

For Immediate Release:

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## **JVC Develops “Slim HD-ILA Optical Engine”**

*Enables Slim 27-cm Deep 60-inch Projection TV With  
Stylish Tabletop Design and Optional Wall Mounting*

JVC developed a new Slim HD-ILA Optical Engine for image projection, greatly reducing micro device display (MDDP) projection TV set depth while maintaining a stylish tabletop design approximately 40 percent reduced in size compared to other JVC products.

The technology led to a slim 60-inch full high-definition (HD) projection TV only about 27-cm deep including stand -- equal to or slimmer than PDP or LCD TVs. This HD-ILA projection TV can fit in spaces that previously could not accommodate such a screen size.

In addition, the TV's unique side heat dissipation design enables the rear of the TV to remain flat so that one can place it flush against or mount it directly on a wall; greatly increasing possible scenarios for its use.

JVC will display a prototype 58-inch slim full HD projection TV featuring this technology and using JVC's own D-ILA reflective LCD technology in the optical engine in the JVC booth at CEATEC Japan 2006 to be held at the Japan Convention Center at Makuhari Messe from Tuesday to Saturday October 3-7.



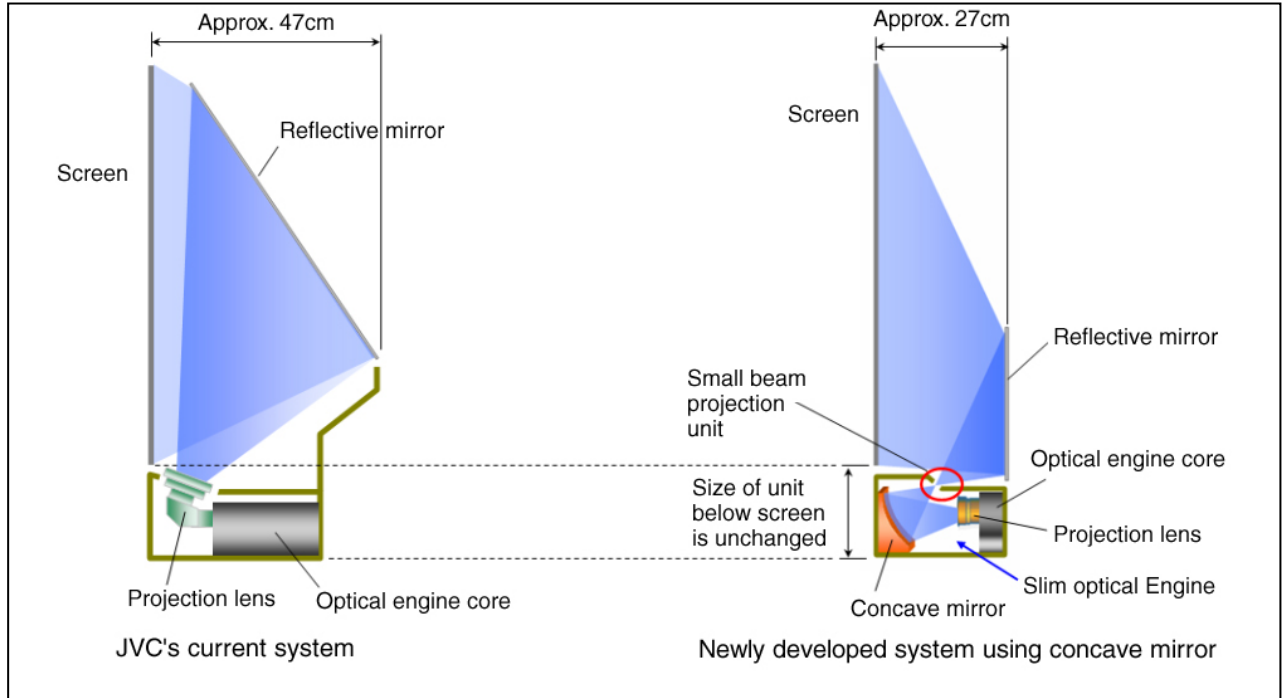
Image of Installed Projection TV Prototype Equipped with “Slim Optical Engine”

### **Features of Newly Developed “Slim Optical Engine”**

#### **1. Optical Projection System of Projection Lens and Concave Mirror Enable Slim Dimensions and Tabletop Design**

JVC adopted a new optical projection system within the projection lens unit that enlarges the image and projects it onto the screen. This combines a new concave mirror with the existing refracting lens to create a projection angle approximately 138 degrees wider and about 1.5 times greater than previous JVC technology. This wide projection angle reduces the projection distance by about 40 percent, enabling JVC to slim down the TV set considerably.

Typical optical projection systems use a convex mirror so the optical engine core must be positioned lower than the beam axis. This makes it difficult to reduce the size below the screen of the unit. This led people to believe it would be difficult to create a slim tabletop projection TV design. JVC however, solved this problem by using a concave mirror and also miniaturizing the optics engine core to enable such a slim tabletop design.



## 2. High Contrast from Shield Design

Since the optical projection system uses a concave mirror, the beam is focused prior to hitting the screen, allowing JVC to make a small beam projection unit. The shield can prevent unnecessary light from entering the optical engine interior, increasing contrast. Dust particles cannot easily enter the interior, also leading to a sharper image.

## 3. Flat TV Set Rear Plane designed for Unique Side Heat Dissipation

The flat rear of the TV allows the set to be wall mounted, expanding the usage scenarios for projection TVs.

## 4. Reasonable Production Cost

The optical projection design does not require a special screen or distortion correction circuit. The miniaturized reflective mirror is one fourth the size of current models. In addition, JVC can construct the newly developed concave mirror using a relatively inexpensive injection molding method, thus enabling a reasonable cost for producing the optical engine.

## 5. JVC Uses Its Own Original High Resolution “D-ILA” Image Display Device

JVC uses its own original 0.7-inch full high definition Direct-Drive Image Light Amplifier (D-ILA) for the image display device, resulting in a bright, high contrast yet silky smooth high-resolution image.

## **Benefits of Newly Developed Slim Optical Engine**

### **Significant Slimming of Projection TVs and Greater Variation for Layout**

JVC will release slim projection TVs that fit stands sold on the market snugly, just like other flat panel displays. One can also place these new slim projection TVs in locations and spaces that were previously difficult including wall mounting, thus greatly expanding potential usage scenarios for projection TVs.

### **Development Background**

PDP and LCD flat panel displays penetrated the global market for large screen TVs rapidly, but there are issues of power consumption and set costs for supporting full HD for PDP and LCD sizes exceeding 50 inches. In contrast, Micro Device Displays (MDDP) are known for brightness with low power consumption, as well as for supporting full HD without significant cost increases. However, because they were deeper than flat panel displays, issues remained regarding the space they require.

JVC pursued various technological developments to make MDDPs slimmer. Creating a higher screen with a lower edge height and the need for a special screen made it especially difficult to create a slim projection TV that meets consumer needs sufficiently.

However, JVC continued developing technology to overcome these issues, and succeeded with a slim optical engine that uses a concave mirror. This enabled JVC to create a 60-inch slim full HD projection TV with tabletop design and depth of approximately 27-cm.

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