SONY
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TRIMASTER EL

Evolution of Excellence

SONY
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Critical areas of monitor performance

BLACK REPRODUCTION

Difficult to express true black

Many monitors are susceptible to elevated black levels, making it difficult to shoot at night. You may experience unexpected results and find yourself with scenes containing artifacts you couldn't see when shooting, such as objects or noise in dark areas that are neither detected nor correctable.

COLOUR REPRODUCTION

Poor colour reproduction in dark areas

Colours in low-luminance scenes are often hard to discern, making colour confirmation in these areas extremely difficult. This hampers production workflows since it requires additional effort to carefully check these areas.

DYNAMIC RANGE

Insufficient dynamic range

A narrow dynamic range makes it difficult to detect subtle differences in lighting and gradation. As a result, details in dark areas and highlights are not properly adjusted. In addition, the full dynamic range of the camera cannot be reproduced accurately.

RESPONSE TIME

Unacceptable motion blur

The inability to clearly depict moving subjects results in problems maintaining focus in fast-paced, dynamic scenes such as sporting events. In addition, a high degree of motion blur makes it a real chore to check the accuracy of lower frame rate cinema footage.

Sony TRIMASTER EL **solutions** fully unleash the potential of Sony's OLED

TRIMASTER EL

UNRIVALLED BLACK REPRODUCTION

Deeper, truer blacks

Sony's solution produces truer blacks, assuring you of a highly precise black level even when viewing under low ambient light.

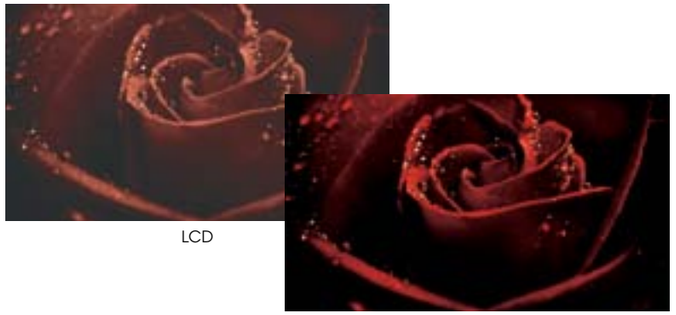
LCD

Sony's OLED

ACCURATE COLOUR REPRODUCTION

Richer colours in dark areas

By accurately reproducing colours in the low-luminance range, Sony's solution allows you to increase image quality by fine-tuning colours in dark areas.



LCD

Sony's OLED

WIDE DYNAMIC RANGE

Exceptional dynamic range

Thanks to its wide dynamic range, Sony's solution faithfully reproduces a camera's dynamic range for smooth, beautifully detailed gradations.

LCD

Sony's OLED

FAST RESPONSE TIME

Vastly improved motion depiction

Sony's solution realises outstanding motion response, eliminating blur that hampers focusing on moving subjects.

LCD

Sony's OLED

Unrivalled Black Reproduction

The satisfaction of seeing truer blacks

TRIMASTER EL superbly reproduces deep, truer blacks, allowing you to pick out subtle details and delicate highlights in surrounding areas. This amazing ability to express accurately and clearly tonal differences in extreme low-luminance areas even exceeds older reference CRTs. Sony's TRIMASTER EL technology is your assurance of precise image reproduction.

- Because TRIMASTER EL technology accurately displays noise and details in dark areas, aperture and exposure can be finely adjusted, helping to avoid unwanted image artifacts.
- Video engineers can concentrate on adjusting tone and colour because it is easier to check the black signal level.

Shooting night scenes is now far easier and delicate differences in dark areas can be faithfully expressed.

Voice of our customers

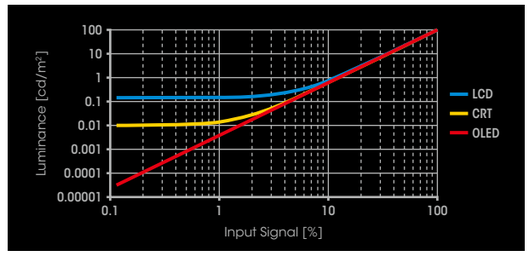
Gary Adcock
My clients expect nothing but the best. To deliver for them, I have to know exactly what I'm seeing, and having the right monitor is critical.
(Producer, Cameraman, Editor, and Technical Chair of NAB's Director of Photography Conference)

David Stroud
The mood of an image is in the lowlights — grading for emotion requires you to manipulate the lowlights. You cannot grade what you cannot see, so accurate blacks are critical.
(Technical Marketing Manager, FilmLight)

Andreas Minuth
Mastering images requires monitors to display every nuance of the signal. You should be able to see more detail in the blacks than on any consumer display out there, so that you can be sure that there are no artifacts in the signal.
(Colourist, CinePostproduction)

Comparison with conventional technology

A key advantage of Sony's TRIMASTER EL technology is the fact that because of its self-emitting properties, each pixel can be turned completely off. No other display technology is able to offer this. Sony's solution is capable of reproducing accurate black with each individual pixel, enabling users to evaluate each picture image faithfully.



Grey scale images corresponding to the input signal
* Grey scales are simulated images.

Accurate Colour Reproduction

The right colour regardless of brightness

Reproducing the delicate shades of dark colours is a challenge for any monitor, but which TRIMASTER EL performs with ease. The wide colour gamut generated by this technology assures faithful and consistent reproduction of colours over the entire luminance range — an impossible feat in the past for non-OLED monitors. This is critical when:

- Adjusting tone and colour during the colour grading process.
- Reproducing accurate and deep colour when working with CG for animation and games.
- Reproducing the wide colour gamut of digital cinema.

Because colours in dark areas can be precisely viewed, TRIMASTER EL is the ideal choice for producing high-quality images.

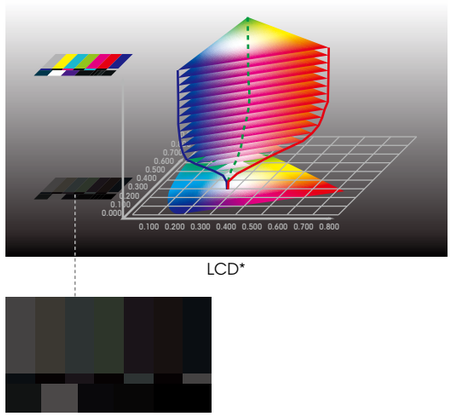
Voice of our customers

Tom Russell
As a grader, accurate colour reproduction is the prime function of a monitor. The OLED achieves this with flying colours.
(Senior Colourist, Prime Focus)

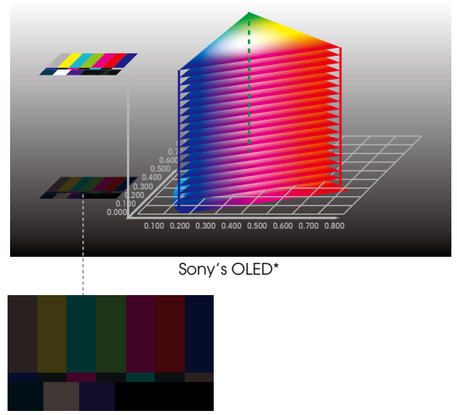
David Stroud
The low-luminance colour performance allows us to see nuances of colour that weren't previously visible, opening up greater possibilities for subtle nuances in the grade.
(Technical Marketing Manager, FilmLight)

Comparison with conventional technology

Sony's Super Top Emission technology not only offers a wide colour gamut with its accuracy for each of the three primary colours, but also maintains this wide colour gamut throughout the entire luminance range.



LCD*



Sony's OLED*

* Colour gamut images based on Sony's test results.

Wide Dynamic Range

The breathtaking drama of wide dynamic range images

Thanks to the wide dynamic range capability of TRIMASTER EL, you can see every detail that the latest cameras capture. The results are nothing short of stunning, with colours smoothly displayed over the entire tonal range and details clearly reproduced in deep shadows and bright highlights.

- Scenes with challenging lighting conditions can be easily and faithfully reproduced, including delicate metal textures and backlit subjects.
- Because details in dark shadows can be accurately checked, retakes can be reduced.
- Black and peak white colours can be checked more efficiently. In addition, clearer display of subjects reduces eye fatigue.

TRIMASTER EL increases production efficiency, and allows users to create superb high-contrast images and video content for future proofing.

Voice of our customers

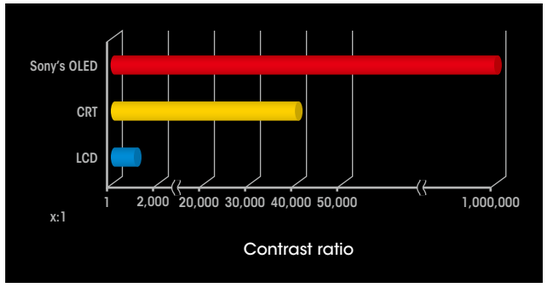
Dave Sperling
The OLED gave us great images outside. We could easily evaluate our image in daylight. The producer or client would ask, 'Why does that camera look so much better?'
(Director of Photography and Cameraman)

Doug Jensen
On the OLED, it looked great. It looked just like I expected it to look in post, and it handled that contrast of the bright and the darks so much better than other monitors I've used.
(HD Cinematographer, Producer, Director and Editor)

David Stroud
The dynamic range is now comparable with a CRT and performs at a level that is realistic for both TV and film. Again, it all comes back to being able to see the full depth of an image and judge it correctly. It removes any guesswork.
(Technical Marketing Manager, FilmLight)

Comparison with conventional technology

Sony's OLED technology has the ability to control each individual pixel from an absolute black to peak white. Each pixel can display the entire dynamic range of the image with no interference to the adjacent pixels.



Fast Response Time

The overwhelming advantage of virtually blur-free motion

During fast-moving sporting events, balls and players move quickly and often unpredictably — action that can cause blurring with other display technologies. TRIMASTER EL avoids this thanks to a lighting-quick grey-to-grey switching speed that allows faithful monitoring without afterimage. This results in easy tracking and clearly displayed player numbers.

- Fast switching speeds provide clearer panning.
- View moving text clearly with virtually no motion blur.
- Adjust focus on a larger monitor rather than on the camera's viewfinder.

The high image quality of fast-moving subjects increases flexibility when broadcasting sports, allowing production staff to capture the real action of the event and greatly reduce eye fatigue.

Voice of our customers

Tom Russell
Anything less than a CRT will quickly become obvious and a negative influence in the suite.
(Senior Colourist, Prime Focus)

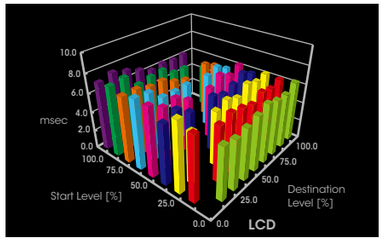
Andreas Minuth
You have to be able to judge your images during real-time playback. When fast-moving objects are blurred, this isn't possible any more.
(Colourist, CinePostproduction)

Comparison with conventional technology

Because the OLED emitting layer inherently responds to any electrical current input, it emits light immediately. Sony's OLED grey-to-grey switching speed (measured in microseconds, µs) is much faster than that of LCDs (measured in milliseconds, ms).*

* Sony test results

Grey-to-grey pixel response
Taller bars represent slower switching times, while smaller bars indicate faster switching speeds, resulting in less motion blur.



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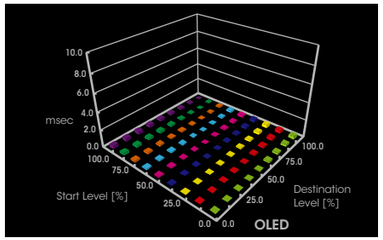

Sony's OLED*

* Simulated images

TRIMASTER EL Monitor Lineup

OLED Master Monitor

BVM-E Series

BVM-E250

BVM-E170

BVM-F Series

BVM-F250

BVM-F170

OLED Picture Monitor

PVM Series

PVM-2541

PVM-1741

PVM-740

Sony's Unique OLED Technology

Sony's 'Super Top Emission' OLED panel

- ✓ Accurate Black Reproduction
- ✓ Accurate Colour Reproduction
- ✓ Wide Dynamic Range
- ✓ Fast Response Time

Sony's original OLED processor

- ✓ Designed specifically for Sony's OLED panel
- ✓ Designed specifically to optimise OLED performance
- ✓ Accurate gamma control of extreme black details