

For Press Information:

June 20, 2007
Victor Company of Japan, Limited

New Lineup of Proprietary D-ILA High-definition Reflective Liquid Crystal Devices
JVC Develops the World's Smallest^{*1} 1.27-inch 4K2K D-ILA Device

— 43% size reduction and 20,000:1 device contrast —

Victor Company of Japan, Ltd. (JVC) announces a new lineup of its proprietary D-ILA (Direct-Drive Image Light Amplifier) high-definition reflective liquid crystal devices for projectors. These newly developed display devices cram approximately 10-megapixel (4096 x 2400 pixels) — more than four times the number for Full HD — into the world's smallest ^{*1} 1.27-inch 4K2K D-ILA device.

^{*1} ... For a 4K2K display device, as of June 20, 2007.

Since JVC developed the first 7.86-megapixel (3840 X 2048 pixels) 4K2K D-ILA device in fall 2000, it has evolved further through a range of test viewings and verification testing, leading to the development of the 4K2K D-ILA device (1.7 inch device size, 5,000:1 device contrast) and the 4K2K D-LIA projector ^{*2} incorporating the device in September 2004.

^{*2} ... Adopted as the 600-inch projector in the NHK Super High-Vision Theater at EXPO 2005 Aichi.

This newly developed 1.27-inch 4K2K D-ILA device adopts a novel construction and production process to produce fine pixels and achieve the world's smallest 4K2K display device (approximately 43% reduction in area compared with a conventional 4K2K D-ILA device). Incorporating device technologies from the highly regarded DLA-HD1 D-ILA home theater projector that achieves 15,000:1 native contrast without an iris mechanism realized a device offering the world's largest number of pixels — about ten megapixels — and a high 20,000:1 contrast (approximately four times increase).

JVC displays this device and a prototype of the new 4K2K D-ILA projector that incorporates the device at the Infocomm 2007 international audiovisual tradeshow at Anaheim, California, from June 19. The powerful large screen perfectly demonstrates the ultra-high definition and great image quality.

Features of the New 1.27-inch 4K2K D-ILA Device

1. The 6.8 μm pixel pitch achieves the world's smallest ^{*1} 4K2K display device that is just 1.27 inches on the diagonal (approximately 43% area reduction), while achieving 10-megapixel (4096 x 2400 pixels) ultra-high-definition displayed images.
2. The device definition of 4096 horizontal x 2400 vertical dots is compatible with 4K Digital Cinema (4096 x 2160 pixels) being promoted by the Digital Cinema Initiative (DCI). It permits 4x enlarged WUXGA (1920 x 1200 pixels) images for design and CAD applications. It is also equivalent to four times the number of scan lines for PAL broadcasts, permitting a wide range of applications.
3. The 0.25 μm gap between pixels achieves a high aperture ratio of at least 93%. In addition, technology to reduce disorder in orientation, new liquid crystals, and novel crystal orientation technologies significantly cut out extraordinary light, such as scattered and diffracted light reflected from the liquid crystal, to achieve a 20,000:1 device contrast (approximately four times increase).
4. Applying the same LC alignment film used on previous D-ILA devices continues the tradition of long life and high durability.
5. Adjusting the drive frequency and reducing the video-signal input load eliminates the problems of ghosting and phase crosstalk and improves the image deterioration resulting from analog drive.

Background to the Development

In 1996, JVC embarked on the development of ultra-high-definition image systems to surpass High-Vision definition. The company developed the first 7.86-megapixel (3840 X 2048 pixels) 4K2K D-ILA device in fall 2000 and began supplying projectors containing this device for research applications in March 2001.

The 4K2K D-ILA device and the 4K2K D-ILA projector incorporating it were subsequently developed in September 2004.

While pursuing these development activities, JVC has also been tackling the development of ultra-high-definition image systems domestically and internationally, through cooperation with the standardization of the Digital Cinema Initiative (DCI) 4K2K specifications and providing technical collaboration (projectors) for the High-Vision 8K4K system being promoted by NHK.

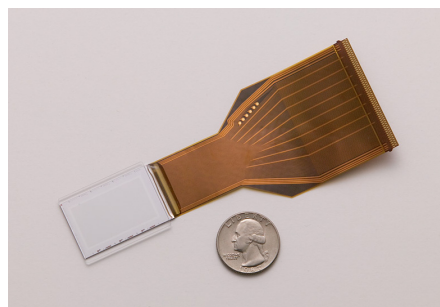
Full HD has spread around the world and infiltrated into general households in recent years. However, great efforts are being made to meet the increasing demands for 4K Digital next-generation, high-definition images that surpass HD for presentation, monitoring and control, and medical applications, including proposals for new digital broadcasting standards that surpass high-definition digital cinema productions and HD broadcasts.

To meet these changes, JVC's new 4K2K D-ILA device offers enhanced performance and the optimal size that future compact 4K2K projectors need to expand into a more diverse range of industries.

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Major Specifications

Device size	1.27-inch diagonal
No. of pixels (H x V)	4096 x 2400 pixels
Pixel pitch	6.8 μm
Gap between pixels	0.25 μm
Aperture ratio	93%
Device contrast	20,000:1
Response time (tr+tf)	4.5 ms
LC mode	Vertical Aligned LC
LC alignment film	Light stabilized inorganic alignment film



* What are D-ILA Reflective Liquid Crystal Devices?

D-ILA is the name given to JVC's proprietary high-performance reflective liquid crystal devices for projectors. These are typical "LCOS" (Liquid Crystal on Silicon) devices that provide both high brightness and high definition.

JVC successfully developed the 1.3-megapixel SXGA type device in October 1997 and launched the D-ILA projector the same year. Since that time, the company has accumulated many years of production experience with devices for high-end projectors and continually released new products: in May 2004, the company launched the world's first domestic Full HD front-projection system and then launched rear-projection systems onto the US market in the July the same year.

The DLA-HD1 D-ILA full High-Vision home theater projector launched in January 2007 features a newly developed 0.7-inch full High-Vision D-ILA device and a new optical engine to achieve a 15,000:1 native contrast — the highest in the industry ^{*3} — that expresses a "true black" quality. This product was well received globally and proved a great hit.

^{*3} For a home theater projector, as of June 20, 2007. Result of JVC survey.

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For further information, please contact:

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