Canon’s LCOS Projectors:
Exceptional Color. Intricate Detail.
Canon’s REALiS brand projectors feature LCOS (liquid crystal on silicon) technology, recently described by a leading trade magazine as “sort of a ‘best of breed’ combination of LCD and DLP technologies.” LCOS technology produces lattice-free seamless images, and unlike LCD has no “screen door effect” to mute color and detail. LCOS technology has been highly coveted for providing extremely crisp images, intricate details, easy-to-read type (as small as 7 pt.) and “HD images that jump out at the viewer in breathtaking quality,” making it the ideal projector for demanding uses and applications. These include medical image presentations, display of CAD engineering drawings and blueprints, faithful color reproduction of professional photography, as well as countless uses for business, higher education and government.

The Difference is in The Details

REALiS LCOS Projectors vs. Transmissive LCD Projectors

The surface area of each pixel in Transmissive LCD projectors is small, creating an overall grid-like lattice effect (“screen door effect”), which results in muted colors and text that appears faint and uneven. REALiS LCOS projectors have minimal gaps between the pixels, creating color-rich, detailed images, and text that appears dark and crisp. The advantages are easy to see:

LCOS vs. DLP

LCOS Technology displays even subtle color gradation and tones of black and grey, which enhance visual accuracy, while DLP has a limited grey scale.

Display of Fine Lines

Display of fine lines: CAD images, blueprints, and fine lines are reproduced smoothly and accurately with REALiS high-resolution projectors.

Display of Color and Detail

REALiS SXGA+ models can be presented with exceptional color and intricate detail.

Display of Small Text

By using more pixels for each letter, REALiS projectors can display easy-to-read type, as small as 7 pt. often illegible on LCD-based XGA projectors.

Display of Fine Grained Objects

REALiS lattice-free images ensures smooth, crisp displays of fine grained objects, including metallic surfaces, typically dulled by LCD projectors.
Canon’s LCOS Projectors: What’s Behind “Color So Real?”

The Secret is AISYS-Enhanced LCOS Technology

Canon’s proprietary AISYS optical system enhances LCOS technology to achieve crisp, color-rich, intricately-detailed images by efficiently utilizing and equalizing light from the projector lamp. This unique technology effectively boosts the performance functions of brightness and contrast to optimize image quality, in a more compact housing that maximizes affordability. New Optical elements were incorporated into the illumination optical system to enhance uniformity of light. The Polarizing Beam Splitters (PBS) in the color separation and recombination system were redesigned for more precise light control (SX6, SX60 and X600 models) resulting in a new standard in bright, beautiful, high-contrast projected images.

Advantages of the AISYS Optical System

- Seamless image
- High Contrast
- Compact Size
- High Definition
- Accurate Color Reproduction
- Brightness

THE TECHNOLOGY

- LCOS Reflective LCD Panels (Liquid Crystal On Silicon)
- Color Separation/Recombination System
  - Newly developed optical PBS for color separation with a new layout boosts the brightness of the projected image
- PBS: Polarization Beam Splitter
- Illumination Optical System
  - Creates highly uniform light
- Projection Lamp
- Projection Lens
- SXGA+ (1400x1050)
- LCOS and AISYS Improved
- 1.7x Powered Zoom Lens
- 3500 ANSI Lumens
- 1000:1 Contrast Ratio
- Adobe RGB Color Match System
- Auto Set-up
- HDCP Compliant

- SXGA+ (1400x1050)
- LCOS and AISYS Improved
- 1.7x Powered Zoom Lens
- 2500 ANSI Lumens
- 1000:1/2000:1 Contrast Ratio
- Home Cinema Mode
- Auto Set-up
- HDCP Compliant
Higher Education

SX50

- SXGA+ (1400x1050)
- LCOS and AISYS
- 1.7x Zoom Lens
- 2500 ANSI Lumens
- 1000:1 Contrast Ratio

Government

X600

- XGA (1024x768)
- LCOS and AISYS Improved
- 1.7x Powered Zoom Lens
- 3500 ANSI Lumens
- 1000:1 Contrast Ratio
- Auto Set-up
- HDCP Compliant

Business

For Applications that Require Precise Color and Detail.
The REALiS Advantage

Canon’s three new LCOS Multimedia Projectors, the REALiS SX6, REALiS SX60, and REALiS X600 join the award-winning REALiS SX50 to create an impressive line-up of high and super-high (SXGA+) resolution projectors. Whether it’s medical and engineering professionals displaying intricately-detailed, color-rich images; professional photographers or graphic artists needing to precisely match Adobe RGB color; business people or educators presenting charts and images in stunning detail; government or security users requiring exacting imagery; or even discerning home theatre enthusiasts, Canon’s new REALiS Multimedia Projector line provides the features and performance to meet their needs.

Genuine Canon Optics 1.7x Power Zoom Lens

Canon’s SX6, SX60 and X600 are equipped with a 1.7X Powered Zoom Lens. The lens configuration is a six-group assembly with 12 elements and four moving groups, featuring one UD lens and two high-precision double-sided aspherical lenses.

Throw Distance

The 1.7x Ultra-Wide Powered Zoom Lens has the widest zoom range of any of Canon’s projector lenses, giving you a diagonal screen size range of 40” (at a very short distance of 3.9’) to 100” at 9.8’ and up to 300” maximum. (See chart page 11.)

Auto Set-up

Press Auto Set, and within seconds your input source is connected, distortion corrected, focus sharpened and color balanced.

Auto Keystone

Automatically calculates the angle of the projector and corrects for image distortion. Vertical (±20°).

Auto Focus

An infrared sensor on the front of the unit measures the distance to the screen and adjusts the focus in as quickly as one second.

Auto Screen Color

Automatically adjusts the color balance according to the projection surface’s color.

Auto Input

Automatically detects the image signal from the input terminal, identifies it as the input signal and selects it for display.
Off and Go

The SX6, SX60, and X600 models are equipped with an internal charging system to run the fan. This makes it possible to unplug the projector right after using it, while the internal charging system keeps the fan running.

Internal charging system for cooling fan.

When presentation is finished, the unit can be unplugged immediately.

- HDCP Compliant DVI-I terminal, Motion Adaptive IP conversion, and Film Mode (2-3 Pull down)

Feature-Rich Technology Engineered For Excellence.

Compatible with a variety of image input signals, including HDTV.

The SX6, SX60, and X600 models feature DVI-I and analog component HD input interfaces. In addition to SD signals from DVD players, these projectors can display high-definition digital video signals as large as 1080i.

- Digital RGB input/
  Analog RGB input (DVI-I)
- Stereo audio input
- Video input
- S-Video terminal
- Service port
- USB port
- Monitor output
- Analog RGB input/
  Component input

Direct Power ON

The SX6, SX60 and X600 can be switched on and off from a central control terminal without actually pressing the buttons on the main unit, permitting remote operation when the projector is mounted overhead. It is also possible to control the power supply by simply connecting or disconnecting the power cable.

When Direct Power setting is 'On', the projector starts up automatically when power is supplied and is ready to display images in approx. 20 seconds.
Image Modes

Select the image mode to suit the characteristics of the content: "Presentation" mode for briefings and conferences, "Adobe RGB" or "sRGB" when color reproduction is critical, etc.

**Standard:** Prioritizes reproduction of white, closely matching the image characteristics of the original

**Presentation:** Produces a bright, high-contrast display for ease of viewing text and numerical data

**Movie/Cinema:** Suitable for displaying theatrical content; image quality emphasizes gradations in dark areas

**Movie & Photo:** For display of video and digital camera images; clearly defines gradations and improves color reproduction

**Adobe RGB/sRGB:** Reproduces colors in the appropriate color space for accurate projection of content produced in specific standardized formats

**Home Cinema:** Controls brightness while enhancing contrast to a ratio of 2000:1; for display of theatrical content in pitch-dark rooms

More Faithful Color: Special Color Filters for Adobe RGB and Home Cinema achieve Expanded Color Space

Sophisticated Canon color management technology, initially developed for digital cameras and printers, has been adapted for the new line of multimedia projectors. Proprietary color filters incorporated in the AISYS optical system expand the color space that can be displayed. The SX6 is fitted with a special RGB color filter that enables 100% support of sRGB and virtually accurate reproduction of Adobe RGB. The SX60 Cinema filter makes it possible to display the original colors of the film before conversion to a video signal.

Adobe RGB Color Match System

A special RGB color filter on the SX6 enables virtually accurate Adobe RGB color as well as sRGB, which is ideal for professional photography, design, publishing and printing. (SX6 only)
The SX60 multimedia projector is equipped with a home cinema filter making it ideal for this application.

Home Cinema Mode

The SX60 multimedia projector is equipped with a home cinema filter making it ideal for this application.

Crisp Blacks Create Rich Shadow Detail

Precise control prevents excess light leakage, producing rich, detailed gradation even in shadowed portions of projected images. And the crisp blacks produced by the LCOS reflective panels create images with realistic depth and dimension.

6-Axis Color Adjustments

A 6-Axis Color Adjustment function has been incorporated to meet the demands of professionals with demanding color requirements. Both hue and saturation can be adjusted on independent RGB and CMYK color axes.

Dynamic Gamma

When dynamic gamma is ‘on’ gamma is automatically adjusted to optimum values. When projecting moving images with rapid shifts in brightness, each frame is displayed with optimum contrast balance to prevent washed-out whites and blocked-up blacks.

Conventional Home Use Projector

SX60
Quiet Operation

In a projector, heat is generated by its projection lamp and power-supply circuits. The cooling system required to dissipate this heat is one of the main reasons why projectors tend to be noisy. In the new SX6, SX60 and X600, ventilation vents, cooling fan, and layout of the optical array have been engineered with noise prevention in mind, resulting in exceptionally quiet operation.

- Vents designed for efficient cooling
- In-line layout for unobstructed ventilation
- Large fan operates at lower speed

LED Illumination

LEDs on the SX6, SX60 and X600 indicate the projector’s connections and operational status at a glance. When several image input devices are connected, a LED indicates which image signal is selected as the input. The LED illumination on the operation panel flashes to indicate start-up, end of presentation, and other user commands.

Input terminals

Operations panel

LED indicates connector responding to image signal.

LEDs flash to indicate/confirm specific operations.

Convenient Remote Control functions for sophisticated presentations

Digital Zoom

Enlarges a selected single area of the screen, such as specific data in a graph; images can be enlarged a maximum of 12x*.

* Resolution of the enlarged section is reduced.

Spot

Highlights a portion of the image on the screen; the spotlight can be made larger or smaller and moved anywhere on the screen.

Freeze

Freeze-frame function lets you freeze the on-screen display for pauses in the presentation, such as changing PC connections or checking the subsequent image file.

Super-High (SXGA+) Resolution

SXGA+ can project 3.1 times the display area of SVGA and 1.9 times the area of XGA to clearly display large amounts of detailed information, such as simultaneous projection of multiple PC windows (SX6, SX60, SX50 only).
Guide Functions

The SX6, SX60 and X600 display guide messages in an on-screen window, providing feedback on invalid operations and set-up tips. The same window also introduces auto set-up and Off & Go functions when power is switched on or off.

Canon Throw Distance Chart

4:3 Aspect Ratio

<table>
<thead>
<tr>
<th>SX6, SX60, X600</th>
<th>SX6</th>
<th>SX60</th>
<th>SX50</th>
<th>X600</th>
</tr>
</thead>
<tbody>
<tr>
<td>Projector Screen Size</td>
<td>40&quot;</td>
<td>80&quot;</td>
<td>100&quot;</td>
<td>150&quot;</td>
</tr>
<tr>
<td>Screen Size – horizontally</td>
<td>7'8&quot;</td>
<td>5'4&quot;</td>
<td>6'8&quot;</td>
<td>10'0&quot;</td>
</tr>
<tr>
<td>Projection distance (shorted to longest)</td>
<td>3'11&quot; – 6'5&quot;</td>
<td>7'9&quot; – 12'11&quot;</td>
<td>9'8&quot; – 16'2&quot;</td>
<td>14'7&quot; – 24'4&quot;</td>
</tr>
</tbody>
</table>

16:9 Aspect Ratio

<table>
<thead>
<tr>
<th>SX6, SX60, X600</th>
<th>SX6</th>
<th>SX60</th>
<th>SX50</th>
<th>X600</th>
</tr>
</thead>
<tbody>
<tr>
<td>Projector Screen Size</td>
<td>40&quot;</td>
<td>80&quot;</td>
<td>100&quot;</td>
<td>150&quot;</td>
</tr>
<tr>
<td>Screen Size – horizontally</td>
<td>2'11&quot;</td>
<td>5'10&quot;</td>
<td>7'3&quot;</td>
<td>10'11&quot;</td>
</tr>
<tr>
<td>Projection distance (shorted to longest)</td>
<td>4'2&quot; – 7'0&quot;</td>
<td>8'9&quot; – 14'1&quot;</td>
<td>10'7&quot; – 17'8&quot;</td>
<td>15'11&quot; – 26'6&quot;</td>
</tr>
</tbody>
</table>

Select the Projector Right for Your Application

<table>
<thead>
<tr>
<th>Markets</th>
<th>SX6</th>
<th>SX60</th>
<th>SX50</th>
<th>X600</th>
</tr>
</thead>
<tbody>
<tr>
<td>Business</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Government</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Education</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Exhibits</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trade Shows</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hotels</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Retail</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Malls</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Publishing</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Design</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Photography</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Medical</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CAD Engineering</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Structural Design</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Architecture</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Applications</th>
<th>SX6</th>
<th>SX60</th>
<th>SX50</th>
<th>X600</th>
</tr>
</thead>
<tbody>
<tr>
<td>Presentations</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Seminars</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Displays</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lectures</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Documentation</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Information</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Visual Artwork</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Color Matching</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Entertainment</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Home Cinema</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Kit Contents

- Remote Control
- Soft Case
- Computer Cable (DVI-VGA)
- USB Cable
- Component Video Adapter Cable
- Power Cord
### Product Specifications

#### Basics
- **Imaging Device**: 0.7" Reflective LCD panels (LCoS) x 3
- **Aspect ratio**: 4:3
- **Native Resolution**:
  - SX6: SXGA+ 3500 ANSI Lumens
  - SX60: SXGA+ 2500 ANSI Lumens
  - SX50: SXGA+ 2500 ANSI Lumens
  - X600: XGA 3500 ANSI Lumens
- **Brightness**: 88% (SX6), 88% (SX60), 85% (SX50), 88% (X600)
- **Uniformity**: 1000:1 (SX6), 1000:1 (SX60), 1000:1 (SX50), 1000:1 (X600)
- **Contrast**:
- **Keystone**:
  - Vertical: +/- 20 degrees (Auto/Manual)
  - Horizontal: +/- 20 degrees (Manual)

#### Optics
- **Projection lens**: F1.85 - 2.5, f=21.7 - 35.8 mm
- **Zoom**: 1.7x Powered, 12x Digital
- **Focus**: Powered (Auto/Manual)
- **Screen size**: 3.9 - 29.5 ft (1.2 - 9 m)
- **Throw Ratio**: 1.46 – 2.43:1
- **Input Signals**:
  - Analog PC input: UXGA/SXGA+/WXGA/SXGA+/XGA/SVGA
  - Digital PC input: UXGA/SXGA+/WXGA/SXGA+/XGA/SVGA
  - Scanning frequency: H:15 - 100 kHz, V: 50 - 100 Hz, Dot clock: 170 MHz

#### Image Adjustments
- **Color Mode**: sRGB, Presentation, Standard, Movie & Photo
- **Color Adjust**: Dynamic Gamma, 6-axis (RGBCMY) Color Adjustment
- **Wall Correction**: Auto/Manual
- **Mounting**: Ceiling/Rear/Ceiling and Rear
- **Tilt Angle**: Adjusting feet up to 10 degrees

#### Input/Output
- **Terminals**:
  - Input: DVI-I 29pin, Mini D-sub 15pin, RCA x 1, Mini DIN 4pin, Stereo mini jack
  - Output: Digital PC input, Analog PC output
- **Control Terminal**: RS-232C
- **Network**: YES (Optional Network Adapter)

#### Lamp
- **Type**: 270W NSH
- **Lamp Life (Quiet/Normal)**:
  - 2000/1500 Hours
  - 4000/2500 Hours
  - 2000/1500 Hours
  - 2000/1500 Hours
- **Remote Control**:
  - Sensor: Wireless Infrared, Front/Back
  - Mouse Control: USB

#### Ratings
- **Fan Noise (Normal/quiet)**: 35/31 dB
- **Power Consumption (Normal/quiet/Stand-by)**: 355W/290W/7W
- **Temperature Operating**: 41 to 95 F (5 to 35 C)
- **Storage**: -22 to 140 F (-30 to 60 C), 5%RH-90%RH
- **Dimensions (W x D x H)**:
  - SX6: 8.9 x 13.2 x 4.5 in. (226 x 336 x 114 mm)
  - SX60: 11.2 x 3.8 x 11.3 in. (284 x 96 x 286 mm)
  - SX50: 8.9 x 13.2 x 4.5 in. (226 x 336 x 114 mm)
  - X600: 8.9 x 13.2 x 4.5 in. (226 x 336 x 114 mm)
- **Weight**: 10.4 lbs (4.7 kg)