

DIFFERENCE BETWEEN LED AND LCD TVs

In the present era where graphic technology has reached a great heights with enhanced level of graphics, colour and effects. People tend to look for the best one as well as practice safer for the eyes more than ever. For this reason LED and LCD comes to offer the solution.

LED (Light emitting diode) and LCD (Liquid crystal display) are used to describe types of television sets, both of which are technically LCD televisions, because both of them use Liquid crystal displays. Though LED panels are precisely same as LCD, but they use a different method of backlighting. LED monitors uses emitting diodes while LCD uses cold cathode fluorescent lamps as its backlight. Both of them are high-definition and are competent to produce clear images. LCD controls the image display while LED controls how the image is lit. Both are available in different range of sizes, from 15 to over 60 inches. Both are only few inches thick.

BACKLIGHTING: LCD televisions use fluorescent lightning, while LED use light emitting diode. This LED lighting can further be divided as edge lightning which has lights only on edges of the TV, due to which size of frame reduces. Another system has a series of LED lights set behind the screen, due to which picture's colour contrast adjusts finely.

DISPLAY OPTIONS: The traditional LCDs light the display with a fluorescent lamp, while the LED screens use hundreds and thousands of the light diodes, one per each pixel.

Due to this its price also increases.

IMAGE QUALITY: Image quality is much better in LED as compared to LCD because the white and black levels are clearly seen in LEDs. Crest white and black levels determine how exhaustive a picture can look on a screen. Poor white levels mean fine details can get washed out in bright scenes, while poor black levels mean shadows swallow up parts of the picture in dark scenes. A very wide range from dark to light lets the HDTV show the tiniest details, regardless of how bright or dark the movie gets.

POWER CONSUMPTION: More power is consumed by the local dimming LED display than LCD. Hence it will be wise and economic to either compromise with energy bill or good quality picture. However, if LED is edge light then it will consume less power as compared to LCD with considered suitable for long time screen use.

VIEWING ANGLES: If the viewing angle of the display is much wider than thirty degrees from the center then the contrast ratio of the image is diminished in LCD. This affects the eyes while this disadvantage is overcome in LED. LEDs have a wider viewing angle, which means the image is still clear when viewed from the side.

COLOUR PRECISION: The LCD TV views are made up of fluorescent backlighting which needs to be adjusted nearly same as RGB-set (Red-Green-Blue colour basic schemes). While in LED TVs RGB-sets are included which delivers a realistic picture similar to the real view.

CONTRAST/ BLACK LEVELS: The contrast ratio of the LED display is much more than the

LCD TVs. The major drawback of LCD display is that in order to have dark areas on the screen, the backlight is blocked by twisting the crystal of display. This technique reduces the contrast ratio and also the fine details of the on screen image. While in LEDs the black region is produced by local dimming impact on the screen by reducing the backlight behind the dark regions. This results in better detail image with maintained contrast ratio.

VIDEO PLAYBACK: The response time in the LED is much faster as compared to LCD and hence the blurring of the image does not occur especially in fast action video. Hence, LEDs have overcome the motion lag problem of LCDs.

PRICE: Price becomes a major factor when comparing LCD and LED TVs. LED displays yield a higher price tag, which reflects their efficiency and the better picture quality. LED displays also allow for thinner, lighter televisions. This advantage further beats the retail price up of a television with an LCD display.

Source : <http://www.udaiportalents.com/technical-learning/difference-between-led-and-lcd-tvs>