

JVC

# D-ILA® PROJECTOR

Incredible film-like image reproduction with the world's first QXGA projector



So advanced it might just be the first in the universe
 JVC presents the world's first ultra-high resolution QXGA projector for super natural color reproduction and clear, sharp details on a large screen

With the introduction of JVC's DLA-QX1G, video image projection takes a quantum leap into the future. Thanks to JVC's original D-ILA® device, the DLA-QX1G is the world's first projector able to deliver the long-awaited ultra-high resolution images that match the depth and true-to-life presence of film. With its QXGA resolution, 7000 ANSI lumens and 1000:1 contrast, the DLA-QX1G delivers images with the super contrast, subtle gradations, and crisp detail which are ideal for projection of workstation graphics, e-cinema productions, HDTV images, and pre-recorded media such as a D-VHS. With QXGA, even the ultra-high-resolution requirements of CAD/CAM images are more than satisfied — image quality is superb with excellent reproduction of even the smallest details. Ideal for use in a wide range of applications — from ultra-high resolution command/control, medical imaging, or GIS/mapping displays to HDTV theaters, electronic cinemas, simulations, 3D imaging, post production and commercial distribution

the DLA-QX1G is the total image projection solution for the 21st century.

# 1000:1 Super Contrast

7000 ANSI Lumens

Native QXGA 3.2M pixels (2048 x 1536 pixels) Film-like Picture



JVG



## High resolution

 World's first native QXGA resolution Provides the world's first native QXGA (2048 x 1536 pixels) ultra-high resolution, ensuring picture-perfect image reproduction With 3.2M pixels, QXGA offers 4 times the XGA resolution of 800K pixels.



## • Full HDTV resolution

QXGA spectacular resolution capability enables it to easily encompass the full HD specifications of 1920 x 1080, allowing projection of full-spec HDTV images without resizing.

## • Ultra-high resolution display Ultra-high resolution CGI and CAD/CAM images can be clearly displayed with vivid detail and crisp contrast.

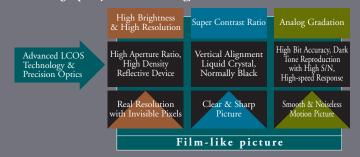
## High brightness

## • 7,000 ANSI lumens

With its powerful 2 kW xenon lamp and new optical system design, the DLA-QX1G achieves outstanding brightness of 7,000 ANSI lumens, enabling projection of dazzling, easy-to-see, high-quality images even under high ambient light.



## D-ILA® High-quality Picture Technology



## D-ILA<sup>®</sup> technology

## • New D-ILA® device

The new QXGA D-ILA® device has evolved from the 0.9-inch D-ILA® device and features 2048 x 1536 pixels, providing a total of 3.2M pixels arranged on a 1.3-inch panel. A separate D-ILA® device is used for each color ( R/G/B), bringing the total number of pixels to 10 million. The result is resolution 2.4 times that of an SXGA device and four times that of an XGA device. With this new QXGA device, HDTV signals (1920 x 1080) can be projected at full resolution without resizing, ensuring silky-smooth images with ultra-fine detail and no visible pixelization.

• 10-bit digital signal processing Signal processing is improved from 8 bits to 10 bits for maximum suppression of signal degradation and noise.

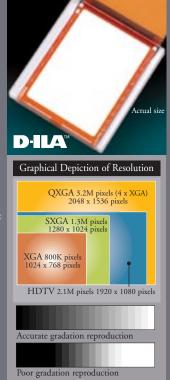
## • 93% aperture ratio

As the D-ILA<sup>®</sup> device's design allow unlimited reduction of the space

between pixels, a high aperture ratio of 93% is achieved, making it possible to project natural-looking images with pixelization almost completely eliminated.

## • Super contrast of 1000:1

Using reflective LCOS (Liquid Crystal on Silicon) and vertical alignment liquid crystals, super contrast of more than 1000:1 is achieved by the device itself.



Experience the ultimate in projection performance with film-quality QXGA images, high brightness, super contrast, and comprehensive pro-standard adjustment functions





# Film-like Picture

Film-like picture projection – high-quality picture display equivalent to a movie theater

## • 1000:1 contrast ratio

A reflective, vertical alignment liquid crystal system and new optical system achieve a super contrast ratio of 1000:1.

 Silky-smooth picture quality with invisible pixelization

The driving IC is located behind the liquid crystal layer, enabling the D-ILA® device to achieve a very high aperture ratio. Since the space between pixels is virtually eliminated, images are smooth and natural-looking.

## Normally black reproduction

With the D-ILA® device, liquid crystals are modulated by applying a low or high voltage. As normally black — black at no modulation is achieved, true black reproduction is possible.

• Analog gradation

Analog gradation allows accurate reproduction of subtle color tones and delicate shades. Gradation characteristics for dark areas are excellent.

## • Xenon lamp

By using a xenon lamp — which has spectrum characteristics close to that of natural light, the DLA-QX1G can faithfully reproduce the original characteristics of images.



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Super Contrast

## Professional adjustment functions

## Three reference white point settings

Color temperature can be switched between three settings (D65/D55/user) according to the input source.

## Gamma mode presets

Three preset gamma tables are selectable and can be customized.

## • Built-in test signal and self-diagnosis function

The test signal can be used to adjust the image and the self-diagnosis function warns of problems with the unit.

## Enhanced flexibility

## • Wide range of inputs

Designed to handle today's diverse range of signal formats, the DLA-QX1G can accept input signals with horizontal frequencies from 31.5 kHz to 135 kHz and vertical frequencies from 48 Hz to 120 Hz, as well as HDTV vertical frequencies of 24 Hz and 30 Hz.

## • Projection of full HDTV signals

HDTV signals of 720P, 1080i, 1080/24sF, 1080/24P can be projected with full resolution.

#### Two optional HDTV input boards

The HD analog video input card converts interlaced HDTV signals to progressive signals. The HD-SDI input card converts HDTV signals to digital signals with less degradation.

## • Two optional zoom lenses & two short-focus fixed lenses

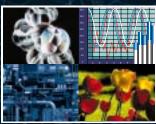
Four optional lenses are available for various installation environments. In addition, up/down/left/right lens shift function (GL-MQ1023SZG/ GL-MQ1015SG) and digital keystone function are provided for more versatile setup.

#### Stackable design

When two DLA-QX1Gs are stacked, brightness of 14,000 ANSI lumens can be obtained.

## Multi-screen projection

As the DLA-QX1G projector's QXGA resolution is four times that of XGA, it is possible to set up a four-screen native XGA system.





GL-MQ1023SZG 3 – 7:1 Zoom Lens (±50% vertical/±30% horizontal shift)

GL-MQ1020ZG 2.1 – 4.8:1 Zoom Lens (Limited shift depending on aspect ratio)

> GL-MQ1015SG 1.5:1 Fixed Lens

(±50% vertical/±30% horizontal shift)

> GL-MQ1010G 1:1 Fixed Lens

(On axis)

## Setting the standard for projection quality in more ways than ever

## A variety of options

Various options including lenses and input cards make it easy to configure the projector to suit the requirements of different installation environments and applications.

## • Optional lenses

Two fixed lenses (1:1, 1.5:1) and two zoom lenses (2.1 to 4.8:1, 3 to 7:1) are available.

## Throw distance range for each lens

_					10.5 -	276'3" (5.0 -	- 64.2 m)
GL-MQ1023SZG			·				
GL-MQ1020ZG			·		16'9"~194'3	" (5.1 - 59.2	m)
GL-MQ1015SG	 5'7"~40	4" (1.7 – 12.	3 m)				
GL-MQ1010G	 3'11"~25'11"	(1.2 - 7.9  m)					
			I				

#### Throw distance vs. screen width

Screen width		GL-MQ1023SZG zoom (3 – 7:1) Wide Tele			GL-MQ1020ZG zoom (2:1 – 4.8:1) Wide Tele				GL-MQ1015SG fixed (1.5:1)		GL-MQ1010G fixed (1:1)		
ft/inch	m	ft/inch	m	ft/inch	m	ft/inch	m	ft/inch	m	ft/inch	m	ft/inch	m
57"	1.45	_	_	33'6"	10.1	_	_	_	_	6'11"	2.1	4'1"	1.5
67"	1.70	17'1"	5.2	38'9"	11.8	—	_	_	—	8'2"	2.5	5'11"	1.8
72"	1.83	18'4"	5.6	41'12"	12.8	—		29'6"	9.0	8'10"	2.7	6'3"	1.9
80"	1.92	20'4"	6.2	46'7"	14.2	—	—	32'10"	10.0	9'10"	3.0	6'11"	2.1
96"	2.44	24'7"	7.5	55'9"	17.0	17'5"	5.3	39'1"	11.9	11'10"	3.6	8'6"	2.6
120"	3.05	30'6"	9.3	69'7"	21.2	21'4"	6.5	48'11"	14.9	14'9"	4.5	10'6"	3.2
144"	3.66	36'5"	11.1	83'4"	25.4	25'7"	7.8	58'9"	17.9	18'1"	5.5	12'10"	3.9
14'	4.27	42'4"	12.9	97'1"	29.6	29'10"	9.1	68'3"	20.8	20'12"	6.4	15'1"	4.6
16'	4.88	48'7'	14.8	110'11"	33.8	34'1"	10.4	78'1"	23.8	23'11"	7.3	17'1"	5.2
20'	6.10	60'4"	18.4	138'5"	42.2	42'8"	13.0	97'5"	29.7	30'2"	9.2	21'8"	6.6
24'	7.32	72'6"	22.1	166'	50.6	50'10"	15.5	116'10"	35.6	36'5"	11.1	25'11"	7.9
26'	7.93	78'5"	23.9	179'9"	54.8	55'1"	16.8	126'4"	38.5	39'4"	12.0	—	—
27'	8.24	81'4"	24.8	186'8"	56.9	57'5"	17.5	131'3"	40.0	—	—	—	
30'	9.15	90'3"	27.5	207'4"	63.2	63'8"	19.4	145'12"	44.5	—	_	_	_
32'	9.76	96'5"	29.4	221'2"	67.4	67'11"	20.7	155'6"	47.4	_	_	_	_
36'	10.98	108'3"	33.0	248'8"	75.8	76'1"	23.2	174'10"	53.3	—	—	—	—
40'	12.20	120'1"	36.6	276'3"	84.2	84'8"	25.8	194'3"	59.2	—	—		—

\*Optical shift function is not available on the GL-MQ1020ZG and GL-MQ1010G lenses.





## • Optional input cards

In addition to the provided RGB analog input card, two optional HDTV input cards are available. The HD analog video input card provides compatibility with legacy analog HDTV devices and includes an on-board de-interlacer for interlaced HDTV sources. The HD-SDI input card allows a convenient, industry standard, direct digital to digital input for HD-SDI sources.





#### Supplied accessories

• Wireless/wired remote control

Convenient and easy-to-use, this remote control lets you operate the DLA-QX1G from a distance. For greater reliability, you can also connect this remote control directly to the DLA-QX1G with the provided 15-m cable.

• Detachable handles



## Major specifications

Image Device	3 D-ILA® Devices (1.3 Inches Diagonal)				
Lamp	2 kW, Xenon				
Brightness	7000 ANSI Lumens				
Resolution	2048 x 1536 Pixels (4:3 Aspect Ratio)				
Contrast Ratio	Greater than 1000:1 (Sequential)				
Uniformity	Greater than 85%				
Sync Frequency					
Horizontal	31.5 kHz – 135 kHz				
Vertical	24 Hz, 30 Hz, 48 Hz – 120 Hz (24 Hz and 30 Hz for HDTV)				
Data Clock	Up to 280 MHz				
Color Processing	10 Bits/Color RGB (approx. 1 billion colors)				
DTV Formats Supported	720/60P, 1080/24P/24sf/30P, 1080/60i/50i (with HD-SDI Module)				
Input Signal	RGB Analog – RGBHV – VGA thru QXGA (Progressive only) HDTV Analog – Y, Pb, Pr HD-SDI – HDTV 24P, 30P, 60i				
Input	3 Input Module Slots				
Electronic Keystone Correction	±15° (Vertical)				
Color Temperature	3 Settings				
Gamma	3 Settings, 12-Bit Processing				
Remote Control	RS-232C (Mini D-sub 9 pin) x 2 (IN/OUT) Wired Remote (Stereo mini ø3.5) x 1				
Projection Lens (Optional)	1:1 Fixed Lens 1.5:1 Fixed Lens, ±50% Vertical/±30% Horizontal Shift 2.1 – 4.8:1 Zoom Lens 3 – 7:1 Zoom Lens, ±50% Vertical/±30% Horizontal Shift				
Power Requirement	AC 200 V – 240 V, 50/60 Hz (Single Phase)				
Power Consumption	2,800 W				
Dimensions (W x H x D)	28-3/8" x 14-1/2" x 37-1/2" (720 x 368 x 951 mm) (without Lens/Handle)				
Weight	187.4 lbs. (85 kg) (without Lens/Handle)				
Options	HD-SDI Input Module HDTV Analog Input Module				
Supplied Accessories	RGB Analog Input Module Detachable Handles Wired/Wireless Remote Control				
Approvals	FCC (Class A), UL, CE				

## Control panel and connectors



Connector boards (provided)



## Allowable input signals

	Signal name	fH	fV	Pixel CLK		ber of tal pixels	Number of vertical lines		Tracking	
		[kHz]	[Hz]	[MHz]	Total	Effective	Total	Effective		
	480P	31.469	59.940	27.000	858	720	525	483	858	
DTV	720_60P	45.000	60.000	74.250	1650	1280	750	720	1650	
	1080_60P <sup>*1</sup>	67.500	60.000	148.500	2200	1920	1125	1080	2200	
	VGA_60	31.469	59.940	25.175	800	640	525	480	800	
VGA	VGA_75	37.500	75.000	31.500	840	640	500	480	840	
, ar	VGA_85	43.269	85.008	36.000	832	640	509	480	832	
	MAC13	35.000	66.667	30.240	864	640	525	480	864	
	SVGA_72	48.077	72.188	50.000	1040	800	666	600	1040	
SVGA <sup>-2</sup>	SVGA_75	46.875	75.000	49.500	1056	800	625	600	1056	
5 V C/1	SVGA_85	53.674	85.061	56.250	1048	800	631	600	1048	
	MAC16	49.725	74.550	57.283	1152	832	667	624	1152	
	XGA_60	48.363	60.004	65.000	1344	1024	806	768	1344	
XGA	XGA_70	56.476	70.069	75.000	1328	1024	806	768	1328	
	XGA_75	60.023	75.029	78.750	1312	1024	800	768	1312	
	XGA_85	68.677	84.997	94.500	1376	1024	808	768	1376	
	MAC19	60.241	74.927	80.000	1328	1024	804	768	1328	
	MAC21	68.681	75.062	100.000	1456	1152	915	870	1456	
	SXGA_60	63.981	60.020	108.000	1688	1280	1066	1024	1688	
	SXGA_75	79.976	75.025	135.000	1688	1280	1066	1024	1688	
SXGA	SXGA_85	91.146	85.024	157.500	1728	1280	1072	1024	1728	
	SXGA_67	70.780	67.003	120.000	1696	1280	1056	1024	1696	
	SXGA_76	81.206	76.179	140.000	1724	1280	1066	1024	1724	
	UXGA_60	75.000	60.000	162.000	2160	1600	1250	1200	2160	
UXGA	UXGA_65	81.250	65.000	175.500	2160	1600	1250	1200	2160	
	UXGA_70	87.500	70.000	189.000	2160	1600	1250	1200	2160	
	UXGA_75	93.750	75.000	202.500	2160	1600	1250	1200	2160	
	UXGA_85	106.250	85.000	229.500	2160	1600	1250	1200	2160	
QXGA	QXGA_60	95.340	59.960	246.750	2588	2048	1590	1536	2588	
Quan	QXGA_60max	95.760	60.000	280.000	2924	2048	1596	1536	2924	
Typical input signals used for this table.										

• Typical input signals used for this table. 1080\_60P is possible only using RGB analog input.

<sup>2</sup> Signals lower than 72 Hz for SVGA cannot be handled.

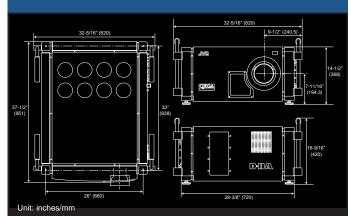
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Dimensions

JVC PROFESSIONAL PRODUCTS COMPANY 
 Division of JVC AMERICAS CORP.

 1700 Valley Road, Wayne, N.J. 07470

 TEL: 973-317-5000, 1-800-526-5308

 FAX: 975-317-5030

 http://www.jvc.com/pro

JVC CANADA INC.

21 Finchdene Square, Scarborough Ontario M1X 1A7 TEL: 416-293-1311 FAX: 416-293-8208 http://www.jvcpro.com

