

Difference between LED and OLED

Parameter	LED	OLED
Acronym for	Light Emitting Diode	Organic Light Emitting Diode
Description	It is a flat panel display that uses array of light emitting diodes as video display.	It is also a type of LED in which organic compound is used as emissive electroluminescent layer to emit light when electric current is supplied to it. These OLEDs are self illuminating.
Brightness	LED displays can get extremely bright and have slight advantage.	OLED display can also produce brighter displays but shining OLED pixels to maximum results in reduced pixel life.
Flexibility	Hard Material is used as substrate and can not be used to make flexible displays.	OLED can be fabricated on plastic substrates and can be used for making roll up display and can be embedded in cloths in future.
Black Level	LED displays rely on LED backlights behind an LCD panel and can no produce dark blacks even with advanced dimming techniques that in LEDs. Hence, LED Displays suffers to produce dark levels.	Dark blacks are the important factor to achieve excellent picture quality allowing higher contrast and richer colors and resulting more realistic images. OLED is the undisputed champion, When it comes to black levels.
Backlighting	Can only dim the LCD image in regions.	OLEDs can produce a very low luminescence level down the individual pixel.
Refresh Rate	LED displays have refresh rate up to 240 Hz.	OLED theoretically can have a response time less than 0.01ms, enabling refresh rate up to 100,000 Hz.
Technology Used	White Edge LEDs LED Arrays Dynamics Array	RGB OLED White OLED
Price	Fabrication of LED substrate is lower cost.	Fabrication of OLED substrate is more costly.
Life	Life of LED displays is higher than OLED.	OLED Displays have lower lifetime than LED displays. The reason behind this use of organic materials which have limited life period.
Colors	LED Displays have lesser color space than OLED displays.	Material used in OLEDs to produce blue color degrades more quickly as compare to material used to produce other colors. This variation in blue