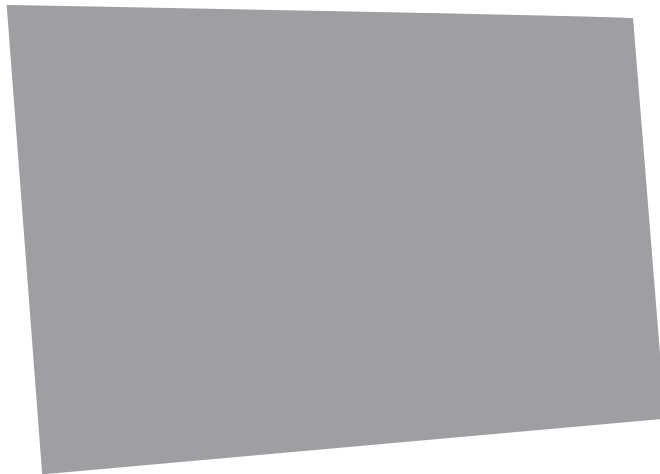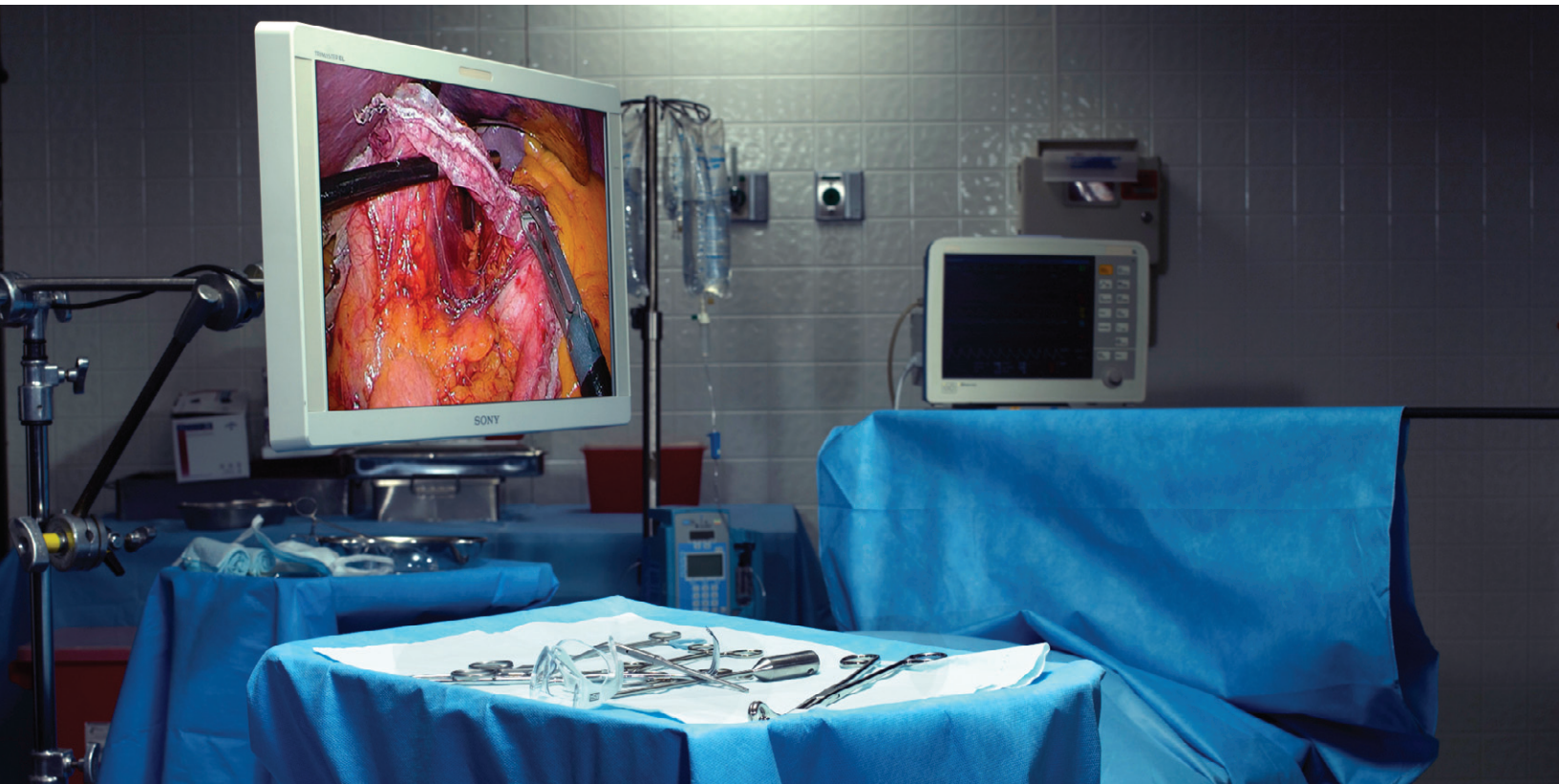# OLED

Groundbreaking technology in surgical imaging

PVM-2551MD
Medical OLED Monitor

TRIMASTER EL

New highs in color, emission efficiency, and contrast.

TRIMASTER™ is a design architecture used to elicit the full performance capabilities of professional flat-panel displays. It comprises the core technologies that enable extremely high levels of color accuracy, precision imaging, and picture-quality consistency.

EL (Electro-Luminescence) is an ideal self-emission display device with a high dynamic range and high picture quality. By refining TRIMASTER technology with the new EL device, Sony effectively boosts the performance expectations of the professional industry.

Accurate Color Reproduction
- Color Management System
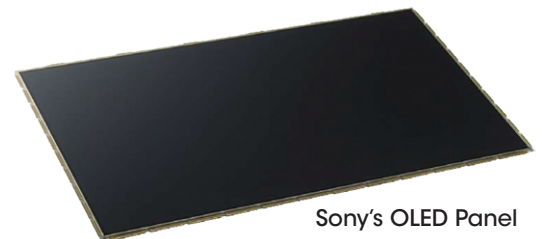- Multiple Color Gamuts
- Digital Uniformity

TRIMASTER EL

Precision Imaging
- High Resolution & High Color Depth Panel
- High Motion Picture Processing
- Accurate Pixel Mapping

Quality Picture Consistency
- Accurate Signal Processing
- Color Feedback System
- Precise Calibration System

+

Sony's OLED Panel

The monitor that sets your surgical sights higher.

Welcome to a new realm of surgical clarity, accuracy, and brilliance. Introducing Sony's PVM-2551MD much anticipated 25-inch medical OLED monitor, featuring TRIMASTER EL technology, for a wide variety of endoscopic and surgical applications. OLED (Organic Light-Emitting Diode) is the next-generation flat-panel screen technology with exceptional image quality which outperforms liquid-crystal display (LCD).

For more than 20 years, Sony has been a trusted and reliable source for surgeons, offering high-quality monitors with exceptional picture quality for a variety of surgical endoscopic and laparoscopic camera applications. The groundbreaking invention of Sony's original OLED panel together with a newly developed dedicated OLED processor establishes a new, improved standard of surgical image viewing.

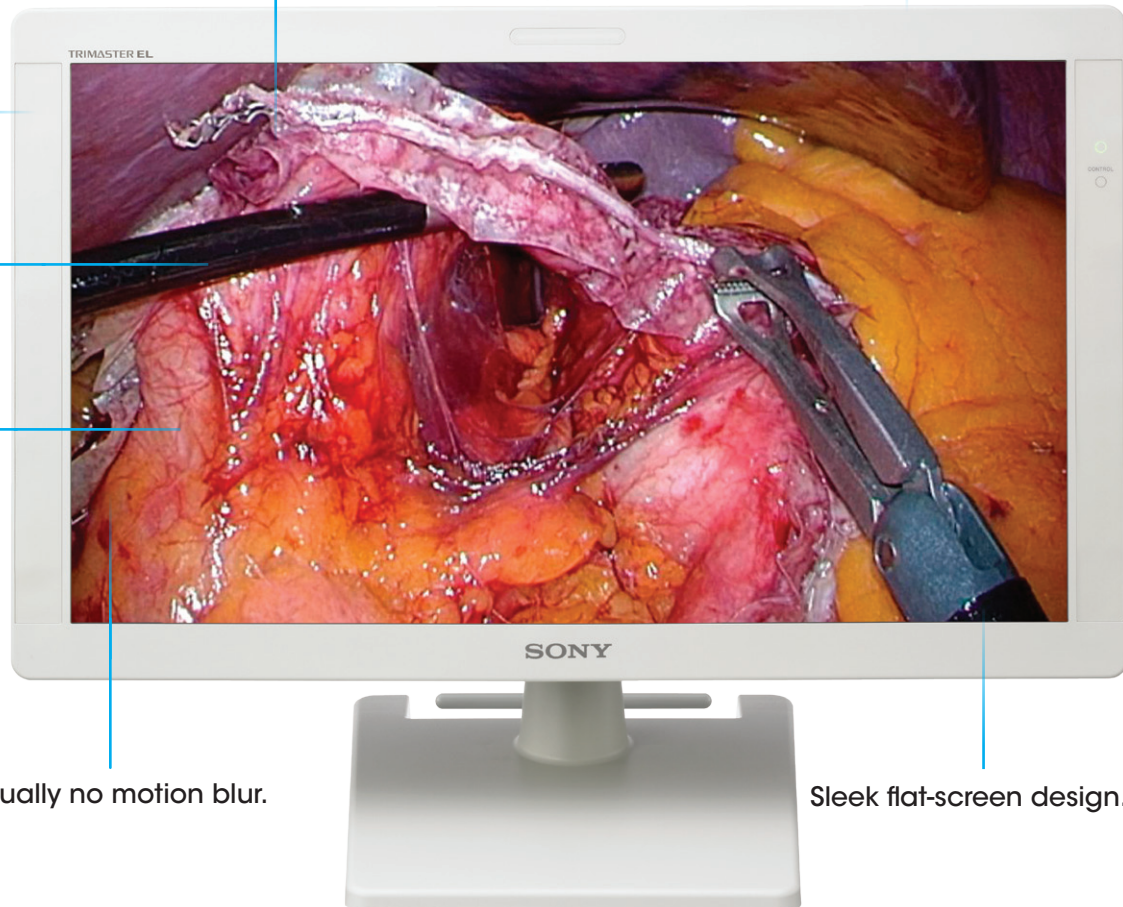Can be mounted on arm, stand, or wall mount.

Designed for ease of cleaning.

Largest color range of any Sony monitor.

One-touch key-inhibit to activate/deactivate control panel.

Accurate color reproduction in dark areas.

20 memory presets to save/load settings like color and gamma.

Virtually no motion blur.

Sleek flat-screen design.

Taking image precision to a new level.

Sony's development of innovative OLED technology establishes an advanced level of critical-image monitoring. The PVM-2551MD features a full HD OLED panel using Sony's unique "Super Top Emission" structure and also comes equipped with an advanced processor that brings out the full performance of the OLED. This combination delivers deep, rich blacks, high-contrast accurate color reproduction, and a response time of more than 10 times faster than standard LCD which minimizes motion blur. The PVM-2551MD also features a wide color gamut for extremely accurate and natural color reproduction, so your field of operation is exposed with a new clarity as you work, extending the boundaries of your surgical vision.
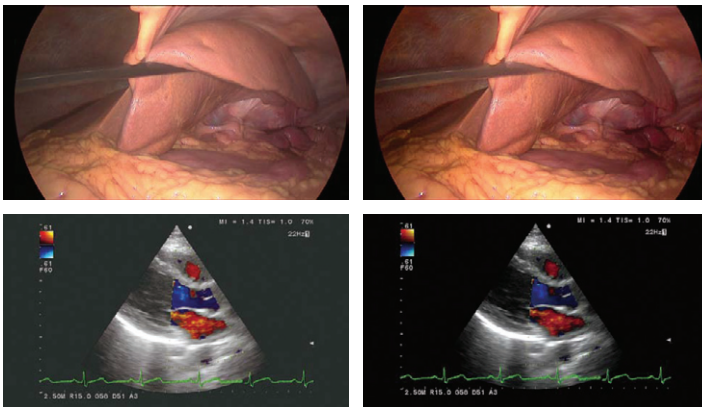
LCD Screen Image*   OLED Screen Image*

The OLED difference is powerful.

What gives OLED its unmatched clarity, accuracy, and brilliance? OLED technology creates light by recombining an electron and a hole within certain organic materials. The process of emitting light with this technology is extremely efficient when compared to other display technologies. Its organic materials react to the control of the electrical current immediately and do not emit light in the absence of an electrical current. That's how the OLED display panel features superb black performance and a response time of more than 10 times faster than standard LCD which minimizes motion blur.

10 times faster than LCD minimizing motion blur.

OLED technology allows for amazingly quick response time for fast-moving images so that you see the quick motion of surgical instruments and hands in fluidity, without stressful picture blur. Because the OLED electroluminescent layer inherently responds to any electrical current input, it emits light one thousand times faster than LCD technology. This gives you the efficient, blur-free pictures that are critical for medical procedures.

Sleek flat-panel design.

The monitor's display surface and bezel (frame) around its periphery are completely flat, and the rounded corners of the chassis offer clean operation while preventing dust build-up. The splash-proof design of the chassis top prevents blood or drug solutions from entering the monitor.

In addition, the protection panel helps reduce damage from accidental impact and the effects of reflection of ambient light. The PVM-2551MD complies with the 100 x 100 mm hole spacing VESA-mounting standard.

Wide color gamut.

Sony's OLED technology displays the largest color range of any Sony monitor previously offered. Sony's micro-cavity structure uses an optical resonance effect in combination with accurate color filters to calibrate and stabilize RGB color accuracy. This combination is also effective in reducing ambient light reflection, and consequently deep color reproduction can be achieved with virtually no degradation, particularly in bright environments. OLED's wider color gamut and superb color reproduction, together with a 10-bit panel driver for each RGB color, provides smooth and accurate image reproduction.

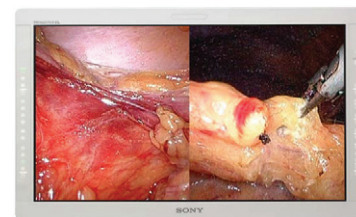# Choose your scan and display modes.

You decide on the suitable image scan mode from a menu of choices, including NORMAL/OVER scan, UNDER scan, FULL, ZOOM, and NATIVE. What's more, you may also use display modes like Mirror Image, Side-by-Side, Picture-in-Picture, and Picture-out-Picture, which allows you to view images in a variety of ways.
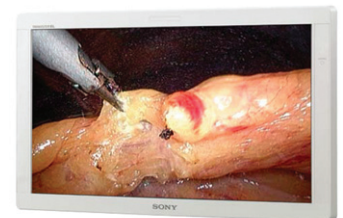
Normal*   Mirror Image*

Side-by-Side*

*Simulated images

Complies with safety regulations.

The PVM-2551MD complies with medical safety regulations UL60601-1 for the U.S. and CSA C22.2 No.601.1 for Canada, making it suitable for professional medical applications. Its flat surface panel is also designed to be easily wiped clean for sanitary and safety conditions in the OR. Front panel flat-surface buttons allow for easy wiping of the control buttons and OLED panels.

Easy inputs and expandability.

This medical monitor is equipped with a variety of video inputs including Composite, Y/C, RGB/Component, HD15, and DVI-D as standard. Furthermore, two built-in option ports greatly expand the range of input signals this monitor can accept. These ports allow users to easily select and change input/output signals for greater flexibility via a variety of available option boards.

Direct input selection for quick change.

This feature allows users to switch image sources during a procedure simply by pressing input select buttons on the front panel.

Front panel with buttons

To learn how Sony's new medical OLED monitor sets a new standard for surgical clarity, contact your authorized Sony reseller or go to: **sony.com/HDforsurgery**.

Picture performance	
Panel	OLED panel
Picture size (diagonal)	24 5/8 inches (623.4 mm)
Effective picture size (H x V)	21 1/2 x 12 1/8 inches (543.4 x 305.6 mm)
Resolution (H x V)	1920 x 1080 pixels (Full HD)
Aspect	16:9
Pixel efficiency	99.99%
Panel drive	RGB 10-bit
Viewing angle (panel specification)	89°/89°/89°/89° (typical) (up/down/left/right, contrast > 10:1)

Input	
Composite input (NTSC/PAL) connector	BNC type (x1), 1 Vp-p ±3 dB sync negative
Y/C input connector	Mini-DIN 4-pin (x1) Y: 1 Vp-p ±3 dB sync negative, C: 0.286 Vp-p ±3 dB (NTSC burst signal level) 0.3 Vp-p ±3 dB (PAL burst signal level)
RGB/component input connectors	BNC type (x3), RGB: 0.7 Vp-p ±3 dB (Sync On Green, 0.3 Vp-p sync negative) Component: 0.7 Vp-p ±3 dB (75% chrominance standard color bar signal)
External synchronized input connector	BNC type (x1) 0.3 Vp-p to 4.0 Vp-p ± bipolarity ternary or negative polarity binary
HD15 input connector	D-sub 15-pin (x1) R/G/B: 0.7 Vp-p, sync positive (Sync On Green, 0.3 Vp-p sync negative) Sync: TTL level (polarity free, H/V separate sync) Plug & Play function: corresponds to DDC2B
DVI-D input connector	DVI-D (x1), TMDS single link
Parallel remote	Modular connector 8-pin (x1)
Serial remote (LAN)	D-sub 9-pin (RS-232C) (x1) RJ-45 modular connector (x1) (Ethernet, 10BASE-T/100BASE-TX)
Optional input port	2 ports, Signal format: H: 15 kHz to 45 kHz, V: 48 Hz to 60 Hz
DC IN connector	XLR-type 4-pin (male) (x1), DC 5 V/24 V (output impedance 0.05 ohms or less)

Output	
Composite output connector	BNC type (x1), Loop-through, with 75 ohms automatic terminal function
Y/C output connector	Mini-DIN 4-pin (x1), Loop-through, with 75 ohms automatic terminal function
RGB/component output connectors	BNC type (x3), Loop-through, with 75 ohms automatic terminal function
External synchronized output connector	BNC type (x1), Loop-through, with 75 ohms automatic terminal function

General		
Power	OLED monitor (PVM-2551MD)	DC IN: 24 V/5.0 A, 5 V/0.030 A (Supplied from AC adaptor)
	AC Adaptor (Sony, AC-110MD)	AC IN: 100 V to 240 V, 50/60 Hz, 1.53 A to 0.58 A DC OUT: 24 V/5.0 A, 5 V/0.060 A
Power consumption		Approx. 135 W (max.) Approx. 80 W (average power consumption in the default status)
Operating conditions	Temperature	32°F to 95°F (0°C to 35°C)
	Recommended temperature	68°F to 86°F (20°C to 30°C)
	Humidity	30% to 85% (no condensation)
	Pressure	700 hPa to 1060 hPa
Storage and transport temperature		−4°F to +140°F (−20°C to +60°C)
Storage and transport humidity		0% to 90% (no condensation allowed)
Storage and transport pressure		700 hPa to 1060 hPa
Dimensions (W x H x D)		24 3/8 x 14 7/8 x 4 1/8 inches (618.4 x 376 x 102.1 mm) (without a stand) 24 3/8 x 18 5/8 x 12 inches (618.4 x 471.5 x 302 mm) (with SU-560 optional stand)
Mass		17 lb 14 oz (8.1 kg) (when the optional stand and the input adaptor are not installed) 18 lb 12 oz (8.5 kg) (when the optional stand is not installed and two BKM-229X are installed)
Accessories supplied		AC adaptor (AC-110MD) (1), AC power cord (1), AC plug holder (2), Instructions for Use (1), CD-ROM (1), Using the CD-ROM Manual (1), Quick Reference (1), When You First Use the Monitor (1), Sales Companies Guide (1)
Optional accessories		SDI 4:2:2 input adaptor (BKM-220D) (1), HD/D1-SDI input adaptor (BKM-243HS) (1), NTSC/PAL input adaptor (BKM-227W) (1), Analog component input adaptor (BKM-229X) (1), 3G/HD/SDI input adaptor (BKM-250TG) (1), DVI-D input adaptor (BKM-256DD) (1), Monitor stand (SU-560) (1)

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