

Display Wall



LED Display Wall

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Brighter display solutions

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New Wide Screen LED Display Wall Cubes Guarantee High Performance and Quality

Mitsubishi Electric have added new wide screen LED display wall cubes to the product line-up, further enhancing our ability to tailor solutions to suit a wide variety of customer applications. Continually looking at ways to improve our product offerings Mitsubishi have incorporated an energy saving LED light source and DLP projector system allowing for advanced visual communications.



Tokyo Metropolitan Police Traffic Control Room

Fukui Prefecture Police Command Center

NIT West Kobe IOC Center

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.



Largest LED Display Wall Cube Line-up Ever

Mitsubishi Electric have introduced a 16:9 70" LED, 16:10 62" and 72" LED's as well as 4:3 models in 50", 60", 67" and 80" that are available in a variety of resolutions including XGA, SXGA+, Full HD (1080P) and WUXGA. Three screen options are also offered:

Black Stripe (standard), Cross-lenticular and Black Bead which vary in brightness and view angle capabilities. This expanded range of choices gives users more flexibility in creating the optimal system to match the application and installation environment.

*All Mitsubishi display wall cubes are manufactured based upon the anti-earthquake simulation which we performed at the product design stage.

■ 16:10 wide format



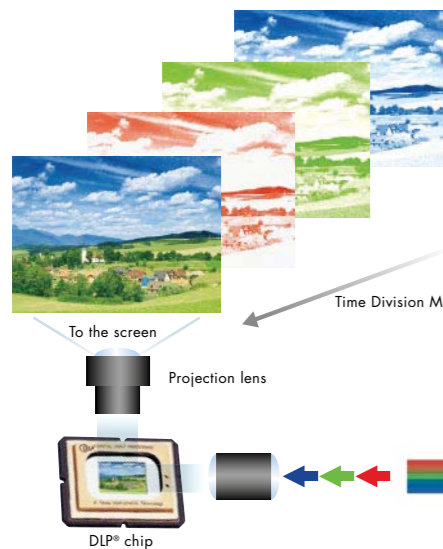
■ 16:9 wide format



■ 4:3 format



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.

*DLP and the DLP medallion logo are registered trademarks of Texas Instruments in the United States of America.

Consistent High-quality Images

Full digital control of color and gradation at every micromirror results in images with consistently high picture quality and uniform color and brightness, even between the center and edges of the display wall.

Higher Reliability

The DLP® chip is a reflective device with a very high reflection ratio, thus very little energy remains on the chip itself. This characteristic allows still images, text data and other fixed patterns to be displayed for long periods of time without image retention or burn-in that occurs with other image processing methods.

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 a conventional ultrahigh-pressure mercury lamp. Combined with the 100,000hr, ultra long service life of our fans, the average service life of Mitsubishi Electric LED display wall cubes is close to 10 years, even when operated 24/7.

*Service life figures not guaranteed.

Choice of Three Brightness Modes

Equipped with an original LED power control circuit, each display wall cube can be set to operate in one of three modes: Normal, Bright or Eco. As a result, command and control room operators can select the brightness according to the environment and use.

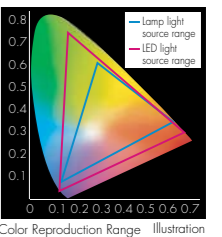
Proven Performance

Over 50,000 Mitsubishi Electric DLP® projector systems have been delivered to mission-critical command and control rooms around the world. Our new LED projection engines are developed through the deep understanding and experience gained from the market and listening closely to customers' needs.

*As of March 2011, inhouse research.

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.



Color Reproduction Range Illustration

Multiple Picture Settings

Mitsubishi Electric LED display wall cubes have multiple picture settings, giving customers 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 backdrop applications in broadcasting studios.

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 ultra high-pressure mercury lamp.

Durability

Air Cooling System for LED Light Source

Liquid Cooling System

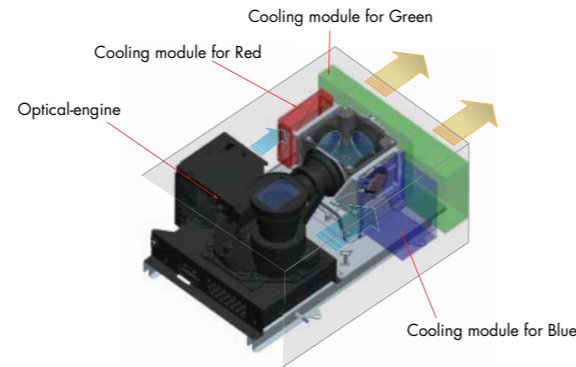
- Pump/Drive parts are required to circulate the liquid
- Complex system requiring liquid reservoir and tube
- Coolant must be replaced frequently due to deterioration and loss
- Pump has a short service life (approx. 50,000hr)

Air Cooling System

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

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.



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

Intelligence

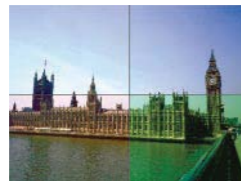
High-resolution Images Created with Mitsubishi Electric's New Optical Engine and Image-quality Circuit Design

High Contrast and Brightness

With newly developed optical system which is 100% tuned for LED light source, the brightness uniformity is improved. For wide models, higher contrast 1500:1 (WE/HE models) and higher brightness 840 cd/m² (62WE / 62WEF) are realised. A high contrast ratio of 1500:1 (WE/HE Models) and 840 cd/m² has been achieved ensuring the reproduction of clear and sharp images.

Colour Space Control Circuit

To compensate for the colour and brightness inconsistencies on Display wall cubes, Mitsubishi Electric has developed an original Colour Space Control Circuit that balances and blends colours. The ratios of each primary colour (Red/Green/Blue) and other colour mixtures are adjusted to provide consistent colour blending and superior uniformity on multi-screen configurations.



without Colour Space Control



with Colour Space Control

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 multi-screen configurations.



without Digital Gradation



with Digital Gradation

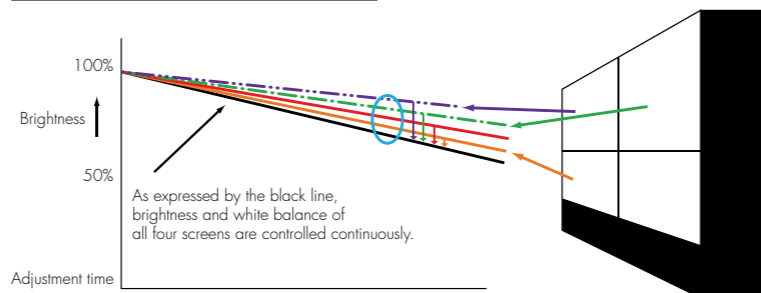
Auto-balancing

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 use 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 every two seconds, and adjust performance automatically to produce extremely accurate colors and brightness balance over the entire display. These features make it possible to maintain image uniformity on multi-screen configurations over long periods of operation without using external software or a computer.

4-screen Multi-image Example



Easy Set-up

Full Front Access for Simple Maintenance

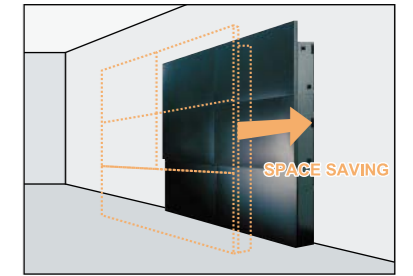


Okazaki Electricity DMS Center



Mitsubishi Electric offers a wide line-up of front-access products: front access is available for 70" [Full HD (1080P)], 62" (WUXGA) and 72" (WUXGA) models, as well as 4:3 models (50", 60" and 67", both XGA and SXGA+). The specially designed slide-and-lift screen and

the special air-ventilation system allow all installation and maintenance work to be completed from the front. As a result, no maintenance space is needed behind the display wall cubes even if they are tiled as a display wall installation.



No space is needed behind a display wall

Flexibility

More Ports and Increased Input Resolution Options

The number of input boards has been increased for compatibility with a wider range of input signals. Compatibility with input resolution is also

increased, now including up to WUXGA (1920x1200).

*Possible to select up to three from five option boards per Display Wall Cube.



Analog RGB input board



Daisy chain board



Video input board



Digital RGB input board



3G-SDI input board

Internal Processing

Built-in Processor

The 70 Series units are equipped with an internal data processing function. Up to four windows (*1) or two windows (*2) per cube can be displayed when using the optional input boards. Windows can be of any size or displayed across the entire wall (up to six windows (*1) or three windows (*2) per cube is possible if a 'desktop' image is not present). Multiple windows can be moved freely without the need of an external computer. Used in combination with Mitsubishi Electric's D-Wall software suite, the entire imaging system can be controlled intuitively from a user-friendly graphical user interface.

(*1) WE/HE Models with VC-B70V2 or PE/XE Models with all boards.

(*2) WE/HE Models with other boards.



1 Back Ground (Desktop)



4 Windows + 1 Back Ground (Desktop)



*The example is for PE75/WE Models.

Redundancy

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 that require round-the-clock operation. 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.

Screen size		62" diagonal size		72" diagonal size		70" diagonal size		50" diagonal size		60" diagonal size		67" diagonal size		80" diagonal size		50" diagonal size		60" diagonal size		67" diagonal size																			
Abbreviated model name		62WE		62WEF		72WE		72WEF		70HE		70HEF		50PE75		50PEF75		60PE75		60PEF75		67PE75		67PEF75		80PE75		50XE		50XEF		60XE		60XEF		67XE		67XEF	
Native resolution		WUXGA (1920 x 1200 Pixels)																																					
Accessibility		Rear		Front		Rear		Front		Rear		Front		Rear		Front		Rear		Front		Rear		Front		Rear		Front		Rear		Front		Rear		Front			
Technology		DLP™ technology (0.96" DLP™ 1 chip)/DarkChip3™/BrilliantColor™ (*1)																																					
Brightness		840cd/m² [Typ.]		690cd/m² [Typ.]		510cd/m² [Typ.]		610cd/m² [Typ.]		500cd/m² [Typ.]		380cd/m² [Typ.]		1090cd/m² [Typ.]		900cd/m² [Typ.]		670cd/m² [Typ.]		760cd/m² [Typ.]		630cd/m² [Typ.]		470cd/m² [Typ.]		610cd/m² [Typ.]		450cd/m² [Typ.]		510cd/m² [Typ.]		350cd/m² [Typ.]		280cd/m² [Typ.]		230cd/m² [Typ.]			
Viewing angle		1/2 gain: ±35deg, 1/10 gain: ±57deg Vertical: 1/2 gain: ±10deg, 1/10 gain: ±28deg																																					
Contrast ratio		1500:1 [Typ.]																																					
Screen to screen gap		Horizontal: 0.2 - 1.5mm (*2)		Vertical: 0.2 - 1.0mm (*2)		Horizontal: 1.0 - 2.5mm (*2)		Vertical: 0.2 - 1.5mm (*2)		Horizontal: 0.2 - 2.0mm (*2)		Vertical: 0.2 - 1.5mm (*2)		Horizontal: 0.2 - 1.5mm (*2)		Vertical: 0.2 - 2.0mm (*2)		Horizontal: 1.0 - 3.0mm (*2)		Vertical: 0.2 - 1.5mm (*2)		Horizontal: 0.2 - 1.5mm (*2)		Vertical: 0.2 - 2.0mm (*2)		Horizontal: 1.0 - 3.0mm (*2)		Vertical: 0.2 - 1.5mm (*2)		Horizontal: 0.2 - 1.5mm (*2)		Vertical: 0.2 - 2.0mm (*2)		Horizontal: 1.0 - 3.0mm (*2)		Vertical: 0.2 - 1.5mm (*2)			
Light source		LED (RGB) 80,000hrs (*3)																																					
Key parts service life (Average)		DLP™ chip: 100,000hrs. (MTBF 650,000hrs) Cooling fan: 100,000hrs																																					
Control signal input		RS-232C: D-sub 9-pin LAN: RJ45 (10BASE-T/100BASE-TX) Dsub9 x 2 (IIN/OUT) Mitsubishi Electric Original Control Link Wire remote: F3.5 Jack IR receiver																																					
Optional input board slot		x3																																					
Power consumption (w/ 1 input board)		Bright mode: 250W [Typ.]		Normal mode: 190W [Typ.]		Eco mode: 150W [Typ.]		Bright mode: 210W [Typ.]		Normal mode: 160W [Typ.]		Eco mode: 120W [Typ.]		Bright mode: 220W [Typ.]		Normal mode: 160W [Typ.]		Eco mode: 117W [Typ.]																					
Voltage range		100-240VAC±10%, 50/60Hz±1Hz																																					
Operating current (100/240V)		3.5/1.4Amp.																																					
Operating environment		Temperature: 10-35°C (50-95°F)		Humidity: 20-80% non-condensing		Temperature: 10-30°C (50-86°F)		Humidity: 20-80% non-condensing		Temperature: 10-35°C (50-95°F)		Humidity: 20-80% non-condensing		Temperature: 10-35°C (50-95°F)		Humidity: 20-80% non-condensing		Temperature: 10-35°C (50-95°F)		Humidity: 20-80% non-condensing		Temperature: 10-35°C (50-95°F)		Humidity: 20-80% non-condensing		Temperature: 10-35°C (50-95°F)		Humidity: 20-80% non-condensing		Temperature: 10-35°C (50-95°F)		Humidity: 20-80% non-condensing							
Weight		100kg/220lbs		105kg/231lbs		112kg/247lbs		116kg/276lbs		107kg / 236lbs		112kg/247lbs		72kg/159lbs		79kg/174lbs		91kg/201lbs		97kg/214lbs		106kg/234lbs		110kg/243lbs		140kg/309lbs		71kg/156lbs		78kg/172lbs		90kg/198lbs		96kg/212lbs		105kg/231lbs		109kg/240lbs	
Model number		Projection engine: VS-WE75U		Cabinet: S-62WE75CA, S-62WE75CAF, S-62WE75UF		Screen unit: SC-62WE75U, SC-62WE75UF		Projection engine: VS-PE75U		Cabinet: S-5070CA, S-5070CAF, S-5070UA, S-5070UAF		Screen unit: SC-5070U, SC-5070UF		Projection engine: VS-XE70U		Cabinet: S-6770CA, S-6770CAF, S-6770UA, S-6770UAF		Screen unit: SC-6770U, SC-6770UF																					

(*1) DLP™, DarkChip3™ and BrilliantColor™ are trademarks of Texas Instruments.

(*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.

(*3) The lifetime of LED light source is an expected value, not guaranteed. The expected lifetime: Temperature condition at operation is 77°F/25°C. With 95°F/35°C, LED lifetime with Bright Mode is 60,000hrs.

* This product is "class 2" LED product.

Cross Lenticular Screen (Option for all models):

Abbreviated model name with optional Cross-lenticular Screen		62WEL		62WEFL		72WEL		72WEFL		70HEL		70HEFL		50PE75L		50PEF75L		60PE75L		60PEF75L		67PE75L		67PEF75L		80PE75L		50XEL		50XEFL		60XEL		60XEFL		67XEL		67XEFL	
Model number for optional cross-lenticular screen		SC-62WE75L		SC-62WE75LF		SC-72WE75L		SC-72WE75LF		SC-70HE75L		SC-70HE75LF		SC-5075L		SC-5075LF		SC-6075L		SC-6075LF		SC-6775L		SC-6775LF		SC-8075L		SC-5075L		SC-5075LF		SC-6075L		SC-6075LF		SC-6775L		SC-6775LF	
Brightness with optional cross-lenticular screen		Bright mode: 430cd/m² [typ.]		Normal mode: 350cd/m² [typ.]		Eco mode: 260cd/m² [typ.]		Bright mode: 310cd/m² [typ.]		Normal mode: 260cd/m² [typ.]		Eco mode: 190cd/m² [typ.]		Bright mode: 570cd/m² [Typ.]		Normal mode: 470cd/m² [Typ.]		Eco mode: 350cd/m² [Typ.]		Bright mode: 400cd/m² [Typ.]		Normal mode: 330cd/m² [Typ.]		Eco mode: 240cd/m² [Typ.]		Bright mode: 320cd/m² [Typ.]		Normal mode: 260cd/m² [Typ.]		Eco mode: 190cd/m² [Typ.]		Bright mode: 270cd/m² [Typ.]		Normal mode: 220cd/m² [Typ.]		Eco mode: 170cd/m² [Typ.]			
Viewing angle with optional cross-lenticular screen		Horizontal: 1/2 gain: ±35 deg, 1/10 gain: ±57deg Vertical: 1/2 gain: ±33deg, 1/10 gain: ±55deg																																					

Black Bead Screen (Option for 4:3 models):

Abbreviated model name with Black Bead Screen		50PE75B		50PEF75B		60PE75B		60PEF75B		67PE75B		67PEF75B		80PE75B		50XEB		50XEFB		60XEB		60XEFB		67XEB		67XEFB	
Model number for Black Bead Screen		SC-5070B		SC-5070BF		SC-6070B		SC-6070BF		SC-6770B		SC-6770BF		SC-8070B		SC-5070B		SC-5070BF		SC-6070B		SC-6070BF		SC-6770B		SC-6770BF	
Brightness with Black Bead Screen		Bright mode: 270cd/m² [Typ.]		Normal mode: 220cd/m² [Typ.]		Eco mode: 170cd/m² [Typ.]		Bright mode: 190cd/m² [Typ.]		Normal mode: 150cd/m² [Typ.]		Eco mode: 110cd/m² [Typ.]		Bright mode: 150cd/m² [Typ.]		Normal mode: 120cd/m² [Typ.]		Eco mode: 90cd/m² [Typ.]		Bright mode: 110cd/m² [Typ.]		Normal mode: 90cd/m² [Typ.]		Eco mode: 70cd/m² [Typ.]			
Viewing angle with Black Bead Screen		Horizontal: 1/2 gain: ±35Degree, 1/10 gain: ±75Degree Vertical: 1/2 gain: ±33Degree, 1/10 gain: ±55Degree																									

Model	Screen size (inches)	Resolution				Front access
		WUXGA (1920 x 1200)	Full HD (1920 x 1080)	SXGA+ (1400 x 1050)	XGA (1024 x 768)	
62WE	62	○				
62WEF	62	○				○
72WE	72	○				
72WEF	72	○				
70HE	70		○			
70HEF	70		○			○
50PE75	50			○		
50PEF75	50			○		○
60PE75	60			○		
60PEF75	60			○		○
67PE75	67			○		
67PEF75	67			○		○
80PE75	80			○		
50XE	50				○	
50XEF	50				○	○
60XE	60				○	
60XEF	60				○	○
67XE	67				○	
67XEF	67				○	○

Analog RGB input board (Option)



Model number	VC-B70G2	
Signal input terminal (Analog RGB)	5BNC x1, HD D-sub 15 pins x1	
RGB input scanning frequency	Signal resolutions	VGA (640 x 480) - WUXGA (1920 x 1200)
	Horizontal	31.5kHz - 92kHz
	Vertical	49Hz - 85Hz
Pixel clock rate	25MHz - 162MHz	
Functions	Image scaling (shrink and zoom) Frame rate conversion	

Digital RGB input board (Option)



Model number	VC-B70D2	
Signal input terminal (Digital RGB)	DVI-D x2	
RGB input scanning frequency	Signal resolutions	VGA (640 x 480) - WUXGA (1920 x 1200)
	Horizontal	31.5kHz - 92kHz
	Vertical	49Hz - 85Hz
Pixel clock rate	25MHz - 162MHz	
Signal format	TMDS	
Functions	Image scaling (shrink and zoom) Frame rate conversion	

Video input board (Option)



Model number	VC-B70V2	
Signal input terminal (Analog Video)	3BNC x2	
Analog video input signals	NTSC, NTSC4.43, PAL, PAL-M, PAL-N PAL-60, SECAM	
Functions	Image scaling (shrink and zoom) Frame rate conversion	

Daisy chain board (Option)



Model number	VC-B70DC	
Signal input terminal	Analog RGB:	HD D-sub 15pins x1
	Digital RGB:	DVI-D x1
	Analog video:	3BNC x1
Signal output terminal	Digital RGB: DVI-D x1 (for daisy chain use only)	
RGB input scanning frequency	Signal resolutions	VGA (640 x 480) - WUXGA (1920 x 1200)
	Horizontal	31.5kHz - 92kHz
	Vertical	49Hz - 85Hz
Analog video input signals	NTSC, NTSC4.43, PAL, PAL-M, PAL-N PAL-60, SECAM	
Pixel clock rate	25MHz - 162MHz	
Functions	Image scaling (shrink and zoom)	
	Frame rate conversion	Daisy chain [Up to 16 cubes]

3G-SDI input board (Option)



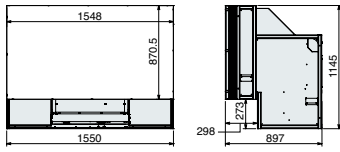
Model number	VC-B70SD1	
Signal input terminal	HD-SDI: BNC x1	
Input signals	3G-SDI (SMPT242M):	1080p@50/59.94/60Hz
	HD-SDI (SMPT292M):	1080i@50/59.94/60Hz, 720p@50/59.94/60Hz
	SD-SDI (SMPT259-C):	480i@59.94Hz, 576i@50Hz
Signal output terminal	HD-SDI: BNC x1 (for through output)	
Gen Lock input terminal	BNC x1	
Functions	Image scaling (shrink and zoom) Frame rate conversion through output	

* At least one input board per single display is needed for operation.

* The specifications are subject to change without notices.

■ 16:9 wide format

70HE



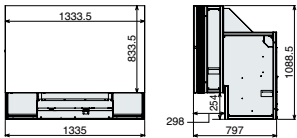
70HEF



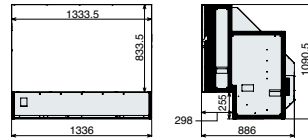
(unit:mm)

■ 16:10 wide format

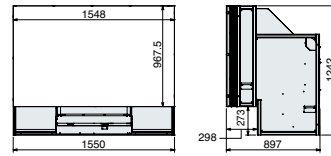
62WE



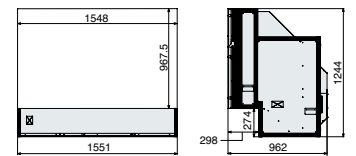
62WEF



72WE



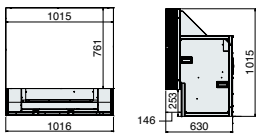
72WEF



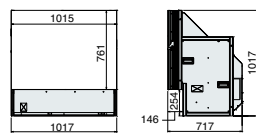
(unit:mm)

■ 4:3 format

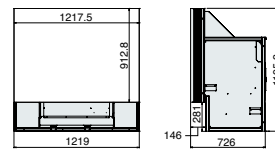
50PE75/50XE



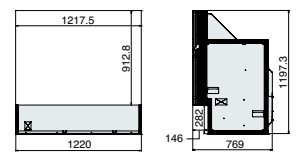
50PEF75/50XEF



60PE75/60XE

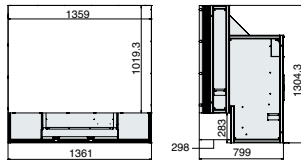


60PEF75/60XEF

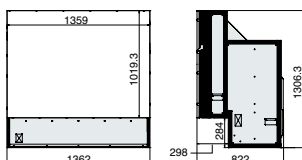


(unit:mm)

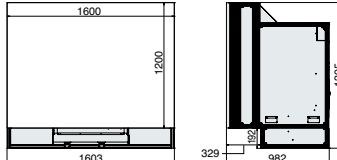
67PE75/67XE



67PEF75/67XEF



80PE75



(unit:mm)

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



for a greener tomorrow

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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Brighter display solutions

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