

# Frequently Asked Questions (FAQ)

## Technical Discussion

Q) How does OLED technology operate?

A) Holes are injected at the invisible anode's ITO layer (2). The holes conduct through the metal transporting layer (3) to the p-type material (4). Simultaneously, electrons travel through the metallic cathode (6) into the n-type material (5). The holes and electrons meet at the p-n intersection and the recombination results in emission of light. The area in which the p-n intersection occurs is sometimes called the emission layer. The wavelength, or color, of emitted light depends on the chosen p-type and n-type materials.

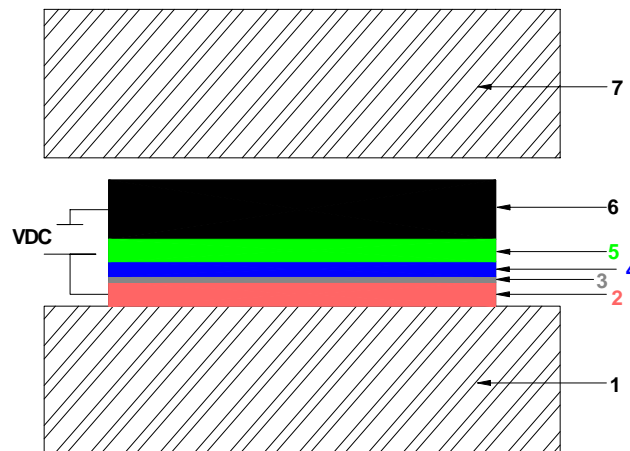


Figure 1: Panel Cross Section for a single pixel

Q) How do the panels remain so thin?

A) The panels can remain as thin as 1.6mm. This is the result of remarkably thin organic layers deposits (2 to 6) that have to be measured in angstroms. The majority of the thickness is actually the result of the substrate (1) which is currently glass in most applications. Mass production requires the use of glass for reliable ITO deposit, which is matured from the Liquid Crystal Display (LCD) industry. The second most notable thickness is the sealing material (7) which can be glass or other thinner materials.

Q) Is OSD involved in alternative substrate development, or flexible displays?

A) OSD is involved in this exciting research to use alternative substrates other than glass. OSD is currently has not advertised any mass production product development in this area, as it still remains to become more reliable. The ideal of flexible or ultra-thin panels on plastic will become a reality with more industry research and development. OSD will make formal announcements as this developing technology get close to our official release.

Q) Is OSD involved in producing transparent displays?

A) OSD is involved in related research to this goal. The material development will play a critical role in the reality of this type of product. OSD has not released any target products in this related field, but will remain involved as this technology moves closer to a reliable and feasible product. OSD will make formal announcements as this developing technology get close to our official release.

Q) Can I obtain more advanced information?

A) With an emerging technology, our research investments and trade secrets must be closely guarded. Please submit your questions to [tech@onestopdisplays.net](mailto:tech@onestopdisplays.net) and will do our best under these circumstances to offer you a response.