

# SONY



LMD-X550MD

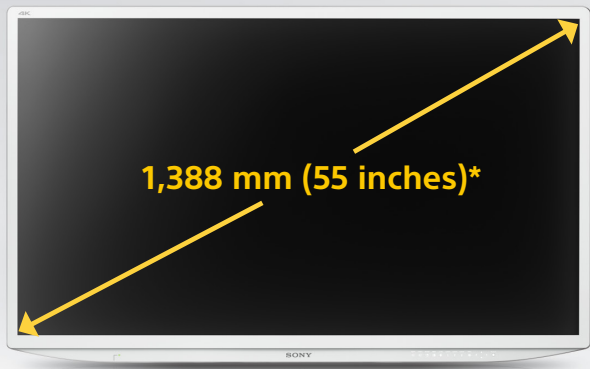
LMD-X310MD

## LMD-X550MD

## LMD-X310MD

LCD Monitors

**4K**



\* Measured diagonally



LMD-X550MD

Offering advanced display technology specifically designed for use in medical environments, the stylish LCD monitors from Sony are available in two sizes. The LMD-X310MD model is 789 mm (31-inch) and the LMD-X550MD model is 1,388 mm (55-inch) in size.

These monitors provide 4K resolution, capable of displaying over four times Full HD, 2D color video displays of images from a surgical endoscope, laparoscopic camera system, and other compatible medical imaging systems. Their compact and user-friendly design is suitable for modern medical environments including operating rooms, surgical centers, clinics, doctor's offices.

## High Picture Quality

### Large 4K Screen

The 4K resolution on 31-inch (4096 x 2160) and 55-inch (3840 x 2160)\*<sup>1</sup> large screen offers high picture quality.

\*1 789 mm (31-inch) and 1,388 mm (55-inch) is measured diagonally across the screen.

### Wide color gamut

The LCD panel and signal processing technology provides a wide color gamut.

### Clear and High-contrast View

The OptiContrast Panel™ achieves clear, high-contrast images by controlling reflection and minimizing light dispersion in the LCD panel. It also helps to eliminate dew condensation in the panel.



OptiContrast Panel

### A.I.M.E.™ (Advanced Image Multiple Enhancer)

A.I.M.E. technology enhances general display of images and objects on the screen.

#### Color Enhancement (Eight levels)

- Clarifies color tone differences between objects.

#### Structure Enhancement (Four levels)

- Improves recognition of the object's outline.
- Visibility gets clear to easily see objects.

A.I.M.E. is an optional function for enhancing the color or structure of the displayed image. Users can select four levels for Structure Enhancement mode and eight levels for Color Enhancement mode, depending on user's preference. Like any of the other settings of the monitor, users must adjust or deactivate A.I.M.E. when appropriate.

## Compact and Stylish Design

### Narrow bezel

The narrow bezel means the monitor has a wider display area, even with the compact body.

### Ergonomic design

The easy-to-grip ergonomic design enables the user to make tiny adjustments simply and quickly.



# Easy to Use

## User-friendly control panel

LED navigated operation enables the user to change the settings very easily, even in dark environments. The user can even assign CUSTOM buttons to commonly used functions.



## Variety of display formats

A variety of display formats – including Rotation Image, Side-by-Side, Picture-in-Picture, and Picture-out-Picture – can be selected easily by simply locating the format on a menu, and selecting a choice.

**Multi-image Display (Examples)**

Normal      Picture-in-Picture (PIP)      Picture-out-Picture (POP)

3 Screen Display      3 Screen Display

**Flip Pattern**

Off      Rotate

## Easy to clean

The flat surface allows the user to easily wipe liquids and gels off the LCD panel and control buttons – ensuring a high standard of disinfection and cleanliness.



## Installation-friendly cabling

All the connectors face downwards, allowing for easy and organized cable connection.



## Compliance with Standards\*2

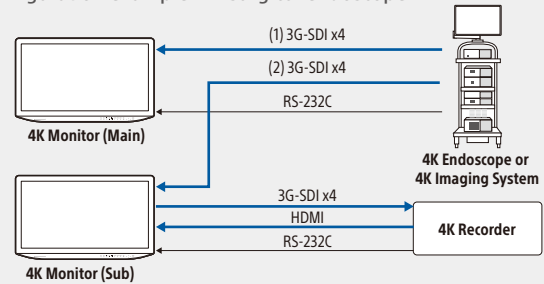
These monitors are certified to IEC 60601-1 and applicable standards in respective countries or economic regions including Canada, Europe and the USA.

\*2 For more details on compliance issues, please contact your nearest Sony office or an authorized dealer.

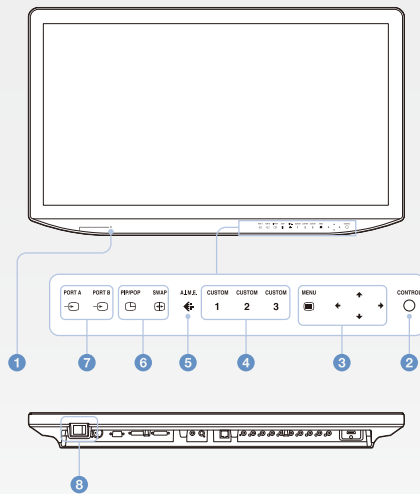
## System configuration

The 4K monitors can be configured with a 4K endoscope and 4K recorder as below. The monitor parameter can be controlled from an external device via RS-232C interface.

Configuration example: 4K surgical endoscope

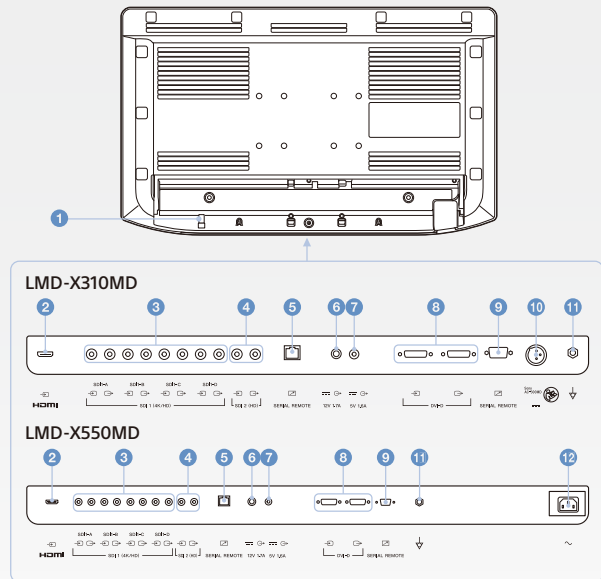


## Front Panel



- 1 Power indicator
- 2 CONTROL button
- 3 OSD menu operation buttons
- 4 CUSTOM button
- 5 A.I.M.E. button
- 6 2 or 3 screen display setting buttons
- 7 Input select buttons
- 8 (ON/STANDBY) switch

## Rear/Bottom Panel



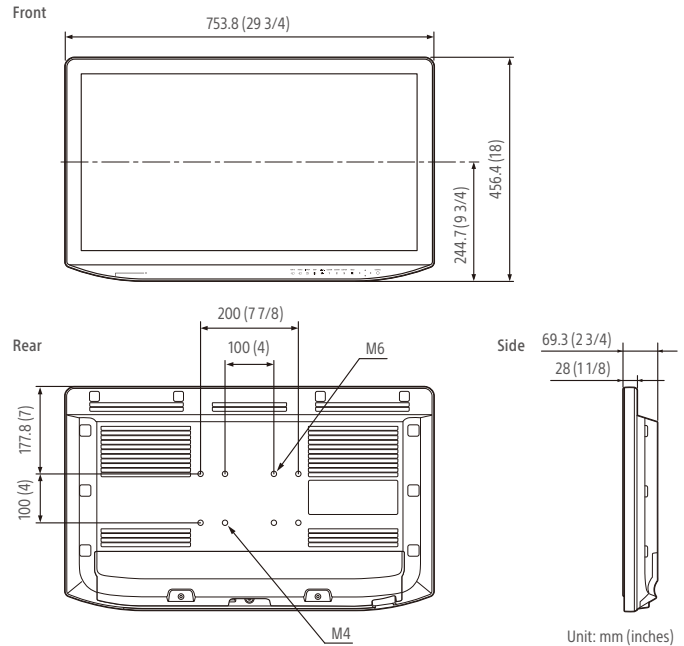
- 1 HDMI cable holder
- 2 HDMI input connector
- 3 3G/HD/SD-SDI input/output connector (BNC type) SDI 1
- 4 3G/HD/SD-SDI input/output connector (BNC type) SDI 2
- 5 SERIAL REMOTE connector (RJ-45)
- 6 12V 1.7A output connector
- 7 5V 1.6A output connector
- 8 DVI-D input/output connector
- 9 SERIAL REMOTE RS-232C connector (D-sub 9-pin, female)
- 10 (DC 26 V input) connector (LMD-X310MD only)
- 11 (equipotential) terminal
- 12 (AC input) connector (LMD-X550MD only)

# Specifications

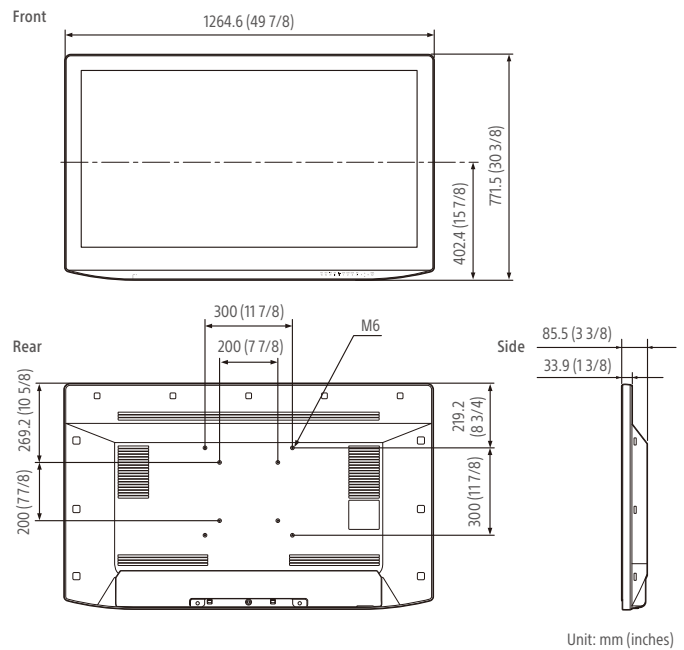
	LMD-X310MD	LMD-X550MD
<b>Picture Performance</b>		
Panel	a-Si TFT Active Matrix LCD	
Picture Size (Diagonal)	789.06 mm (31 1/8 inches)	1387.8 mm (54 3/4 inches)
Effective Picture Size (H x V)	698.0 x 368.1 mm (27 1/2 x 14 1/2 inches)	1209.6 x 680.4 mm (47 5/8 x 26 7/8 inches)
Pixel pitch	0.1704 x 0.1704 mm	0.315 x 0.315mm
Resolution (H x V)	4096 x 2160 pixels	3840 x 2160 pixels
Aspect	17 : 9	16 : 9
Pixel Efficiency	0.9999	
Backlight	LED	
Panel Technology	LCD with IPS	
Luminance (Panel Specification)	770 cd/m <sup>2</sup> (typical)	520 cd/m <sup>2</sup> (typical)
Contrast Ratio	1450 : 1	1400 : 1
Colors	Approx.1.073 billion colors	
Viewing Angle (Panel Specification)	89°/89°/89°/89° (typical)	
Gamma	1.8, 2.0, 2.2, 2.4, 2.6, DICOM, Highlight	
HDMI Input	HDMI (x1) (HDCP 1.4 correspondence)	
DVI-D Input	DVI-D (x1) (HDCP 1.4 correspondence) TMDS single link	
SDI Input	BNC (x5) 3G/HD/SD-SDI	
Serial Remote (LAN)	D-sub 9-pin (RS-232C) (x1), RJ-45 (x1) (Ethernet, 10BASE-T/100BASE-TX)	
DC Input	XLR-type 3-pin (male) (x1), 26 V DC (output impedance 0.005 ohms or less)	
DVI-D Output	DVI-D (x1) when HDCP disabling	
SDI Output	BNC (x5)	
DC 5 V/12 V Output	5 V Output (x1), 8 W 12 V Output (x1) 20 W max	
<b>General</b>		
Power Requirements	LCD monitor - DC Input: 26 V, 6.9 A AC adaptor (AC-300MD): 245 (W) x 150 (L) x 58 (H) mm AC adaptor's AC IN: 100 V - 240 V, 50/60 Hz, 2.1 A - 1.0 A	LCD monitor AC IN: 100 V - 240 V, 50/60 Hz, 3.2 A - 1.3 A
Power Consumption	LCD monitor: Approx. 180 W (max.)	Approx. 290 W (max.)
Operating Temperature	0°C to 40°C (32°F to 104°F) (Recommended: 20°C to 30°C (68°F to 86°F))	
Operating Humidity	30% to 85% (no condensation)	
Storage/Transport Temperature	-20°C to +60°C (-4°F to +140°F)	
Storage/Transport Humidity	0% to 90%	
Operating/Storage/Transport Pressure	700 hPa to 1060 hPa	
Dimensions (W x H x D)	753.8 x 456.4 x 69.3 mm (Slimmest D 28mm) (29 3/4 x 18 x 2 3/4 inches)	1264.6 x 771.5 x 85.5 mm (Slimmest D 33.9 mm) (49 7/8 x 30 3/8 x 3 3/8 inches)
Mass	Approx. 11.8 kg (Approx. 26 lb 0.23 oz)	Approx. 35.2 kg (Approx. 77 lb 9.6 oz)
Supplied Accessories	AC adaptor: AC-300MD (1) AC power cord (1) Instructions for Use (CD-ROM) (1) Abridged edition of Instructions for Use (1) AC power plug holder (2) Instructions for Use of the AC adaptor (1) Service Contact List (1) M4 x 12 mm Screw (4)	AC power cord (1) Instructions for Use(CD-ROM) (1) Abridged edition of Instructions for Use (1) AC power plug holder (2) Service Contact List (1) M6 x 12mm Screw (4)

# Dimensions

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