## Specifications

### Model Name
- MS33i2/AR
- MS53i2/AR
- MS23i2/AR
- CCL356i2/F
- CCL256i2/F
- MS33i2
- MS53i2
- MS23i2

### Performance
- **Viewing Angle**: 170˚ vertical and horizontal (Wide view)
- **Contrast Ratio**: 750 : 1 (typ) 900 : 1 (typ) 850 : 1 (typ) 750 : 1 (typ)
- **Maximum Luminance**: 1100cd/m² typ. (calibrated to 500cd/m² and 410cd/m² by factory default)
- **Grayscale**: 1073.74 million colors (DisplayPort 10bit input)
- **Input Signals**: DVI-D (DVI 1.0 compliant), DisplayPort (DisplayPort 1.1a compliant)

### Power Supply
- **Input Voltage**: 100V ~ 240V (±10%) 50/60Hz
- **Maximum Power Consumption**: 120W typ. (with power management feature)
- **Display Area**: 433.152mm X 324.864mm
- **Pixel Pitch**: 0.2115mm X 0.2115mm

### Physical Characteristics
- **Dimensions**
  - **Landscape**: 474 (W) X 468.4 / 529.9 (H) X 220 (D)mm
  - **Portrait**: 390 (W) X 522.2 / 583.7 (H) X 220 (D)mm
  - **Weight**: Net: approx. 12kg

### Accessories
- **Input**: USB Hub, USB upstream connector (x1), USB downstream connector (x2)
- **Output**: Power cord (3P), DVI cable, USB cable, Operation manual, Calibration Control Luminance, Gamma, Capability of saving 3 sets of LUT settings
- **Other Features**: Luminance Uniformity Correction, Hardware Pivot, LED indicator, Configurations switching function, ISD Technology

### Approvals
- **Plag and Play**: DDC2B compliant

### Others
- **Input 100V ~ 240V (±10%) 50/60Hz**
- **OSD**
- **Mount**: 100mm VESA mounting
- **Tilt stand**: Tilt, Swivel, Portrait / Landscape
- **USB Hub**: USB Rev. 2.0 compliant, Self-powered
- **Pixel Pitch**: 0.270mm X 0.270mm

### Important Information
- **Cleaning kit (Special AR coating model only)**
- **Environmental Management**: Environmentally conscious technology and processes are confirmed through ISO14001 and ISO13485 certification which are international standards concerning environment management and quality control respectively.
- **Quality Assurance**: TOTOKU has obtained ISO14001 and ISO9001/ISO13485 certification which are international standards concerning quality assurance.

### Contact Information
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- **http://www.totoku.com/display/**

### Higher Image Quality and Total Management

— DICOM Conformance —
Reliable Quality and Stability

Luminance stabilizing system λ-Sentinel II

λ-Sentinel II consists of a luminance sensor and a luminance control circuit. The luminance sensor is integrated into the front bezel, directly against the screen, and constantly monitors and adjusts sub-pixel luminance on the screen surface by sending feedback information to the control circuit.

• With luminance fluctuations caused by the LCD matrix taken into account, highly accurate luminance control is achieved.

• Actual luminance measurements including intermittent luminance are taken on the screen surface.

ISO (Independent Sub-pixel Drive) technology

Driven by each sub-pixel corresponding to individual information readout as an original image, three times resolution enhancement is achieved. In addition, up to 1276 shades of gray are now simultaneously displayable by the upgraded IO technology.

• Special AR coating for film-like black and improved sharpness

To ensure high color reproduction and superior image quality, ISD (Independent Sub-pixel Drive) technology combines high-definition pixels output by each sub-pixel with matrix display output by the conventional LCD technology.

Remote grayscale check and remote calibration functions

Conformance to DICOM GSDF and calibration can be remotely accomplished. These features minimize the burdens on display administrators.

Special AR coating for film-like black and improved sharpness

Tosoku’s new Special AR coating technology addresses properties of noise, color reproduction, contrast, and viewing angle achieving film-like black and accurate reproduction of images.

OSD information display

At your fingertips, you can view current display status and information, including actual measurement of luminance, calibration settings, total operating hours as well as model name and serial number.

LED indicator

A glance at the LED indicator tells you the display’s current operating status.

Display Quality Control

Medvisor Series

The Medvisor Series is a series of software to collectively support display quality control from acceptance and periodic consistency testing to constant monitoring, calibration.

Environmental Regulations

RoHS

Tosoku’s displays and graphics cards are compliant with the European Union Directive 2002/95/EC for the Restriction of the use of Hazardous Substances in Electrical and Electronic Equipment (RoHS).

*For details, please refer to our website.

Worldwide Medical Safety and EMI standards

Tosoku’s medical image displays comply with various stringent worldwide medical standards. They ensure safety and reliability required for use in medical facilities.

*Optional software Calibration Kit is required to set up the Advanced Power Savings feature.