



## DLP vs LCD projectors

### What is the technical difference?

Details/diagrams of the technical difference: <http://www.projectorpoint.co.uk/ProjectorLCDvsDLP.htm>

**DLP – Digital Light Processing;** is a proprietary technology developed by **Texas Instruments**. The DLP chip is a reflective surface made up of thousands (or millions) of tiny mirrors. Each mirror represents a single pixel. In a DLP projector, light from the projector's lamp is directed onto the surface of the DLP chip. The mirrors tilt back and forth, directing light either into the lens path to turn the pixel on, or away from the lens path to turn it off. To define color, a color wheel is used that contains (at minimum) a red, green, and blue filter. This wheel spins in the light path between the lamp and the DLP chip and alternates the color of the light hitting the chip from red to green to blue. The mirrors tilt away from or into the lens path based upon how much of each color is required for each pixel at any given moment in time. This activity modulates the light and produces the image that is projected onto the screen. Further details/diagrams - <http://www.dlp.com/technology/how-dlp-works/default.aspx>

**LCD – Liquid Crystal Display;** these projectors contain three separate LCD glass panels, one each for the red, green, and blue components of the video signal. Each LCD panel contains thousands (or millions) of liquid crystals that can be aligned in either open, closed, or partially closed positions to allow light to pass through. Each liquid crystal behaves in essence like a shutter or blind, and each represents a single pixel ("picture element"). As red, green, and blue light passes through the respective LCD panels, the liquid crystals open and close based on how much of each color is needed for that pixel at that moment in time. This activity modulates the light and produces the image that is projected onto the screen. Further details/diagrams - <http://www.projectorpeople.com/lcd-projectors/>

### Which is better?

The answer is simple - neither one is better than the other. They both have advantages over the other, and they both have limitations. Both technologies are much better than they used to be. I found this article one of the best describing in detail both technologies – The Technology War: LCD vs. DLP Evan Powell, July 28, 2009 [http://www.projectorcentral.com/lcd\\_dlp\\_comparison.htm](http://www.projectorcentral.com/lcd_dlp_comparison.htm)

### So ..

At the end of the day even after reading many articles about these technologies, you need to first ask yourself as a consumer and user –WHAT DO I NEED THE PROJECTOR TO DO? This is sometimes never asked in detail by the consumer themselves. Of course one of the main issues usually ends up being budget, however even within this category - this should be only one of several important reasons to choose a certain projector.

### What is your budget? be realistic and specific:

Under \$2,000

Between \$2,000 - \$5,000

Over \$5,000 etc

Remember to put in your budget; spare lamps, carry bags, freight, cabling, and/or installation costs.

### What are you using the projector for?

School	bright classroom, interactive whiteboard, permanently mounted
Home Theatre	mainly movies, replacement for your TV (longer viewing hours), games machine
Business/Corporate	portable or permanently mounted, what am I projecting – text, graphics, video conferencing, videos
Hospitality	large screen for bar/club, conference venue
Churches	large screen, dual projection

### Warranty:

*There are two types*

**Manufacturers Warranty:** - for the machine and the lamp.

**Supplier Guarantee:** - where did I get the machine from, will this supplier help with advice, backup, servicing and any other associated devices I may need.

### Advice:

Ask an Audiovisual Professional - these people will ask the correct questions in all categories and give you the best solution.

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**Shipleys Audiovisual Ltd**