# JVC
## PROFESSIONAL

D-ILA® PROJECTOR
# DLA-SX21
# DLA-SX21S



Get ready for the high-resolution imaging demands of the future with the DLA-SX21.


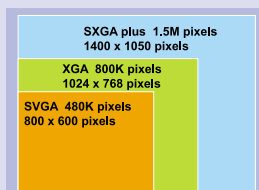
**D-ILA**

*SXGAPlus*

**1400 x 1050 Pixels**

# Ultra-high-quality 1.5M pixel-resolution images, natural color reproduction, and versatile projection functions for impressive, high-impact presentations.

From engineering and architecture to fashion design and advertising, many businesses depend on accurate, high-quality imaging to develop products or to communicate effectively with clients and employees.  Simulations, 3D, and CAD all demand natural color reproduction and the highest-possible resolution to ensure that projected images look as their creators intended.  From small fonts and high-resolution graphics to high-quality animation and motion pictures, the DLA-SX21 projector delivers stunning projection images with ultra-high 1.5M-pixel resolution and superb color reproduction capability.  For even more accurate results, this quality-oriented projector is provided with a color profile, DVI-D Plug and Play, and DIST enhancer.  Convenient presentation functions such as H/V digital keystone and GUI on-screen menu setting are also provided. Versatile enough to handle the requirements of many different applications including multi-window and motion picture presentations, the DLA-SX21 projector is equally at home in technical training classes, medical seminars, business conferences and executive boardrooms. And, with its high-resolution pictures and superb color reproduction, this high-quality projector can also provide the foundation of state-of-the-art home theater, as well.
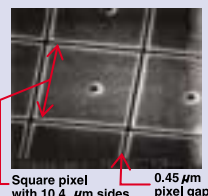
## New technologies

### True SXGA plus (1400 x 1050 pixels) with D-ILA technology

The DLA-SX21 incorporates three high-performance SXGA+ (1400 x 1050) 0.7" D-ILA devices (1.5M pixels x 3) with a total of 4.5M individual RGB pixels.  These pixels are converged on screen to produce a stunning, high-resolution picture with 1.5M high-density converged pixels.  The high-density, reflective liquid crystal structure used in JVC's original D-ILA (Direct Drive Image Light Amplifier) technology achieves the optimal combination of brightness, resolution, contrast and color for the big screen. Thanks to the fine pitch D-ILA device, images are smooth as silk, boasting incredible detail and lush, vibrant, super-realistic color. Because small text, 3D computer graphics, animation and moving pictures are all displayed clearly right into the corners, this system is ideal for multiscreen applications.  You'll be able to effectively combine each image with other images for a more powerful, high-impact presentation.

SXGA plus  1.5M pixels
1400 x 1050 pixels

XGA  800K pixels
1024 x 768 pixels

SVGA 480K pixels
800 x 600 pixels

Comparison of resolution of each device

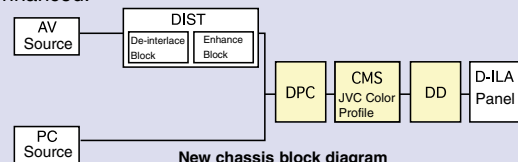Square pixel with 10.4 μm sides    0.45 μm pixel gap

0.7" SXGA Plus device

### New JVC optical engine

JVC has developed a powerful new optical engine that incorporates PBS (Polarized Beam Splitter) circuits.  The PBS circuits separate light source into Red, Green, and Blue (RGB) components and then use these RGB components to compose the image reproduced on-screen.  Incorporated in the DLA-SX21, this original JVC technology minimizes dissipation in the light path and suppresses stray light in the prism, making it possible for this small 0.7" device to deliver an impressive 1500 ANSI lumens with an enhanced contrast ratio.

### New circuitry

Developed specially for the DLA-SX21, this all-new circuitry (shown below) improves the sharpness, S/N, and color reproduction of both graphics and video. Gray scales and shading correction levels are also enhanced.

AV Source
DIST
De-interlace Block    Enhance Block
PC Source
DPC
CMS JVC Color Profile
DD
D-ILA Panel

**New chassis block diagram**

**DPC:** This section is newly designed to make horizontal keystone possible, enabling the full potential of SXGA plus machines to be achieved.
**CMS:** The RGB processor section (CMS) incorporates a well-accepted circuit

**DD:** The drive IC (Device Driver) used in the DLA-SX21's D-ILA device is the same advanced circuit used in our DLA-QX1 QXGA ultra-high resolution projector, assuring optimum device operation according to the input signals.  This operation processing enables the D-ILA device to express film-like gradations.

## Intelligent, advanced presentation projection

### JVC color profile

JVC's color profile technology has been developed to ensure that colors are reproduced with greater fidelity to the original.  Important color reproduction elements such as "color temperature", "gamma" and "RGB gamut" are optimized for each of four modes (sRGB, MacRGB, AdobeRGB, EBU).  Simply choose the mode that matches your source for best results.

#### 4 color profile modes are available.

❶ **sRGB mode**: Corresponds to the color reproduction and color space defined by the international sRGB standard.  This mode provides reliable, faithful color reproduction of images from Windows-based computers and HDTV pictures.

❷ **Mac mode**: Gamma and gamut preset to match Mac computer standard color reproduction.

❸ **Adobe mode**: Gamma and gamut settings optimized for Adobe applications such as Photoshop and Illustrator.

❹ **EBU mode**: Suitable for broadcast video monitors.

### DVI-D Plug and Play

Enables digital-to-digital input and ensures high-quality image reproduction without degradation.

#### Another presentation support system

● 16x digital zoom function  ● Freeze frame  ● Hide buttons
● Selectable 16:9 - 4:3 aspect ratio

### H/V digital keystone correction

Keystone correction can be performed horizontally (±10 degrees) and vertically (±30 degrees). So, projection is possible offset at an angle, making installation flexible.

Before horizontal correction

After correction

Before vertical correction
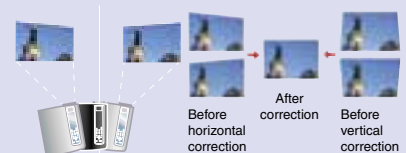
Note :  The maximum correction range is narrowed depending on the resolution and the combination of horizontal and vertical corrections.

### Capture User Logo function

Instead of a blue screen, you can project a customized image (such as a company logo) whenever no other signal is input.  Use this function to add a custom display for the interval between presentations.

JVC PROFESSIONAL

(Simulated picture)

# High-performance video/cinema projection

## Original JVC DIST (Digital Image Scaling Technology)

JVC's original DIST technology consists of IP conversion, pixel density conversion and enhancer technology. Together these technologies ensure full correspondence with most DTV format signals, as well as with conventional NTSC/PAL/SECAM signals. Input signals are converted to SXGA plus resolution with reduced flicker and smear.

ADC → IP → DPC → DSD → 1400 X 788
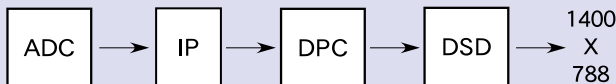
**IP:** The IP conversion system corresponds with all interlaced signals (including NTSC/PAL/SECAM/1080i (50 Hz/60 Hz), 24sF, 25sF, 30sF) by selecting the optimum pull-down system (2-3 or 2-2 pull-down).

**DPC:** The pixel density conversion system achieves favorable frequency characteristics.

**DSD:** JVC's original contour correction technology (DSD - Digital Super Detail) is able to accurately control horizontal and vertical lines while suppressing the influence of oblique lines. Also incorporated is a color difference signal enhancer without overshoot that minimizes smear in color details. Two additional enhancers (with overshoot and without overshoot) are provided to enhance expression of details.

DIST

(Simulated pictures)
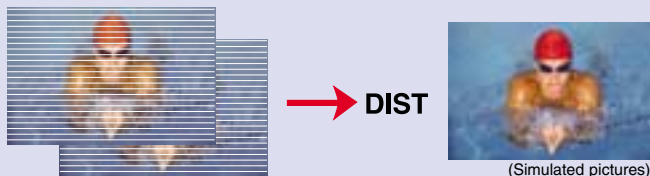
## 720p, 1080i (60, 50), 1080p (24, 25, 30), 1080p (24sF, 25sF, 30sF), HDTV format compatibility

To ensure compatibility with DTV signals, the DLA-SX21 accepts analog signals in the 720p, 1080i, 1080p and HDTV formats.

## High contrast of 800:1

With extra-high contrast ratio of 800:1, the DLA-SX21 projects images with sharp details, crisp edges and great depth. Even in a bright room, images are clear, sharp and natural looking.

## Digital shift

With Digital Shift, you can adjust the display position of the 16:9 image up or down on the 4:3 screen. This gives you a lot more installation flexibility when using the 16:9 screen; for example, when suspending the projector from the ceiling.

(Simulated pictures)

ceiling

# User-friendly design

## Easy-to-change lamp and low running cost

The lamp can be easily replaced from the side and the filter from the front underside of the projector. An NSH lamp (high-pressure mercury lamp) is used, so running cost is kept low. The lamp life is approx. 2000 hours.

## Easy installation

Installation is a snap, so you can take this projector anywhere for a presentation without worrying about setting it up. The feet can be adjusted to optimize the projection angle.

The lamp replacement is easy. Just remove the cover, unscrew the two screws, and pull out the lamp. Place a new lamp in the socket, screw it in, and replace the cover.

## Compact, portable design

Weighing only 5.9 kg (13 lbs.), this projector is compact enough to carry anywhere.

## New GUI on-screen display

The on-screen menu allows you to quickly make adjustments to various settings. The first and second menus are shown simultaneously for simple, systematic setting operation.

## Wireless remote control unit

A wireless remote control unit with cursor keys is provided for remote operation of the projector. The GUI on-screen menu can also be operated with this remote control unit.

# DLA-SX21S projector

In addition to the standard version, the DLA-SX21S is also available with a fixed 1:1 lens. Using an array of multiple DLA-SX21Ss, images can be projected on a wide screen for display in a command/control tower, simulation, mall, large conference, auditorium, 3D system, etc.

# D-ILA®

## Specifications

### SYSTEM
| | |
|---|---|
| Image Device | 3-panel D-ILA® (0.7-inch diagonal) |
| Projection Lens | Zoom lens (2:1 - 2.6:1, power focus, 40% offset) (DLA-SX21), 1:1 short-focus fixed lens (0% offset) (DLA-SX21S) |
| Brightness | 1,500 ANSI lumens |
| Resolution | 1,400 x 1,050 pixels (1.5M pixels), 1,000 TV lines (4:3, vertical, video input) |
| Aspect Ratio | Visible area 4:3 (Selectable 16:9 - 4:3 aspect ratio) |
| Contrast | 800:1 |
| Scanning Frequency | |
| Horizontal | 15 kHz - 120 kHz |
| Vertical | 24, 25, 30, 50 -120 Hz |
| Data Clock | 230 MHz |
| Screen Size (width) | 0.8 m to 6.1 m (2.6 ft to 20.0 ft) (DLA-SX21), 0.8 m to 2.0 m (2.6 ft to 6.6 ft) (DLA-SX21S) |
| Throw Distance (approx.) | 1.6 m to 12.0 m (5.2 ft to 39.4 ft) (DLA-SX21), 0.8 m to 2.0 m (2.6 ft to 6.6 ft) (DLA-SX21S) |
| Lamp | 250 W, NSH |
| Electric Keystone Correction | |
| Vertical | ±30 degrees |
| Horizontal | ±10 degrees |
| Digital Zoom | 4 times (area ratio 16 times, 8-step), (DLA-SX21) |
| Still | Freeze |
| Color profile | sRGB, MacRGB, AdobeRGB, EBU, off (—) |
| Color Temperature | 6500/STD/user(not linked with color profile), selectable |
| On-screen Display | 8 languages (Japanese/English/German/Spanish/Italian/French/Portuguese/Korean) |
| DIST | |
| ON/OFF switching | 480i (NTSC), 576i (PAL), 480p, 576p, 720p@60, 1080i (60,50) 1035i@60, 1080p (24sF, 25sF, 30sF),1080p (24, 25, 30) |

### INPUT SIGNALS
| | |
|---|---|
| RGB/RGBHV | VGA/SVGA/XGA/SXGA/SXGA+/UXGA |
| Composite | NTSC/PAL/SECAM/NTSC4.43 |
| Component | Y, PB/B-Y, PR/R-Y, 480i/480p, 720p, 1080i, 1080/24sF/25sF/30sF 1080/24p/25p/30p |

### INPUT TERMINALS
| | |
|---|---|
| RGB | 2 sources (BNC (PC2)/D-sub 15-pin (PC1)) |
| Digital | 1 source (DVI) (not compatible with SXGA Plus) |
| Video | 3 sources (RCA/S-terminal/BNC (Y/PB/PR) (same as RGB)) |
| Audio | 1 source (mini jack) |

### OUTPUT TERMINAL
| | |
|---|---|
| DC output | DC 5 V, 1.5 A |

### CONTROL TERMINALS
| | |
|---|---|
| Serial input | 1 source (RS-232C, D-sub 9-pin) |
| Serial output | 1 source (RS-232C, D-sub 9-pin) |

### GENERAL
| | |
|---|---|
| Dimensions (WHD) | 298 x 124 x 360 mm (11-3/4" x 4-15/16" x 14-3/16") excluding projections |
| Weight | 5.9 kg. (13 lbs) |
| Power Requirement | 100 - 240, 50/60 Hz |
| Power Consumption | 340 W |
| Options | Lamp for replacement |

*EMC Class B approved.

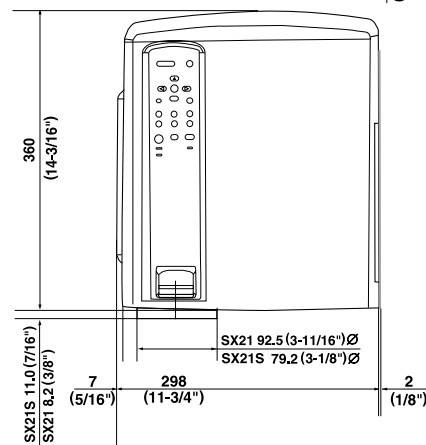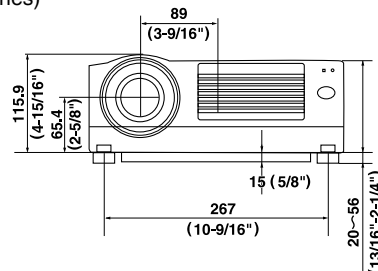## Connectors



## Throw Distance vs. Screen Width

| Screen Size | Throw Distance (approx.) DLA-SX21 | |
|---|---|---|
| Width | Wide | Tele |
| 0.81 m (32") | 1.56 m (5'1") | 2.05 m (6'9") |
| 1.22 m (48") | 2.37 m (7'9") | 3.10 m (10'2") |
| 1.52 m (60") | 2.98 m (9'9") | 3.89 m (12'9") |
| 1.73 m (68") | 3.38 m (11'1") | 4.41 m (14'6") |
| 1.83 m (72") | 3.58 m (11'9") | 4.68 m (15'4") |
| 1.93 m (76") | 3.79 m (12'5") | 4.94 m (16'2") |
| 2.44 m (96") | 4.80 m (15'9") | 6.25 m (20'6") |
| 3.05 m (120") | 6.01 m (19'9") | 7.83 m (25'8") |
| 3.66 m (144") | 7.22 m (23'8") | 9.41 m (30'10") |
| 4.06 m (13') | 8.03 m (26'4") | 10.46m (34'4") |
| 5.08 m (17') | 10.05m (32'12") | -- |
| 6.10 m (20') | 12.08m (39'8") | -- |

| Screen Size | Throw Distance DLA-SX21S |
|---|---|
| Width | |
| 0.81 m (32") | 0.77 m (2'6") |
| 1.22 m (48") | 1.17 m (3'10") |
| 1.45 m (57") | 1.40 m (4'7") |
| 1.70 m (67") | 1.66 m (5'5") |
| 1.83 m (72") | 1.79 m (5'10") |
| 2.03 m (80") | 1.99 m (6'6") |

## Dimensions

### DLA-SX21/DLA-SX21S

unit : mm (Inches)