LED Display Wall

[78 Series Version]
**New Wide-format LED Display Wall Cubes Guarantee High Performance and Quality**

Energy-saving LED light source and DLP® projector system incorporated to realize more advanced visual communications. Display wall cubes with wide formats of 16:9 and 16:10 newly added to the product line-up, further enhancing our ability to tailor solutions to suit diversified customer applications.

**Smart 7 ~ New Functions for Market-leading Large Display Wall Systems**

The key to visual communications can be found in Mitsubishi Electric's Smart 7 technologies, the core concept behind display wall design at Mitsubishi Electric. These advanced cutting-edge technologies are incorporated in all 70 Series products, ensuring innovative display solutions for command and control room applications.

**DLP® Technology for the Ultimate in High Quality and Digital Control**

At the core of Mitsubishi Electric projection technology is the DLP® chip: a display device with minute metal mirrors arranged at multiple points on a silicon base using the most advanced semiconductor fabrication technology available. Each micromirror corresponds to a single pixel or element of the picture. Images are produced by maneuvering these micromirrors electronically. Each micromirror corresponds to a single pixel or element of the picture. Images are produced by maneuvering these micromirrors electronically.

**LED Light Source Advantages**

- **Virtually Maintenance-free**
  A LED light source has an average service life that is approximately 10 times longer than that of conventional ultrahigh-pressure mercury lamps. Combined with the 100,000hr ultralong service life of our fans, the average service life of Mitsubishi Electric LED display wall cubes is more than 10 years, even when operated 24/7.

- **Choice of Four Brightness Modes**
  Equipped with an original LED power control circuit, each display wall cube can be set to operate in one of four modes (for WE, HE and PE models): Normal, Bright, Eco and Advanced Eco. As a result, command and control room operators can select the brightness according to the environment and use.

- **Wider Color Reproduction Range**
  The LED light source offers a much wider range of color reproduction, allowing a larger array of vivid colors to be used for the icons and symbols frequently used in command and control rooms. This ultimately makes it easier for command and control room operators to share information.

- **Multiple Picture Settings**
  Mitsubishi Electric LED display wall cubes have multiple picture settings, giving the freedom to choose the best setting according to the application and content being displayed. Optimized Color is best for reproducing natural-looking colors, Vivid Color realizes more striking colors in icons/symbols, and Low Color Temperature is ideal for backdrops with limited contrast.

- **Eco-conscious**
  The LED light source eliminates the use of mercury, and thus helps to preserve the environment. At the same time, the Eco mode setting contributes to lower power consumption and CO2 emissions than display wall cubes that use a conventional ultrahigh-pressure mercury lamp.

**Largest LED Display Wall Cube Line-up Ever**

An expansive line-up is now available including 62 and 72-inch 16:10 wide models, a 70-inch 16:9 wide model, and 50, 60, 67, and 80inch 4:3 models. Available resolutions include XGA, SXGA+, Full HD(1080P) and WUXGA. Three screen options are offered as well: Black Stripe (standard), Cross-lenticular and Black Bead, which vary in brightness and viewing angle capabilities. This expanded range of choices gives users more flexibility in creating the optimal system to match the application and installation environment.

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*All Mitsubishi Electric LED cubes are manufactured based upon the anti-earthquake simulation which we performed in the product design stage.

*As of September 2012, in-house research.

*Service life figures not guaranteed.
Air Cooling System for LED Light Source

Liquid Cooling System
- Pump/Drive parts are required to circulate the liquid
- Complex system requiring liquid reservoir and tube
- Coolant must be replaced frequently due to deterioration and loss
- Pump has a short service life (approx. 50,000hrs)

Cooling module for Blue

Efficient Air Cooling System Realizes Higher Reliability

The system has an optimal airflow path and cooling module design that are perfectly matched to the characteristics of the LED light source.

Air Cooling System
- Highly efficient, compact cooling module
- No moving parts that require frequent replacement
- Long service life

*The cooling module consists of a highly efficient cooling pipe and aluminum plate.

Intelligence

High-resolution Images Created with Mitsubishi Electric’s New Optical Engine and Image-quality Circuit Design

High Contrast and Brightness

With newly developed optical system which is 100% tuned for LED light source, the brightness uniformity is even more improved. For wide model, higher contrast 1500:1 (WE/HE models) and higher brightness 1100 cd/m² (62/70/72/WUXGA) are realized. For 4:3 models, higher contrast 1600:1 (PE models) and 1,700:1 (PE model) are achieved with the highest brightness at 1420 cd/m² (50/62/70/84).

Color Space Control Circuit

To compensate for the color and brightness inconsistency on display wall cubes, Mitsubishi Electric has developed an original Color Space Control Circuit that balances and blends colors. The ratios of each primary color (Red/Green/Blue) and other color mixtures are adjusted to provide consistent color blending and superior uniformity on multiscree configurations.

Digital Gradation Circuit

Loss of brightness at the screen edges is no longer a problem owing to Mitsubishi Electric’s innovative digital gradation circuit. Brightness is distributed evenly across the screen, ensuring the reproduction of sharp, vivid images from edge to edge on multiscree configurations.

Auto-balancing

Brightness and Color Uniformity Maintained between Multiple Screens Realizing More Expressive images

Dynamic Color & Brightness Balancing

Each display wall cube is equipped with three built-in sensors (one for each primary color) that sense a color and brightness maintenance algorithm. The sensors continually monitor the individual red, green, and blue output of each display wall cube, share the data with adjacent cubes, and adjust output performance automatically to produce extremely accurate colors and brightness balance over the entire display. These features make it possible to maintain image uniformly on multiscree configurations over long periods of operation without using external software or a computer.

Digital RGB input board

Analog RGB input board

Video input board

Smart Switch

A “Smart Switch” function has been added to Mitsubishi Electric display wall cubes to deliver the signal redundancy necessary for mission critical applications. If a signal is unexpectedly lost, the display wall automatically switches to the alternative signal source (either “port-to-port” or “board-to-board”) within seconds after the “no signal” status is detected. This function makes it possible for the user to minimize downtime in the event of a signal source failure.
(*2) Depending on configuration and environment. The maximum screen to screen gap size is recommended for large display walls to allow for screen expansions due to heat and humidity.

### Cross Lenticular Screen (Option for all models):

<table>
<thead>
<tr>
<th>Model Name</th>
<th>Screen Size</th>
<th>Brightness</th>
<th>Viewing Angle</th>
<th>Native Resolution</th>
</tr>
</thead>
<tbody>
<tr>
<td>50XEF</td>
<td>50&quot;</td>
<td>1400 x 1050</td>
<td>120° (30°)</td>
<td>Full HD</td>
</tr>
<tr>
<td>50XE</td>
<td>50&quot;</td>
<td>1400 x 1050</td>
<td>120° (30°)</td>
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<tr>
<td>67PE78</td>
<td>67&quot;</td>
<td>1024 x 768</td>
<td>120° (30°)</td>
<td>720p</td>
</tr>
<tr>
<td>60PEF78</td>
<td>60&quot;</td>
<td>1024 x 768</td>
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</tr>
<tr>
<td>60PE78</td>
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<td>1024 x 768</td>
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<td>720p</td>
</tr>
<tr>
<td>50PEF78</td>
<td>50&quot;</td>
<td>1024 x 768</td>
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<td>720p</td>
</tr>
<tr>
<td>50PE78</td>
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<tr>
<td>70HE78</td>
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<td>120° (30°)</td>
<td>720p</td>
</tr>
<tr>
<td>62WEF78</td>
<td>62&quot;</td>
<td>1024 x 768</td>
<td>120° (30°)</td>
<td>720p</td>
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### Black Bead Screen (Option for 4:3 models):

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</tr>
</tbody>
</table>
■ 16:9 wide format

70HE78

70HEF78

■ 16:10 wide format

62WE78

62WEF78

72WE78

72WEF78

■ 4:3 format

50PE78/50XE

50PEF78/50XEF

60PE78/60XE

60PEF78/60XEF

67PE78/67XE

67PEF78/67XEF

80PE78

(unit:mm)

*The design and measurements are subject to change without notice.

Eco Changes is the Mitsubishi Electric Group’s environmental statement, and expresses the Group’s stance on environmental management. Through a wide range of businesses, we are helping contribute to the realization of a sustainable society.

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