Simple Network Technology

HITACHI
Inspire the Next

Hitachi Projector Catalogue 2012

3LCD

Ultra Short Throw Edition

www.sntechnology.co.za

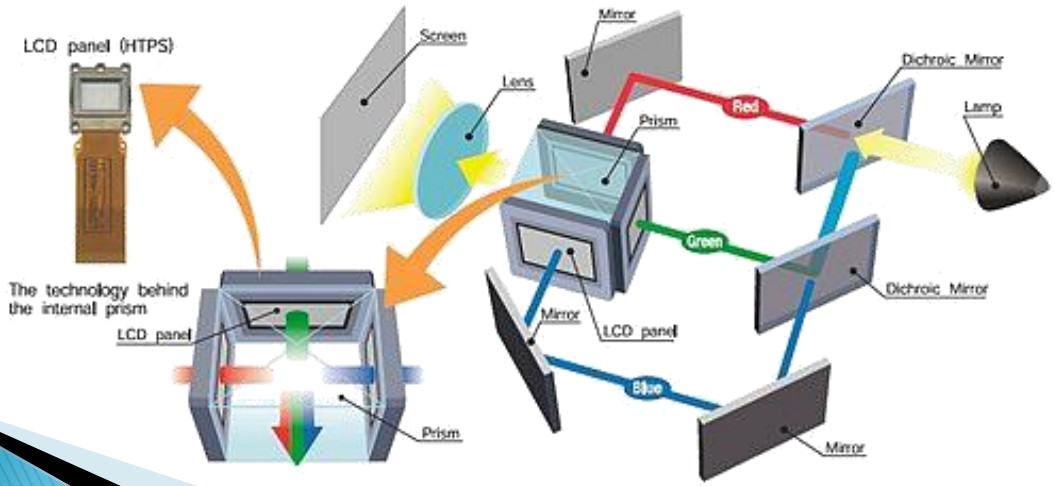
simple network technology

Hitachi 3LCD Technology

- Creating Colours from White Light:
- A projector using 3LCD technology works by first splitting the white light from the lamp into its three primary colours of red, green and blue by passing the lamp light through special dichroic filter / reflector assemblies called “dichroic mirrors.” Each dichroic mirror only allows specific colored wavelengths of light to pass through while reflecting the rest away. In this way, the white light is split into its three primary color beams and each is directed toward, and subsequently through its own LCD panel.

- Image Generation at the LCDs:
- The three LCD panels of the projector are the elements that receive the electronic signals to create the image which is to be projected. Each pixel on an LCD is covered by liquid crystals. By changing the electrical charge given to the liquid crystals, each pixel on an LCD can be darkened until it is totally opaque (for full black), lightened until it is totally transparent (allowing all the lamp light to pass through for full white), or shaded in varying degrees of translucence (for different shades of gray). This is similar to how a digital watch’s characters appear bold and black on its LCD when its battery is new, but start to fade gradually as its battery weakens. In this way, the brightness level on every pixel for each primary color can be very precisely controlled to produce the final pixel's specific color and brightness level required on the screen.

- Color Image Recombination and Projection:
- After each colored light is filtered through its individual LCD panel, the beams are recombined in a dichroic prism that forms the final image which is then reflected out through the lens.



Hitachi 3LCD Technology

- Advantages

- Proponents of 3LCD projection technology claim that it has the following advantages over it closest competing technologies:
- 3LCD projectors are able to produce brighter colors compared to those using single-chip DLP technology. This is because 3LCD projectors mix and project the light beams from all three colours to form each individual pixel's color, while single-chip DLP projectors create colors by projecting them in sequence one at a time and rely on human colour perception to mix and interpret the correct colors for each pixel.
- The way a single-chip DLP projector works sometimes causes viewers to see a "rainbow" or "color breakup" effect where false colors are briefly perceived when either the image or the observer's eye is in motion. As all three primary colors are displayed all the time by 3LCD projectors, they do not suffer from this effect.
- 3LCD projectors are able to display finer image gradations by giving each pixel on the projected image a smooth variation in brightness levels. This is because the liquid crystals for each pixel on an LCD panel can be given fine levels of opacity by varying the electrical charge. On the other hand, a single-chip DLP projector has a single mirror reflecting the lamp light to the lens on its DMD chip for each pixel. It varies the brightness of each pixel by vibrating the mirror between its on or off state in varying frequencies and relies on human perception to interpret the brightness of each pixel.
- 3LCD projectors typically use less power compared to a single-chip DLP projectors of the same brightness rating.
- 3LCD projectors are typically more affordable than those using LCOS or 3-chip DLP technologies.

Hitachi 3LCD Technology

- Disadvantages

- Older 3LCD projectors with large pixel pitches usually have a "screen door" effect
- 3LCD projectors are typically more costly than single-chip DLP ones of similar specifications.
- Single-chip DLP projectors typically have higher contrast ratios compared to older 3LCD models of similar price or brightness rating.
- The LCD panels and dichroic mirrors in 3LCD projectors may degrade with time, causing color shifts, unevenness of illumination, and reduction of contrast. The single DMD chip in single-chip DLP projectors tend to have a longer life span.
- The smallest single-chip DLP projectors are smaller than the smallest 3LCD projector models.
- Current LCOS projector models typically deliver sharper images at higher resolutions than 3LCD projectors . ting technologies:

- **3LCD Projection Structure**
- **External Links**

- Internal Structure of 3LCD Projection
- 3LCD Website

- 3LCD projectors use 3 Chips in EVERY projector for full-time color. With its 3-chip design, 3LCD delivers clear and vibrant images, so true-to-life you may not believe your eyes.

Hitachi 3LCD Technology

- High Color Light Output

- With the fast-paced development of high-definition, rich color video and projection content, the quality and impact of the color produced by a projector has become extremely important. To date, buyers and users have had no way to determine if their projector is capable of producing rich, vivid color. Color Light Output addresses this issue and provides an important picture-quality indicator for classrooms, conference rooms and living rooms.
- What is Color Light Output?

- Color Light Output (CLO) is a specification that provides never before available information about a projector's ability to deliver color. Developed by color scientists using the same approach as White Light Output (Brightness) measurement, Color Light Output provides the buyer additional information about color.

Hitachi 3LCD Technology

- Why is Color Light Output Important?

- Color Light Output is critically important because it measures the brightness of Red, Green and Blue. Red, Green and Blue create white when combined in the right proportions. They also comprise the input signal that tells your projector how to reproduce the color image. If a projector produces bright Red, Green and Blue that when combined equal the brightness of white, then beautifully balanced color is possible.

- Color Light Output provides users with a way to evaluate projector color output and make better buying decisions.
- Understanding Brightness and Color

- Current product specifications such as Brightness (or White Light Output), Contrast Ratio and Resolution give no information regarding a projector's ability to reproduce color.

3 CHIP TECHNOLOGY

Hitachi
Use in limited spaces

- Do you have trouble finding a place to set up your projector? Hitachi ultra short throw and ultra portable projectors allow great presentations in limited spaces.

- “I have no room to set up my projector”
- “I don’t have enough distance for a
- Large image”

“Project from right near the screen”

“Make a large image in a small space”

HITACHI
Inspire the Next

Ultra Short Throw Projectors

- Hitachi CP-A301N
- Basic Specifications
- Resolution : 1,024 x 768 colour pixels (XGA)
- Light Output (Brightness) : 3,000 lumens
- Weight : 3.8kg (8.4 lbs)

- Highlighted Features
- 80” (203cm) from only 53cm
- Advanced networking features
- Tabletop mounting with optional stand

- Hitachi CP-A221N
- Basic Specifications
- Resolution : 1,024 x 768 colour pixels (XGA)
- Light Output (Brightness) : 2,200 lumens
- Weight : 3.8kg (8.4 lbs)

- Highlighted Features
- 80” (203cm) from only 53cm
- Advanced networking features
- Tabletop mounting with optional stand

- Hitachi CP-AW251N
- Basic Specifications
- Resolution : 1,280 x 800 colour pixels (WXGA)
- Light Output (Brightness) : 2,500 lumens
- Weight : 3.8kg (8.4 lbs)

- Highlighted Features
- 80” (203cm) from only 56cm
- Advanced networking features
- Tabletop mounting with optional stand

HITACHI
Inspire the Next

Ultra Short Throw Projectors

- Hitachi CP-AW2519N
- Basic Specifications
- Resolution : 1,280 x 800 colour pixels (WXGA)
- Light Output (Brightness) : 2,500 lumens
- Weight : 4.1kg (9.1 lbs)

- Highlighted Features
- 80” (203cm) from only 53cm
- Fully Interactive
- Advanced Networking Features

- Hitachi BZ-1
- Basic Specifications
- Resolution : 1,280 x 800 colour pixels (WXGA)
- Light Output (Brightness) : 2,500 lumens
- Weight : 4.1kg (9.1 lbs)

- Highlighted Features
- 80” (203cm) from only 53cm
- Fully Interactive
- Advanced Networking Features

- Hitachi iPJ-AW250N
- Basic Specifications
- Resolution : 1,280 x 800 colour pixels (WXGA)
- Light Output (Brightness) : 2,500 lumens
- Weight : 4.1kg (9.1 lbs)

- Highlighted Features
- 80” (203cm) from only 56cm
- Fully Interactive
- Advanced Networking Features

HITACHI
Inspire the Next

Ultra Short Throw Projectors

- Hitachi CP-D10
- Basic Specifications
- Resolution : 1,024 x 768 colour pixels (XGA)
- Light Output (Brightness) : 2,000 lumens
- Weight : 3.5kg (7.7 lbs)

- Highlighted Features
- 80” (203cm) from only 92.7cm
- Advanced Security Features
- Hybrid Filter : 4,000 Hour Cleaning Cycle

Hitachi BZ-1/M Brochure

Adobe Acrobat Document

Hitachi CP-AW2519N CP-AW251N / CP-A301N / CP-A221N Brochure

Adobe Acrobat Document

Hitachi iPJ-AW250N Brochure

Adobe Acrobat Document

Hitachi Projector Warranty

Adobe Acrobat Document

Hitachi CP-D10 Brochure

Adobe Acrobat Document

HITACHI
Inspire the Next

Simple Network Technology

HITACHI
Inspire the Next

Hitachi Projector Catalogue 2012

3LCD

Contact Us : 021 448 6404 or E-mail Us : info@sntechnology.co.za
www.sntechnology.co.za

simple network technology