For more details click here

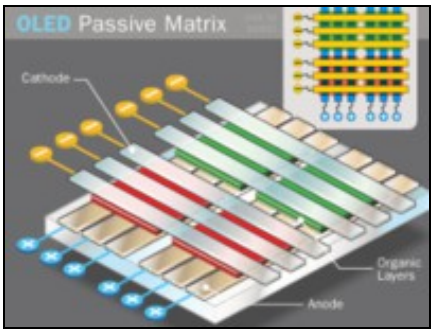
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Passive-matrix OLED - PMOLED

PMOLEDs have strips of cathode, organic layers and strips of anode. The anode strips are arranged perpendicular to the cathode strips. The intersections of the cathode and anode make up the pixels where light is emitted. External circuitry applies current to selected strips of anode and cathode, determining which pixels get turned on and which pixels remain off. Again, the brightness of each pixel is proportional to the amount of applied current.

PMOLEDs are easy to make, but they consume more power than other types of OLED, mainly due to the power needed for the external circuitry. PMOLEDs are most efficient for text and icons and are best suited for small screens (2- to 3-inch diagonal) such as those you find in cell phones, PDAs and MP3 players. Even with the external circuitry, passive-matrix OLEDs consume less battery power than the LCDs that are currently used in these devices.[source]

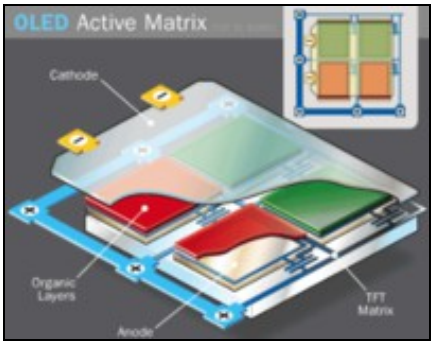


Passive Matrix

Active-matrix OLED - AMOLED

AMOLEDs have full layers of cathode, organic molecules and anode, but the anode layer overlays a thin film transistor (TFT) array that forms a matrix. The TFT array itself is the circuitry that determines which pixels get turned on to form an image.

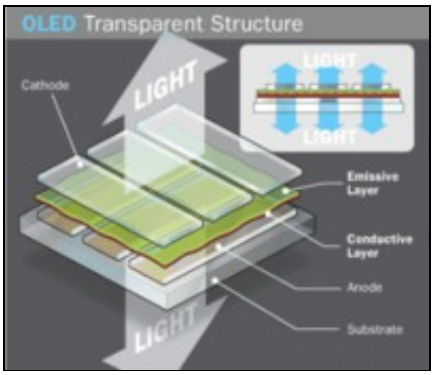
AMOLEDs consume less power than PMOLEDs because the TFT array requires less power than external circuitry, so they are efficient for large displays. AMOLEDs also have faster refresh rates suitable for video. The best uses for AMOLEDs are computer monitors, large screen TVs and electronic signs or billboards.[source]



Active Matrix

Transparent OLED

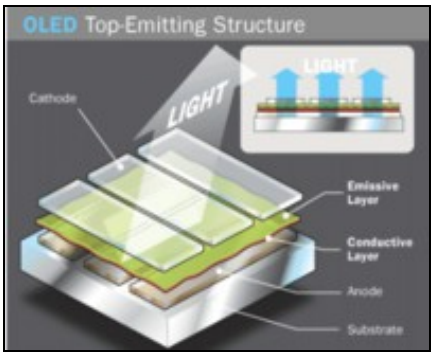
Transparent OLEDs have only transparent components (substrate, cathode and anode) and, when turned off, are up to 85 percent as transparent as their substrate. When a transparent OLED display is turned on, it allows light to pass in both directions. A transparent OLED display can be either active- or passive-matrix. This technology can be used for heads-up displays. [source]



Transparent OLED

Top-emitting OLED

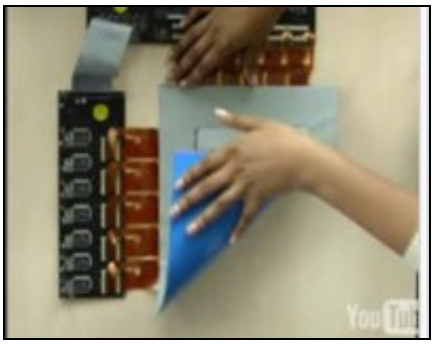
Top-emitting OLEDs have a substrate that is either opaque or reflective. They are best suited to active-matrix design. Manufacturers may use top-emitting OLED displays in smart cards.[source]



Top-Emitting OLED

Foldable OLED

Foldable OLEDs have substrates made of very flexible metallic foils or plastics. Foldable OLEDs are very lightweight and durable. Their use in devices such as cell phones and PDAs can reduce breakage, a major cause for return or repair. Potentially, foldable OLED displays can be sewn into fabrics for "smart" clothing, such as outdoor survival clothing with an integrated computer chip, cell phone, GPS receiver and OLED display sewn into it.[source]



White OLED

A white organic LED (OLED) incorporating a blue phosphorescent dye and a down-conversion phosphor has achieved a luminous efficacy of 25 lm/W. This high-efficacy device was enabled by lowering the device operating voltage, increasing the outcoupling efficiency, and incorporating highly efficient phosphorescent emitters.[source]

