

## LMD-1951MD

19-inch SXGA 2D LCD medical monitor



### Overview

#### **Full 10-bit HD / SD colour reproduction**

The 19-inch LMD-1951MD SXGA medical LCD monitor is designed for both SD (Standard Definition) and HD (High Definition) systems that generate 4:3/5:4 aspect ratio signal output. The LMD-1951MD incorporates many of the same characteristics and features as the LMD-2451MD, including ChromaTRU™ colour processing for excellent picture reproduction, a full 10-bit digital signal processor to produce accurate and lifelike images, and enhanced viewing modes such as Picture-in-Picture and Mirror Image.

#### ENVIRONMENTALLY-FRIENDLY FEATURES

Advanced LED backlight technology enables the LMD-1951MD to reproduce brighter images than previous models, while at the same time being environmentally-friendly, Hg-free and offering lower power consumption.

### Features

#### **Excellent picture reproduction**

For the highest level of colour reproduction accuracy, the LMD-1951MD uses ChromaTRU™ colour processing technology, for outstanding colour consistency. The monitor also offers highly bright high-contrast images thanks to LED backlight technology

along with a high-quality SXGA LCD panel.

## **Natural gradation and accurate colour reproduction**

The LMD-1951MD adopts an advanced full 10-bit digital video signal processor to produce accurate and lifelike images with smooth and natural gradation.

## **Wide range of standard input interfaces**

The LMD-1951MD is equipped with a full range of inputs, including composite, Y/C (S-Video), RGB, HD15 and DVI-D as standard. Furthermore, two built-in option ports greatly expand the input signals this monitor can accept. These ports allow users to easily select and change input/output signals for ultimate flexibility via a variety of available option boards, including 3G-SDI input (with the BKM-250TG option board).

## **Design features for hygiene and safety**

The LMD-1951MD is liquids resistant and designed to be easily wiped clean of liquids and gels, ensuring effective hygiene and safety in the medical environment. It also features rounded corners, which is beneficial in a busy and space-limited environment such as an operating room.

## **Variety of scan and display modes**

There are various image scan modes – such as Normal/Over scan, Under scan, Full, Zoom and Native – allowing users to select the most suitable scan mode depending on the requirements. Furthermore, the LMD-1951MD provides a variety of display modes including Mirror Image, Side-by-Side and Picture-in-Picture, which allow users to optimally view images according to each particular application.

## **Variety of gamma curve settings**

Users can choose from a variety of gamma settings – 1.8, 2.0, 2.2, 2.4, 2.6, and DICOM – depending on their requirements.

## Key-inhibit

Users can activate/deactivate control panel buttons with just one touch. Use of this feature helps prevent inadvertent operation of the control panel in a busy environment. When the menu item KEY-INHIBIT is set to ON, control panel buttons cannot be used – this prevents unauthorised alteration of settings.

## VESA mounting

The monitor can stand on a desktop or be mounted on the wall or ceiling with a 100 x 100mm VESA arm mount.

## Compliance with medical standards

This product is distributed to the US and EU as a medical device and satisfies product safety standards (e.g. IEC 60601-1). For more details, please contact your nearest Sony sales office or an authorized dealer.

## Specifications

### Picture Performance

|                                |   |
|--------------------------------|---|
| Panel                          | a-Si TFT Active Matrix LCD                    |
| Picture size (diagonal)        | 481.84 mm (19.0 inches)                       |
| Effective Picture size (H x V) | Approx. 376 × 301 mm (14 7/8 × 11 7/8 inches) |
| Resolution (H x V)             | 1280 x 1024 pixels (SXGA)                     |
| Aspect                         | 5:4   |
| Pixel efficiency               | 99.99%  |
| Colors                         | Approx.16.7 million colors                    |

Viewing angle (panel specification) 89°/89°/89°/89° (typical)  
(up/down/left/right contrast > 10:1)

## Input

Composite input (NTSC/PAL) connector BNC type (×1), 1 Vp-p ± 3 dB sync negative

Y/C input connector 4-pin mini-DIN (×1)  
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 (×3)  
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 (×1)  
0.3 Vp-p to 4.0 Vp-p ± bipolarity ternary or negative polarity binary

D-sub 15-pin (x1),  
R/G/B: 0.7 Vp-p sync positive (Sync On Green, 0.3 Vp-p sync negative)

|                      |  |
|----------------------|--|
| HD15 input connector | Sync: TTL level (polarity free, H/V separate sync)<br>Plug & Play function: corresponds to DDC2B |
| DVI input connector  | DVI-D (x1) TMDS single link  |
| Parallel remote      | Modular connector 8-pin (×1)   |
| Serial remote (LAN)  | D-sub 9-pin (RS-232C) (×1)<br>RJ-45 modular connector (ETHERNET) (×1)                            |
| Optional input port  | 2 ports<br>Signal format:<br>H: 15 kHz to 45 kHz<br>V: 48 Hz to 60 Hz                            |
| DC IN connector      | DC5V/24V (output impedance 0.05 ohms or less)  |

## Output

|                            |   |
|----------------------------|---|
| Composite output connector | BNC type (×1)<br>Loop-through, with 75 ohms automatic terminal function       |
| Y/C output connector       | 4-pin mini-DIN (×1)<br>Loop-through, with 75 ohms automatic terminal function |

|                                 |  |
|---------------------------------|--|
| RGB/component output connectors | BNC type (× 3)<br>Loop-through, with 75 ohms automatic terminal function |
|---------------------------------|--|

|  |  |
|--|--|
| External synchronized output connector | BNC type (× 3)<br>Loop-through, with 75 ohms automatic terminal function |
|--|--|

## General

|       |   |
|-------|---|
| Power | LCD monitor (LMD-1951MD)<br>AC 100-240 V, 50/60 Hz, 0.92 A-0.40 A<br>DC IN: 24 V 3.5 A 5 V 0.030 A<br>(Supplied from AC adaptor)<br>AC Adaptor (Sony, AC-110MD) (optional)<br>AC IN: 100 V-240 V, 50/60 Hz, 1.53 A-0.58 A<br>DC OUT: 24 V 5.0 A 5 V 0.060 A |
|-------|---|

|                   |   |
|-------------------|---|
| Power consumption | Maximum: approx. 85 W (when two BKM-229X are installed) |
|-------------------|---|

## Operating conditions

|             |                                |
|-------------|--------------------------------|
| Temperature | 0 °C to 35 °C (32 °F to 95 °F) |
|-------------|--------------------------------|

|                         |                                 |
|-------------------------|---------------------------------|
| Recommended temperature | 20 °C to 30 °C (68 °F to 86 °F) |
|-------------------------|---------------------------------|

|                                   |  |
|-----------------------------------|--|
| Humidity                          | 30% to 85% (no condensation)   |
| Pressure                          | 700 hPa to 1060 hPa  |
| Storage and transport temperature | -20 °C to +60 °C (-4 °F to +140 °F)  |
| 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)            | 455.8 x 368.3 x 101.7 mm (18 x 14 5/8 x 4 1/8 inches) (without a stand)                        |
|                                   | 455.8 x 435.7 x 302 mm (18 x 17 1/4 x 12 inches) (with SU-560 optional stand)                  |
| Mass                              | 6.7 kg (14 lb 12 oz) (when the optional stand and the input adaptor are not installed)         |
|                                   | 7.1 kg (15 lb 10 oz) (when the optional stand is not installed and two BKM-229X are installed) |
| Accessories supplied              | 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)

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## Optional Accessories

|           |                                |
|-----------|--------------------------------|
| BKM-220D  | SDI 4:2:2 Input Adaptor        |
| BKM-243HS | HD/D1-SDI input adaptor        |
| BKM-227W  | NTSC/PAL input adaptor         |
| BKM-229X  | Analog component input adaptor |
| BKM-250TG | 3G/HD/SD-SDI input adaptor     |
| BKM-256DD | DVI-D input adaptor            |
| AC-110MD  | AC adaptor                     |
| SU-560    | Monitor stand                  |

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## Gallery

