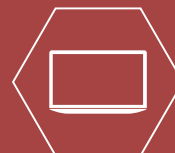


SONY



# Local Dimming Technology

Advanced Innovation for Monitors



# What is Local Dimming?

Local Dimming technology is a kind of backlight control to achieve the true black and high brightness.

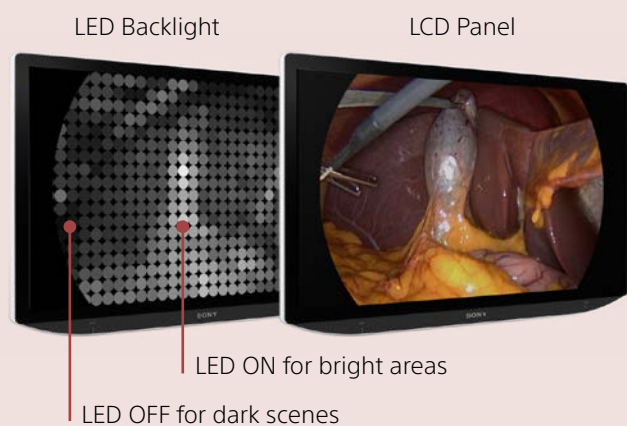
Thanks to this technology, our LMD-XH Monitor series can display images with high contrast and accurate reproduction of the original image.

## How does it work?

The reproducibility of black is improved thanks to an individual drive of different areas of the backlight. An excellent "peak brightness" is achieved by adding the power that is saved in the dark area to be put on top of the bright area. As a result of Sony's special expertise, this is possible.

Thanks to Local Dimming, ultra-high brightness and ultimate black level can be achieved (with a peak brightness of up to 1750 cd/m<sup>2</sup> and a contrast ratio of 1.000.000:1).

[Imagery in this article is simulated for illustrative purposes]



## Wider Colour Gamut

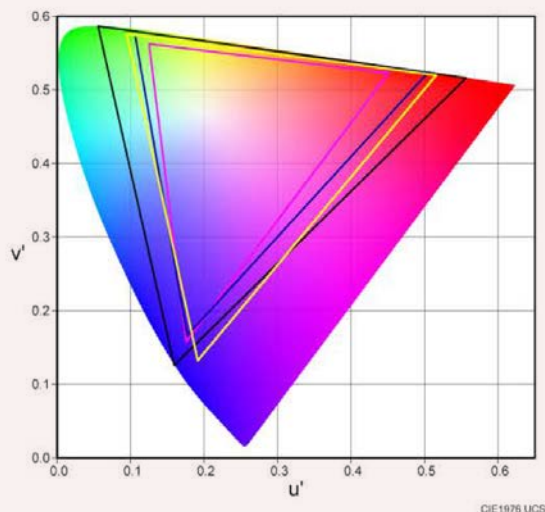
The LCD panel and signal processing technology offer a wide color gamut. This conforms to the ITU-R recommendation BT.2020 with a wider color space than the BT.709 color space, allowing for better color reproduction and realistic visualisation.

LMD-XH3200MT

LMD-XH550MT  
LMD-XH550MD

ITU-R BT.2020

ITU-R BT.709



Enrichment in true colours

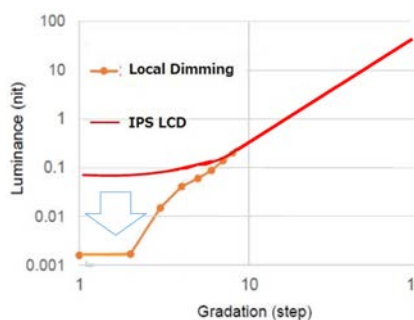


Standard colours



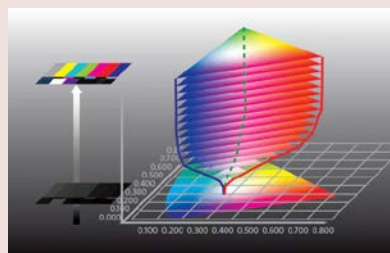
The Local Dimming technology allows for exceeding the boundaries of illumination, whereas conventional LCD monitors have a constant global backlight.

With Local Dimming technology, colours can be clearly seen even in dark areas, while conventional monitors will crash and may not reproduce the colours correctly.

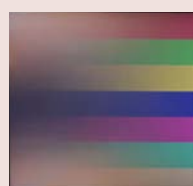
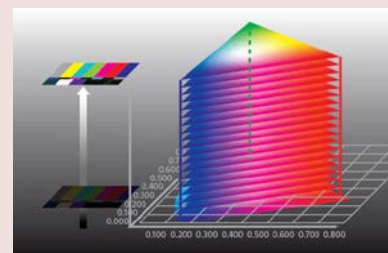


### Local Dimming technology

Typical LCD Monitor



Local Dimming LCD Monitor



**LCD**  
Poor colour reproduction in dark scene conditions

Dark ← → Bright



**LCD + Local Dimming**  
Keep wider-colour reproduction level in dark scene conditions

Dark ← → Bright

## Benefit for medical application

This test compares three types of display:

One with a regular backlight (left), another with Local Dimming technology in regular mode (middle), and the third one when changing to HLG (Hybrid Log Gamma) which is part of the BT.2100 standard for HDR signal reproduction.

| Input Signal | SDR                                                     | HDR                                                                                  | HDR                                      |
|--------------|---------------------------------------------------------|--------------------------------------------------------------------------------------|------------------------------------------|
| Monitor Mode | SDR                                                     | SDR                                                                                  | HDR                                      |
|              |                                                         |                                                                                      |                                          |
|              | LMD-X310MD (375nit)                                     | LMD-XH550MT (375nit)                                                                 | LMD-XH550MT (1500nit)                    |
|              | The front is clearly visible but the back appears dark. | The back is visible due to the bright input signal, but the front appears saturated. | Both the back and the front are visible. |

# Revolution in surgical imaging

## LMD-XH Series

4K 3D & 2D Surgical Monitors



LMD-XH550MD



LMD-XH550MT



LMD-XH320MT

**4K**

**A.I.M.E.**

**HDR**

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