EPSON®

3LCD Projector

3LCD™
ADVANCED IMAGING TECHNOLOGY

Soft, Bright, Beautiful Epson 3LCD projectors

When powerful images are a must, so is a 3LCD projector. Systems that use 3LCD technology are easy on the eyes because they reproduce astoundingly beautiful images in bright, natural color without dither noise or color break-up. 3LCD - World leader in projection technology.

What is a 3LCD projector?

The technology behind LCD projectors

3LCD projectors pass light through LCD panels about the size of a postage stamp then use the projector's lens to expand the minute details within the images. Thus, the projector is able to reproduce a wide gamut of colors to project clear,detailed and beautiful images with ultra-smooth movement onto the viewing surface. This is the defining characteristic of 3LCD systems.

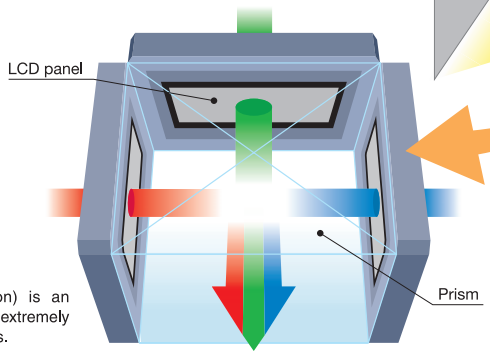
3-panel LCD system...Technology by Epson

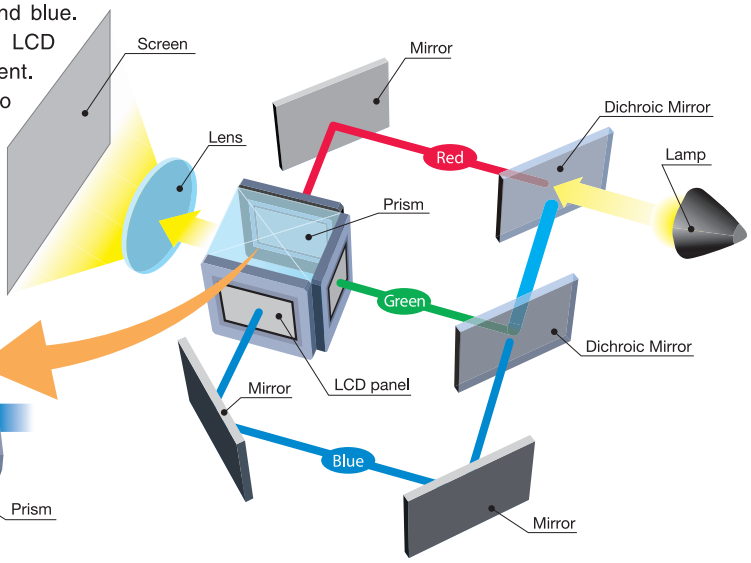
A projector which uses the 3-panel LCD system breaks light waves that are produced by the lamp into the three primary colors, red, green and blue. Each of the three colors of light is then passed through its own LCD panel to provide images in full time color with silky smooth movement. The three colors of light are then recombined through a prism to give the images the rich, full color which is projected onto the viewing surface without the possibility of color break-up.

■ LCD panel (HTPS)

*HTPS(High Temperature Poly-Silicon) is an active matrix transmissive LCD. It is extremely small and produces high quality images.

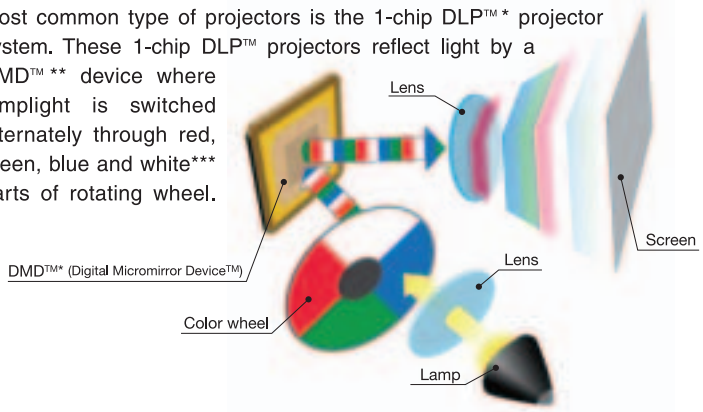
■ The technology behind the internal prism





The technology behind other projectors

In business projectors, after the 3LCD projector system, the second most common type of projectors is the 1-chip DLP™* projector system. These 1-chip DLP™ projectors reflect light by a DMD™ ** device where lamplight is switched alternately through red, green, blue and white*** parts of rotating wheel.



Broadening the reach of 3LCD projectors

3LCD projectors continue to be by far the most widely used projectors in the world. Many different projector manufacturers adopt 3LCD due to its overwhelmingly solid reputation. The more than 6.6 million business projectors units sold over the past 15 years is a testament to customers' trust in the technology and understanding of the stunningly beautiful images LCDs project.

(3LCD projector worldwide market share in FY2003)

■ 3LCD projectors
■ Other projectors include 1-chip DLP™ projector

Based on independent research by Decision Tree Consulting (DTC)

Highly reliable

The high reliability of 3LCD projectors is a matter of great pride for us. Part of why we believe our products are so dependable is because they contain no moving mechanical parts in the light control system. We believe that being as the number 1 projector brand worldwide in 2003(source:Decision Tree Consulting)–is a tribute to customer's trust in the reliability of our 3LCD projector systems.

Advancement of 3LCD projectors

The world of imaging technology is constantly evolving in quality and 3LCD projectors are evolving right along side to bring you more detailed and beautiful images. 3LCD projectors are positioned to bring wonder and excitement to the future world of imaging.

*"DLP™"(Digital Light Processing™) is a trademark of Texas Instruments Incorporated. **"DMD™"(Digital Micromirror Device™) is a trademark of Texas Instruments Incorporated.
***Some 1-chip DLP™ projectors do not contain white but contain other colors.

Notable distinctions for Epson's LCD technology

Epson's LCD technology is a matter of great satisfaction for us. We introduced the world's first 3LCD projector for sale in 1989. Epson has been producing a great number of LCD panels for projectors for many years, and today enjoys the #1 market share in worldwide microdevice market for projection systems.

Epson's worldwide LCD share in projection system microdevice panels in FY2003.

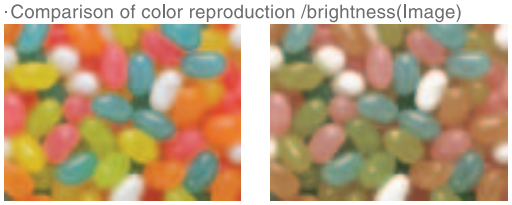
(TSR etc., Based on independent research)

Characteristics of 3LCD projectors

Bright images

Enjoy beautiful color in clear, defined images that are easy on the eyes, even in a bright room. In internal testing we found that Epson 3LCD projectors consistently yielded brighter red, green and blue over top selling 1-chip DLP™ projectors using similar lumens ratings. 3LCD projectors can project bright, vivid images with a low output lamp which uses less electricity. That's also technology that is friendly to the environment.

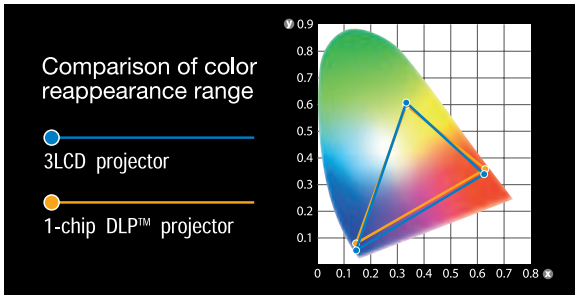
·Comparison of color reproduction /brightness(Image)



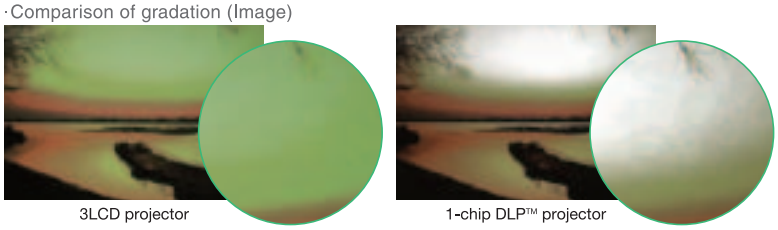
3LCD projector　　1-chip DLP™ projector

Natural images

3LCD systems' wide color production area reproduces primary colors in all their vividness. Especially in darker parts of images, smooth movement in the microscopic LCs in LCD panels allows for smooth, natural color changes. Moreover, due to limited gradation of darker shades, many 1-chip DLP™ projectors can not faithfully reproduce the subtle color changes resulting in a visual distraction called 'Dither Noise' which is not an issue with 3LCDs.



·Comparison of gradation (Image)

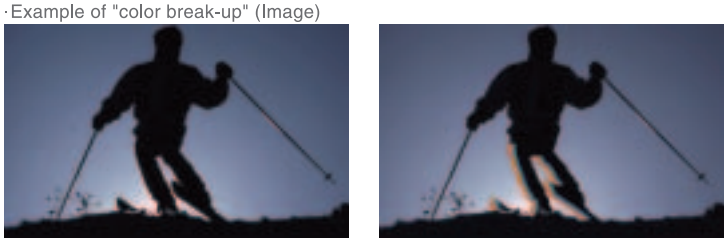


3LCD projector　　1-chip DLP™ projector

Gentle on the eyes

3LCD projectors reproduce images which are easy on the eyes. The images will not have color break-up (or rainbow pattern), which can be seen by some viewers with 1-chip DLP™ projectors. This rainbow pattern perceptible as a result of the color sequential technology can be distracting to those viewers. In short, if it is a 3LCD projector you can be sure of thoroughly amazing, enjoyable images.

·Example of "color break-up" (Image)

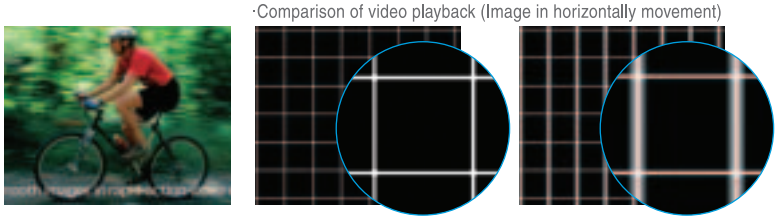


3LCD projector　　1-chip DLP™ projector

Smooth video playback

3LCD projectors use three separate liquid crystal panels- one red, one blue and one green-to form a continuous image containing all colors. This means that even rapid-motion video appears smooth. With color-sequential, 1-chip DLP™ projectors, viewers may see multiple lines or blurry image in rapid motion video.

·Comparison of video playback (Image in horizontally movement)

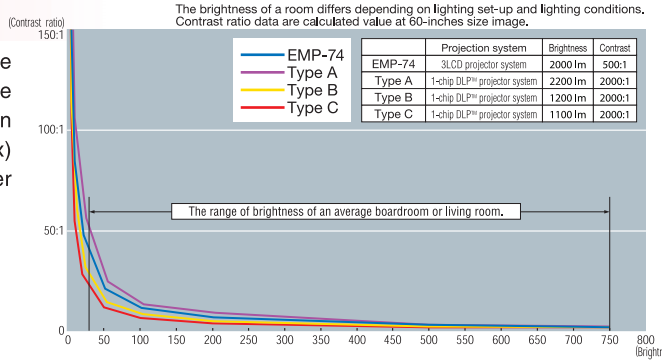


Original　　3LCD projector

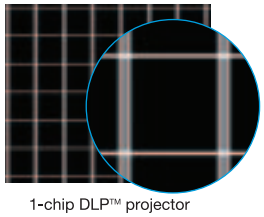
Contrast ratio

The contrast ratio of a projector in actual use changes depending on the brightness of the room, as shown in the graph on the right. In the normal range of brightness (30 to 750 lux) of a meeting room or a living room, a brighter projector will produce a higher contrast ratio.

The brightness of a room differs depending on lighting set-up and lighting conditions. Contrast ratio data are calculated value at 60-inches size image.



	Projection system	Brightness	Contrast
EMP-74	3LCD projector system	2000 lm	500:1
Type A	1-chip DLP™ projector system	2200 lm	2000:1
Type B	1-chip DLP™ projector system	1200 lm	2000:1
Type C	1-chip DLP™ projector system	1100 lm	2000:1



1-chip DLP™ projector

Results above were found by comparing several models of top selling 1-chip DLP™ business projectors from countries with high market share against several Epson 3LCD business projectors with similar specifications and prices.(As of July, 2004) The images are simulated to show results.

History of Epson's LCD

LCD technology has become an integral part of our lives, and Epson has led the way by inventing and bringing a great many LCD products to the market.

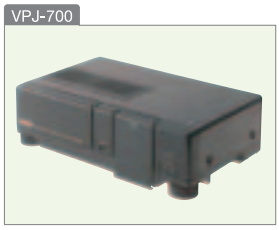
- 1973: Marketed the world's first digital quartz watch with a six-digit LCD to indicate the time. (Seiko Quartz LC V.F.A.06LC)
- 1982: Introduced the world's first TV watch for sale (DXA002)
- 1984: Introduced the world's first LCD pocket color TV to the market (ET-10)
- 1988: Developed the world's first ultla-small,high-definition HTPS LCD with driving circuit
- 1989: Introduced the world's first LCD projector for sale (VPJ-700)

Seiko Quartz LC V.F.A.06LC

DXA002

ET-10

VPJ-700



Multimedia Projector
EMP-8300

SPECIFICATIONS		EMP-8300
Projection system		RGB Liquid Crystal Shutter Projection System
Pixel number		786432 dots (1024 x 768) x 3
Brightness	Hight Brightness mode	5200 lm (Lens shift: Center, Color mode: Dynamic, Zoom: Wide)
	Low Brightness mode	3000 lm (Lens shift: Center, Color mode: Dynamic, Zoom: Wide)
Contrast		1200:1 (Color mode: Dynamic, High Brightness mode)
Color reproduction		Full Color (16,77 million colors)
Projection Lens (Standard Zoom Lens)	Type	Electrical: zoom / focus / lens shift
	F-number	1,7-2,2
	Focal length	53-72 mm
	Zoom ratio	1-1.35
Dimensions Exclude projection lens & feet		491 (D) x 349 (W) x 179 (H) mm
Weight		Approx. 24.7 lbs / 11.2 Kg

Lens sold separately

Multimedia Projector
EMP-9300NL

SPECIFICATIONS	EMP-9300NL
Projection system	RGB Liquid Crystal Shutter Projection System
Pixel number	1470000 dots (1400 x 1050) x 3
Brightness	2500 lm (Lens shift: Center, Color mode: Dynamic, Zoom: Wide)
Contrast	1100:1 (Color mode: Dynamic, High Brightness mode)
Color reproduction	Full Color (16.77 million colors)
Dimensions Exclude projection lens & feet	491 (D) x 349 (W) x 179 (H) mm
Weight (with Standard Zoom Lens)	Approx. 24.7 lbs / 11.2 Kg

Multimedia Projector
EMP-7850

SPECIFICATIONS		EMP-7850
Projection system		RGB Liquid Crystal Shutter Projection System
Pixel number		786432 dots (1024 x 768) x 3
Brightness	Hight Brightness mode	3500 lm (Color mode: Dynamic, Zoom: Wide)
	Low Brightness mode	2500 lm (Color mode: Dynamic, Zoom: Wide)
Contrast		700:1 (Color mode : Dynamic)
Color reproduction		Full Color (16,77 million colors)
Projection Lens	Type	Manual zoom / focus
	F-number	1,7 - 2,3
	Focal length	28 - 37 mm
	Zoom ratio	1 - 1.35
Dimensions Without lens or feet projecting		325 (D) x 419 (W) x 117 (H) mm
Weight (with Standard Zoom Lens)		Approx. 12.1 lbs / 5.5 Kg

Multimedia Projector
EMP-745

SPECIFICATIONS		EMP-745
Projection system		RGB Liquid Crystal Shutter Projection System
Pixel number		786432 dots (1024 x 768) x 3
Brightness		2500 lm
Contrast		400:1
Color reproduction		Full Color (16,77 million colors)
Projection Lens	Type	Manual: zoom/focus
	F-number	1,58 - 1,76
	Focal length	23,7 - 28,5 mm
	Zoom ratio	1 - 1.2
Dimensions Without lens or feet projecting		193 (D) x 276 (W) x 70 (H) mm
Weight		Approx. 3.9 lbs / 1.8 Kg

Multimedia Projector
EMP-81

SPECIFICATIONS		EMP-81
Projection system		RGB Liquid Crystal Shutter Projection System
Pixel number		786432 dots (1024 x 768) x 3
Brightness	Hight Brightness mode	2000 lm
	Low Brightness mode	1500 lm
Contrast		400:1
Color reproduction		Full Color (16,77 million colors)
Projection Lens	Type	Manual: zoom / focus
	F-number	1,70 - 1,87
	Focal length	21,3 - 25,6 mm
	Zoom ratio	1,0 - 1,2
Dimensions Excluding Feet		272 (D) x 350 (W) x 109 (H) mm
Weight		Approx. 8,9 lb / 4,0 Kg

LCD Projector
EMP-S1H

SPECIFICATIONS		EMP-S1H
Projection system		RGB Liquid Crystal Shutter Projection System
Pixel number		480000 dots (800 x 600) x 3
Brightness		1400 lm
Contrast		500:1
Color reproduction		Full Color (16,77 million colors)
Projection Lens	Type	Manual: focus
	F-number	1,4
	Focal length	16,6 mm
	Zoom ratio	Digital Zoom (1,0-1,2)
Dimensions Exclude projection lens & feet		265 (D) x 370 (W) x 106 (H) mm
Weight		Approx. 7.0 lbs / 3.2 kg

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Dealer's Stamp:

3LCD ADVANCED IMAGING TECHNOLOGY

The 3LCD logo is a symbol of the 3LCD system's beautiful picture quality.

Printed on Octorber 2004

EPSON