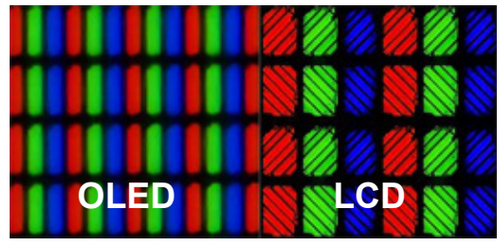
Flat Panels: LCD, OLED & Processing Technology



Backlight and Pixels:

A flat panel consists mainly of a matrix displaying colors and light. The matrix is made of pixels groups of 3 RGB dots (sub-pixels). They make up the imaging part of the screen. The backlight refers to the physical lights that are located behind or on the sides of the screen itself. The term backlight for flat panel displays refers only to LCD. **OLED and AMOLED do not use backlights.**

"LED" LCD:

The term "LED" monitor refers to the backlight technology, not to the screen.
"LED monitors" are actually LCD monitors using an LED (light emitting diodes) backlight instead of a CCFL (Cold Cathode Fluorescent Lamps) backlight. The LEDs are not used to create the pixels.

TFT AMLCD and LCD:

LCD (Liquid Crystal Display) can be either AMLCD or PMLCD.
AMLCD stands for Active Matrix LCD in opposition to Passive Matrix LCD.
An AMLCD uses three Thin Film Transistors (TFT) for each pixel and controls all simultaneously. To the opposite PMLCD updates each row & line in sequence. As a result, the AMLCD is much faster, usually provides better contrast and viewing angles than PMLCD. LCDs do ***not*** suffer from "burn-in".
All Transvideo LCD monitors are of the higher quality TFT AMLCD.

OLED and AMOLED:

OLED use Organic Light Emitting Diodes instead of the Liquid Crystals in LCDs.
AMOLED (Active Matrix OLED) use TFT (Thin Film Transistors) to address each individual pixel providing faster display times than PMOLED (Passive Matrix OLED).
Because OLED monitors do not use a backlight they display darker blacks along with a higher contrast ratio in low-light conditions.
Early on AMOLED provided better viewing angles than AMLCD. However Transvideo CinemonitorHD family (TFT AMLCD) viewing angles range between 80º and 85º that is comparable with AMOLED viewing angles.
AMOLED can suffer burn-in if the same image is displayed for long periods of time. Some consumer products include "Burn-in fixes" by actually damaging the rest of the pixels so all are burnt uniformly. These however reduce considerably the lifespan of the display and are not offered by Transvideo.
All Transvideo OLED monitors are of the higher quality TFT AMOLED.

Transvideo Processing Technologies:

The human brain can see continuous images with frame rates at low as 16 fps. The SMPTE set the standards to 24 fps for film, 30 fps for NTSC TV and 25 fps for PAL TV. Recent researches suggest that the human brain perceives the real world at a rate of approximately 40 frames per second. Some 3D Filmmakers are shooting at 48 fps and even 60 fps to enhance the 3D effect. The current trend for scripted productions is definitely towards higher frame rates.
Transvideo monitors are engineered to handle higher frame rates and are "future-proof". They are compatible with high-speed cameras running at thousands of frames per second such as Vision Research© Phantom™ Camera.

Transvideo has developped **two major proprietary technologies in image processing** for monitoring:

- **The Real Frame Rate (RFM™) processing featured in the CinemonitorHD family has provided true monitoring of in-camera images since 2007.**

HD cameras usually have 1 frame delay or more on the monitor output. Most monitors' processors add a delay of a few frames or more, making it challenging for Focus Pullers.

- **Transvideo 7" StargateFHD includes the latest Fast Path processing system delivering both "immediate display" and no latency.** The camera output is displayed instantaneously without any introduced delay by the processor.

Thanks to this latest innovation the 7" StargateFHD allows Focus Pullers to no longer "chase" focus.

Tel: 1 818 985 4903. Email: info@transvideointl.com
TRANSVIDEO INTERNATIONAL. 11712 Moorpark St # 112B, North Hollywood, CA 91604. USA