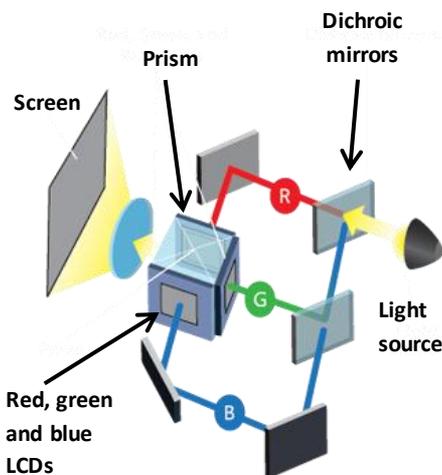


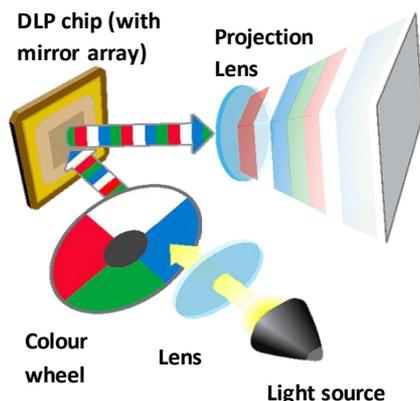
Projector Technology

There are two common projector technologies: DLP¹ (Digital Light Processing), and 3LCD (3 Liquid Crystal Display).

Inside a 3LCD optical engine



Inside a DLP optical engine



¹ DLP™ (Digital Light Processing™) is a trademark of Texas Instruments Incorporated.

DLP technology

1-chip DLP projector systems shine lamp light through red, green, blue and white² segments of a rotating colour wheel. This creates sequential bursts of coloured light, which are reflected by tiny mirrors to make the projected image. The viewer's brain combines these sequential red, green, blue images with the burst of white light to perceive colour.

However, some viewers can discern the individual basic colours being projected sequentially, instead of the intended colour. This is called 'colour break-up', or may be referred to as the 'rainbow effect'.

3LCD technology

Epson's 3LCD system uses dichroic mirrors³ to separate the white light from the projector lamp into red, green and blue light streams. Each of the three light streams is passed through its own LCD panel to create red, green and blue image portions, which are then recombined using a prism before being projected as a single full-colour image.

As the final colour is perfectly blended *before* being projected, the result is a stable image with no risk of colour break-up. Colours are vivid, faithfully reproduced and easier on the eyes.

² Some 1-chip DLP™ projectors do not contain white but contain other colours.

³ Dichroic mirrors are coated glass that allows different wavelengths of light to either pass through or be reflected. For example, one type of dichroic mirror reflects red light while allowing green to pass.

Colour brightness

Many manufacturers only quote the brightness of their projectors' White Light Output. This doesn't give the full picture, as a projector's Colour Light Output can be significantly lower than its rated White Light Output. When this occurs, projected images can appear dull.

Equal White and Colour Light Output levels ensure bright, vibrant colours and true-to-life images – essential for today's digital content. Epson's 3LCD projector engine produces equally high White and Colour Light Output (brightness), with rich colours that are three times brighter⁴ than 1-chip DLP projectors.

Energy efficiency

On average, 3LCD projectors are 25 percent more energy efficient than 1-chip DLP projectors⁵, helping to reduce energy bills and impact on the environment.

For more information visit:

www.epson.eu/CLO

⁴ Compared to leading 1-chip DLP business and education projectors based on NPD data, July 2011 through June 2012. Colour Brightness (Colour Light Output) measured in accordance with IDMS 15.4. Colour Brightness will vary depending on usage conditions. For more information please visit www.epson.eu/CLO

⁵ Data source: ProjectorCentral.com Jan. 2012. Average of 1,122 shipping models for which the manufacturers provided lumens and total power data for all resolutions and brightness levels. Energy efficiency was measured as wattage per lumen. It was measured for both 3LCD and 1-chip projectors in each of five brightness segments. 3LCD projectors averaged less required electricity per lumen in each of the five segments.