

## BVM-E250

24.5-inch Full-HD Reference  
OLED Monitor



### Overview

#### **Professional applications**

For professional applications such as colour grading, high-end editing, broadcasting and scientific research, Sony's leading edge Organic Light-Emitting Diode (OLED) technology and signals processing technology ensures absolutely outstanding performance with the BVM-E250.

State-of-the-art product

Super Top Emission technology enhances OLED's intrinsic benefits to deliver outstanding black performance, a quick response with virtually no motion blur, and a wide colour gamut. An all-new 12-bit output digital signal processing engine provides a nonlinear cubic conversion colour-management system that delivers precise colour reproduction, stunning picture uniformity, smoother-than-ever gamma performance, and picture quality consistency.

Accepts computer signals via HDMI

The BVM-E250 accepts various computer signals input up to 1920 x 1080 through its HDMI connector. It is also equipped with Digital Cinema features.

### Features

#### **Superb Picture Performance**

Sony TRIMASTER EL technology combines the ultimate performance of Sony OLED display with the highly sophisticated TRIMASTER technology to provide the highest level of picture performance:

- Accurate Black Reproduction
- High purity and accurate colour reproduction
- Quick response with virtually no motion blur
- High Contrast Performance

### **Super Top Emission™ technology**

Sony's Super Top Emission™ technology has a micro-cavity structure which incorporates colour filters. The micro-cavity structure uses an optical resonance effect to enhance colour purity and improve light-emission efficiency. In addition, the colour filter of each RGB further enhances the colour purity of emitted light, and reduces ambient light reflection.

### **Ultimate Display Engine**

High-precision signal processing engine has been developed to fulfil the reference monitor criteria and is optimized to maximize OLED panel performance. This engine incorporates 12-bit output accuracy at each process, and provides both a high quality I/P conversion algorithm and a highly accurate colour management system.

### **Multi-format signal support**

The BVM-E250 monitor can accept almost any SD or HD video format, both analogue and digital, and variable computer signals up to 1920 × 1080. In addition to the standard inputs, four option board slots are offered to configure this monitor according to different user needs.

### **Versatile video inputs**

This monitor is equipped as standard with two 3G/HD/SD-SDI inputs, an HDMI (with HDCP) input and a Displayport\* for future

expansion. In addition, four option ports are available.

\* DisplayPort input will be supported from monitor software version 1.1 or later.

## **Four Slots for Optional Video Input Decoders**

The monitor can accept up to four optional video input boards simultaneously. Available formats include analogue, composite, Y/C, components, RGB and digital 3G/HD/SD SDI.

## **3D signal analyzing functions (3D signal input, 2D display)**

By installing the optional BKM-250TG 3G/HD-SDI input adaptor\*, the BVM-E250 can support a variety of 3D signal analyzes. The 3D signals\* are displayed in 2D mode.

- Difference display
- Checkerboard display
- L/R switch display
- Horopter check display
- Flip H display

\* Requires the BKM-250TG 3G-SDI input adaptor (serial number 7200001 or later). 3D signals are not displayed in stereoscopic view.

## **Auto White Balance**

The colour temperature and white balance of BVM-E and F Series monitors can be automatically adjusted by the Auto White Balance function using specified colour temperature probes, such as the Konica Minolta CA-210, CS-200, DK-Technologies PM5639/06, and X-Rite i1 (Eye-One) Pro.

## **High Quality I/P Conversion Technology**

The BVM-E250 monitor uses a sophisticated I/P conversion technique that keeps artefacts that are often seen in flat panel

displays to a minimum such as edge jaggedness, conversion errors, etc.

### **Low video delay**

The BVM-E250 display engine ensures a picture delay that is less than one field.

### **Panel Calibration**

Every BVM-E250 monitor is carefully calibrated at the factory on an individual basis, providing a high level of accuracy and stability for characteristics such as gamma and uniformity.

### **Colour Feedback System**

Using a colour feedback system, the BVM-E250 monitor achieves the stability required for Broadcast critical monitoring applications.

### **Interlaced Display Mode**

Faithfully reproduces interlaced signals, emulating CRT monitors.

### **Picture**

The unique Picture

### **Gamut Error Display**

BVM-E250 master monitor incorporates a Gamut Error Display function that detects irregular signal input.

### **S-LOG Gamma**

BVM-E250 master monitor incorporates gamma tables to reproduce images captured using S-LOG Gamma technology. S-LOG gamma is a technique used in Sony's digital cinematography cameras that allows the full latitude of the camera CCD to be maintained throughout the production chain.

### **2K Picture Resolution**

The 2048 Image Slide function of the BVM-E250 allows 2K resolution (2048 x 1080 pixels) images to be mapped, pixel-to-

pixel, on the full-HD (1920 x 1080 pixels) panel without picture degradation.

### HD Frame Capture Mode

The HD Frame Capture function of the BVM-F Series allows a picture frame from the 3G-SDI and HD-SDI input to be captured and saved as a picture file on a Memory Stick™ media.

### Separate Control unit with memory stick slot

A separate control unit BKM-16R is available for the BVM-E250. It is equipped with a Memory Stick socket enables users to download and save all monitor set-ups such as input channel configuration, control preset adjustments, white balance settings and maintenance parameters.

### Centralised Monitor-Wall Control

Multiple monitors can be easily managed by a single control unit BKM-16R via an Ethernet connection.

## Specifications

### Picture Performance

|                                |                                            |
|--------------------------------|--------------------------------------------|
| Panel                          | OLED panel                                 |
| Picture Size (Diagonal)        | 623.4 mm<br>24 5/8 inches                  |
| Effective Picture Size (H x V) | 543.4 x 305.6 mm<br>21 1/2 x 12 1/8 inches |
| Resolution (H x V)             | 1920 x 1080 pixels (Full HD)               |
| Aspect                         | 16:09                                      |

|                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|-------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Pixel Efficiency                    | 0,9999                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Panel Drive                         | RGB 10-bit                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Panel Frame Rate                    | 48 Hz, 50 Hz, 60 Hz, 72 Hz, 75 Hz *1                                                                                                                                                                                                                                                                                                                                                                                                             |
| Viewing Angle (Panel Specification) | 89°/89°/89°/89° (typical)<br>(up/down/left/right contrast > 10:1)                                                                                                                                                                                                                                                                                                                                                                                |
| Normal Scan                         | 0% scan                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Native Scan                         | Mapping the pixels of the signal to the panel to one-to-one mode, or displaying an SD signal of nonsquare pixels (the number of H pixels of the signal system is 720 or 1440) or a 640 × 480 SD signal of HDMI video by scaling processing of doubling for the V direction and correct aspect ratio for the H direction and also optimizing and displaying a picture by modifying the aperture coefficient value, filter coefficient value, etc. |
| Under Scan                          | 3% under scan                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Over Scan                           | Mask of 5% over scan portion in the normal scan                                                                                                                                                                                                                                                                                                                                                                                                  |
| Color Temperature                   | D55, D61, D65, D93, D-Cine *2 , User                                                                                                                                                                                                                                                                                                                                                                                                             |

|                    |                                                                                                                   |
|--------------------|-------------------------------------------------------------------------------------------------------------------|
| Standard Luminance | 100 cd/m <sup>2</sup> (Preset1 to Preset5)<br>48 cd/m <sup>2</sup> (Preset (D-Cine))<br>(100% white signal input) |
|--------------------|-------------------------------------------------------------------------------------------------------------------|

|                           |                                                                   |
|---------------------------|-------------------------------------------------------------------|
| Color Space (Color Gamut) | ITU-R BT.709, EBU, SMPTE-C, D-Cine *3, E250 Native *4, S-GAMUT *5 |
|---------------------------|-------------------------------------------------------------------|

|              |                    |
|--------------|--------------------|
| Warm-up Time | Approx. 30 minutes |
|--------------|--------------------|

## Input

|                           |                                 |
|---------------------------|---------------------------------|
| BNC (x2) Input impedance: | 75 Ω unbalanced                 |
| Sampling frequency        |                                 |
| 3G-SDI:                   |                                 |
| - Y/Cb/Cr (4:2:2):        | 148.5 MHz/74.25 MHz/74.25 MHz   |
| - Y/Cb/Cr (4:4:4):        | 148.5 MHz /148.5 MHz/148.5 MHz  |
| - G/B/R (4:4:4):          | 148.5 MHz/148.5 MHz/148.5 MHz   |
| HD-SDI:                   |                                 |
| - Y/Cb/Cr (4:2:2):        | 74.25 MHz/37.125 MHz/37.125 MHz |
| SD-SDI:                   |                                 |
| - Y/Cb/Cr (4:2:2):        | 13.5 MHz/6.75 MHz/6.75 MHz      |
| Quantization              |                                 |

|                     |                                                                                     |
|---------------------|-------------------------------------------------------------------------------------|
|                     | 3G-SDI: 10bit/sample, 12 bit/sample<br>HD-SDI: 10bit/sample<br>SD-SDI: 10bit/sample |
| HDMI Input          | HDMI (x1) (HDCP correspondence, Deep Color correspondence)                          |
| DisplayPort         | DisplayPort connector (x1) *6                                                       |
| Option Port         | Four (4) ports                                                                      |
| Parallel Remote     | D-sub 9-pin (female) (x1)                                                           |
| Serial Remote (LAN) | RJ-45 (x1) (Ethernet, 10BASE-T/100BASE-TX)                                          |

## Output

|               |                                                                                                                                                                                                                             |
|---------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| SDI Output    | BNC (x1) (monitor output) *7<br>Output signal amplitude: 800 mVp-p $\pm$ 10%<br>Output impedance: 75 $\Omega$ unbalanced<br>Transmission distance<br>3G-SDI: 70 m max. *8<br>HD-SDI: 100 m max. *8<br>SD-SDI: 200 m max. *9 |
| DC 5 V Output | Circle 4-pin (female) (x1)                                                                                                                                                                                                  |



## General

|                       |                                                                                                                                                                                                                                                                                     |
|-----------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Power Requirements    | 100 V to 240 V AC, 1.6 A to 0.8 A, 50/60 Hz                                                                                                                                                                                                                                         |
| Power Consumption     | Approx. 145 W (max.)<br>Approx. 72 W (average power consumption in the default status)                                                                                                                                                                                              |
| Inrush Current        | (1) Maximum possible inrush current at initial switch-on (Voltage changes caused by manual switching): 53 A peak, 17 A r.m.s. (240V AC)<br>(2) Inrush current after a mains interruption of five seconds (Voltage changes caused at zero-crossing): 39 A peak, 6 A r.m.s. (240V AC) |
| Operating Temperature | 0°C to 35°C<br>(Recommended: 20°C to 30°C)<br>32°F to 95°F<br>(Recommended: 68°F to 86°F)                                                                                                                                                                                           |
| Operating Humidity    | 0% to 90% (no condensation)                                                                                                                                                                                                                                                         |

|                                      |                                                                                                                                                     |
|--------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|
| Storage/Transport Temperature        | -20°C to +60°C<br>-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) *10           | 576.0 x 424.0 x 148.0 mm<br>22 3/4 x 16 3/4 x 5 7/8 inches                                                                                          |
| Mass                                 | Approx. 13.0 kg<br>Approx. 28 lb 11 oz                                                                                                              |
| Supplied Accessories                 | AC power cord (1)<br>AC plug holder (1)<br>Bracket (1)<br>Operation Manual (Japanese, English, each 1)<br>CD-ROM (1)<br>Using the CD-ROM Manual (1) |
|                                      | BKM-16R Monitor Control Unit<br>BKM-37H Controller Attachment Stand<br>SMF-700 Monitor Interface Cable<br>BKM-220D SDI 4:2:2 Input                  |

## Optional Accessories

Adaptor (with serial number 2100001 or higher)  
 BKM-227W NTSC/PAL Input Adaptor  
 BKM-229X Analog Component Input Adaptor (with serial number 2200001 or higher)  
 BKM-243HS HD/D1-SDI Input Adaptor (with serial number 2108355 or higher)  
 BKM-244CC HD/SD-SDI Closed Caption Adaptor  
 BKM-250TG 3G/HD/SD-SDI Input Adaptor (with serial number 7300001 or higher)

## Notes

Note [\*1] 48 Hz, 60 Hz and 72 Hz are also compatible with a frame rate of 1/1.001.

Note [\*2] D-Cine:  $x = 0.314$ ,  $y = 0.351$

Note [\*3] Chromaticity point of SMPTE RP 431-2 is not covered in full.

[\*4] The BVM-E250 individual

|      |                                                                                                                                                                                       |
|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Note | chromaticity points. The widest color space setting of the signal is reproduced by the BVM-E250. R ( $x=0.681, y=0.319$ )/G ( $x=0.189, y=0.724$ )/B ( $x=0.141, y=0.051$ ) (typical) |
| Note | [*5] For displaying the color gamut of the wide color space mode S-GAMUT, which is available for the F23 or F35 Digital Cinematography Camera.                                        |
| Note | [*6] The DisplayPort input is available from V1.1.                                                                                                                                    |
| Note | [*7] The signal from the monitor output connector does not satisfy the online signal specifications.                                                                                  |
| Note | [*8] When using 5C-FB coaxial cables (Fujikura or equivalent).                                                                                                                        |
| Note | [*9] When using 5C-2V coaxial cables (Fujikura or equivalent).                                                                                                                        |
| Note | [*10] The values for dimensions are approximate.                                                                                                                                      |

## Gallery



