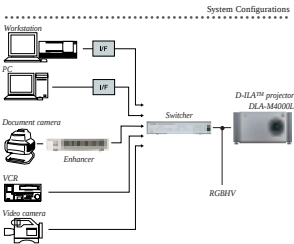


ideal for a wide range of

Presentation/Development/Designing

High-impact image reproduction makes your presentation more persuasive.

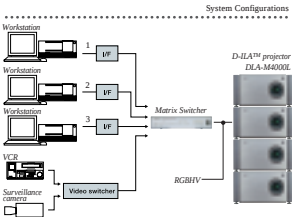
Since it has none of the fuzziness or washed-out look common to conventional video projectors, the DLA-M4000L high-resolution projector is ideal for displaying small characters, detailed images, and high-resolution graphics. Images from PCs, or workstations retain all the quality of the original, ensuring that nothing is lost in the transition to the big screen and making your presentation even more impressive.



Monitoring/Security

High-precision display monitors the situation in detail.

Ideal for monitoring and security management in large facilities or traffic control centres where detailed monitoring is critical, the DLA-M4000L's high-precision multi-source projection capability and systems flexibility makes it an excellent choice for a centralised monitoring system.



Specifications	
Image Device	3 D-ILA devices (0.9 inches diagonal)
Projection Lens	Optional (see below)
Lamp	1.6KW, Xenon lamp
Brightness	4,000 ANSI lumens
Resolution	1,365 x 1,024 pixels, full coverage of S-XGA(1,280 x 1,024 Graphics (S-XGA, XGA, S-VGA, VGA)
Contrast Ratio	More than 350:1
Uniformity	More than 80%
Screen size (mm: width) (inch: diagonal, 4:3)	(3:1 ~ 7:1 zoom): 1,219 mm ~ 12,192 mm (60" ~ 600") (1.5:1): 1,321 mm ~ 5,080 mm (65" ~ 250") (1:1): 1,626 mm ~ 4,064 mm (80" ~ 200")
Throw Distance	(3:1 ~ 7:1 zoom): 5.1 m ~ 42.7 m (16.6 ft ~ 140 ft) (1.5:1): 2.0 m ~ 7.8 m (6.5 ft ~ 25.7 ft) (1:1): 1.6 m ~ 4.0 m (5.1 ft ~ 13.2 ft)
Sync Frequency	Horizontal: 15kHz ~ 82kHz Vertical: 50Hz ~ 78Hz
Input	PC (Mini D-sub 15-pin) x 1 RGBHV (BNC) x 1 Y, Pb/B-Y, Pr/R-Y (BNC) x 1
Output	PC (Mini D-sub 15-pin) x 1
Power Requirement	AC 200V ~ 240V, 50/60 Hz
Power Consumption	2,200 W
Dimensions (W x H x D)	747 x 368 x 793 mm (29.4" x 14.5" x 31.2") (without lens)
Weight	71 kg (157 lbs) (without lens)

Optional Accessories



GL-M4023SZ
2.3x (3:1 ~ 7:1) Zoom Lens



GL-M4015S
1.5:1 Fixed Lens



GL-M4010G
1:1 Fixed Lens

Throw distance at each screen size with GL-M4010G 1:1 Fixed Lens

Throw distance at each screen size with 0.67:1 (16:9) aspect ratio							
Screen size	(Diagonal)	(inch)	80	100	120	150	200
	(Width)	(m)	1.63	2.03	2.44	3.05	4.06
Throw distance		(ft)	5.33	6.66	8.00	10.00	13.32
		(m)	1.54	1.95	2.37	2.99	4.03
Throw distance		(ft)	5.05	6.40	7.77	9.81	13.22

Recommended screen size: 85" ~ 150" (4:3 aspect ratio)

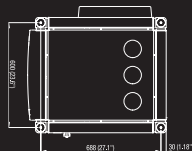
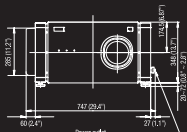
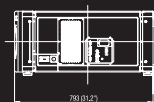
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Dimensions

Unit: mm (inch)



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