

# Product Specifications

## DLP™ LED Display Cube



Combination model name:

**Model: 67PEF78**

Information in this document is subject to change without notice.

**Mitsubishi Electric Corporation  
Kyoto Works**

Date: November 30, 2012

## 67PEF78 models Specifications

### (1) Combination model name

Combination model name	Unit model name			Features
	Engine	Cabinet	Screen	
67PEF78U	VS-PE78U	S-6770CAF	SC-6775UF	LED light source Front maintenance Black stripe screen
67PEF78L	VS-PE78U	S-6770CAF	SC-6775LF	LED light source Front maintenance Fine cross screen
67PEF78B	VS-PE78U	S-6770CAF	SC-6770BF	LED light source Front maintenance Black bead screen

### (2) Image panel and light source

Type	DLP™ technology (0.95" DLP™ 1 chip) DarkChip3™ , BrilliantColor™
Resolution	1400 x 1050 pixels
Light source	LED (RGB)
Light source average lifetime	100,000hours @ ADV.ECO mode 80,000hours @ Other modes

DLP and Digital Light Processing are trademarks of Texas Instruments.

### (3) Electric specification

Power consumption Thermal dissipation (with 1 input board typ.)	Mode	Power consumption	Thermal dissipation
	BRIGHT	233W	200.4kcal/h (795BTU/h)
	NORMAL	147W	126.4kcal/h (502BTU/h)
	ECO	108W	92.9kcal/h (369BTU/h)
	ADV.ECO	88W	75.7kcal/h (300BTU/h)
Voltage range	AC 100 – 240V +/-10% , 50/ 60Hz +/-1Hz		
Operating current (100/240V)	3.4/1.5 Amp.		
Inrush current (100/240V)	30/60 Amp.		
Control signal input	RS-232C: D-Sub 9 pins		
	LAN: RJ45 x1 (10BASE-T/100BASE-TX)		
	D-Sub 9 pins x 2 (input, output) Mitsubishi original control link		
	Wire remote: F3.5Jack		
	IR Receiver		
Input board slot	Input board slot for optional input board x 3		
Input signal specification	Refer to (10) Optional input board specification		
Overlay function	Up to 6 windows per each screen.		

#### (4) Optical specification (Typical value)

Screen model name		SC-6775UF	SC-6775LF	SC-6770BF
Brightness	BRIGHT Mode	790cd/m <sup>2</sup>	400cd/m <sup>2</sup>	190cd/m <sup>2</sup>
	NORMAL Mode	580cd/m <sup>2</sup>	290cd/m <sup>2</sup>	140cd/m <sup>2</sup>
	ECO Mode	390cd/m <sup>2</sup>	200cd/m <sup>2</sup>	90cd/m <sup>2</sup>
	ADV.ECO mode	150cd/m <sup>2</sup>	80cd/m <sup>2</sup>	30cd/m <sup>2</sup>
Viewing angle	Horizontal	1/2 gain: +/- 35° 1/10 gain: +/- 57°	1/2 gain: +/- 35° 1/10 gain: +/- 57°	1/2 gain: +/- 35° 1/10 gain: +/- 75°
	Vertical	1/2 gain +/- 10° 1/10 gain: +/- 28°	1/2 gain +/- 33° 1/10 gain: +/- 55°	1/2 gain +/- 35° 1/10 gain: +/- 75°
Screen size		67" Diagonal size (1359mm x 1019.3mm)		
Light output		1000ANSI Lumen @BRIGHT Mode		
Contrast ratio		1600:1		
Brightness uniformity		95% at 90% image height		
Geometry distortion		0.2%		
Mullion size (*)		1.0mm – 3.0mm		
Color gamut		180% EBU		
Lateral color shift Red – Green Blue – Green		0.5pixel		

(\*) Depending on configuration and environment.

3.0mm recommended for large walls to allow for expansion due to heat and humidity.

#### (5) Mechanical specification (Approximate value)

Dimensions	Width	1362mm / 53.6"		
	Height	1306.3mm / 51.4"		
	Depth	822mm / 32.4"		
Weight		110kg / 243lbs		
Audio noise		31dBA (typ.) (at 1m distance from screen center)		
Packing dimensions		Engine unit	Cabinet unit	Screen unit
	Width	910mm / 35.8"	1451mm / 57.1"	1500mm / 59.1"
	Height	500mm / 19.7"	1483mm / 58.4"	1200mm / 47.2"
	Depth	530mm / 20.9"	852mm / 33.5"	180mm / 7.1"
Packing Weight		37kg / 82lbs	87kg / 192lbs	28kg / 62lbs
Accessories		Engine unit: User's manual, Control cable Cabinet unit: User's manual Parts for connecting cubes Brackets for engine fixation Bolts for engine fixation, Joint hole seal		

### (6) Environment

Temperature and humidity Condition at operation	10°C – 30°C (50°F – 86°F), 20% – 80% non condensing
Temperature and humidity Condition at storage	-20°C – 50°C (-4°F – 122°F), 20% – 80% non condensing

### (7) Safety approval

Safety approval	UL60950-1, CSAC22.2No.60950-1, EN60950-1 K60950-1, AS60950-1, GB4943
EMC	FCC part15 Subpart B Class A ICES-003 Issue No.4 Class A EN55022 Class A, EN55024 EN61000-3-2, EN61000-3-3 K00022 Class A, K00024 AS/NZS CISPR 22 Class A GB9254 Class A, GB17625.1 VCCI Class A, JIS C 61000-3-2

### (8) Parts reliability (Average lifetime)

Cooling fan	100,000hours
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### (9) Options

Remote control unit	R-XL50TX
Analog RGB input board	VC-B70G2
Digital RGB input board	VC-B70D2
Video input board	VC-B70V2
Daisy chain board	VC-B70DC
SDI input board	VC-B70SD1
LED unit	S-78LE
Power cord (North America)	JC-PC3MA
Power cord (Europe)	JC-PC3ME
Power cord (China)	JC-PC3MC
Power cord (Japan)	JC-PC3MJ
Motorized adjustment tool	S-A70E
Motor units for screen/mirror	S-MA70E

## (10) Optional input board specification

### Analog RGB input board: VC-B70G2

Signal input terminal (Analog RGB)		5BNC x1 HD Dsub15 x1
RGB Input scanning frequency	Signal resolution	VGA (640 x 480) – WUXGA (1920 x 1200) (Refer to attached “Supported signals list”)
	Horizontal	31.5kHz – 92kHz
	Vertical	49Hz – 85Hz
Pixel clock rate		25MHz – 162MHz
Functions		Scaling: shrink and zoom. Frame rate conversion.

### Digital RGB input board: VC-B70D2

Signal input terminal (Digital RGB)		DVI-D (with HDCP) x2
RGB Input scanning frequency	Signal resolution	VGA (640 x 480) – WUXGA (1920 x 1200) (Refer to attached “Supported signals list”)
	Horizontal	31.5kHz – 92kHz
	Vertical	49Hz – 85Hz
Pixel clock rate		25MHz – 162MHz
Signal format		TMDS
Functions		Scaling: shrink and zoom. Frame rate conversion.

### Video input board: VC-B70V2

Signal input terminal (Analog Video)		3BNC x2
Video input signals		NTSC, NTSC4.43 PAL, PAL-M, PAL-N, PAL-60, SECAM
Functions		Scaling: shrink and zoom. Frame rate conversion.

### Daisy chain board: VC-B70DC

Signal input terminal		Analog RGB: HD Dsub15 x1 Digital RGB: DVI-D (with HDCP) x1 Analog Video: 3BNC x1
Signal output terminal		Digital RGB: DVI-D x1 (Daisy chain use only. Can not output HDCP signals.)
RGB Input scanning frequency	Signal resolution	VGA (640 x 480) – WUXGA (1920 x 1200) (Refer to attached “Supported signals list”)
	Horizontal	31.5kHz – 92kHz
	Vertical	49Hz – 85Hz
Video input signals		NTSC, NTSC4.43 PAL, PAL-M, PAL-N, PAL-60, SECAM
Pixel clock rate		25MHz – 162MHz
Functions		Scaling: shrink and zoom. Frame rate conversion. Daisy chain function (Up to 16 cubes)

### SDI input board: VC-B70SD1

Signal input terminal		BNC x 1
Signal output terminal		BNC x 1 (for through output)
Input signals		3G-SDI (SMPTE424M): 1080p@50/59.94/60Hz HD-SDI (SMPTE292M): 1080i@50/59.94/60Hz 720p@50/59.94/60Hz SD-SDI (SMPTE259M-C): 480i@59.94Hz, 576i@50Hz
Gen lock input		Terminal: BNC x 1 Format: NTSC/PAL Black burst
Functions		Scaling: shrink and zoom. Frame rate conversion. Through output: (Up to 16 cubes @ HD-SDI, SD-SDI Up to 9 cubes @ 3G-SDI)

## Supported signals list

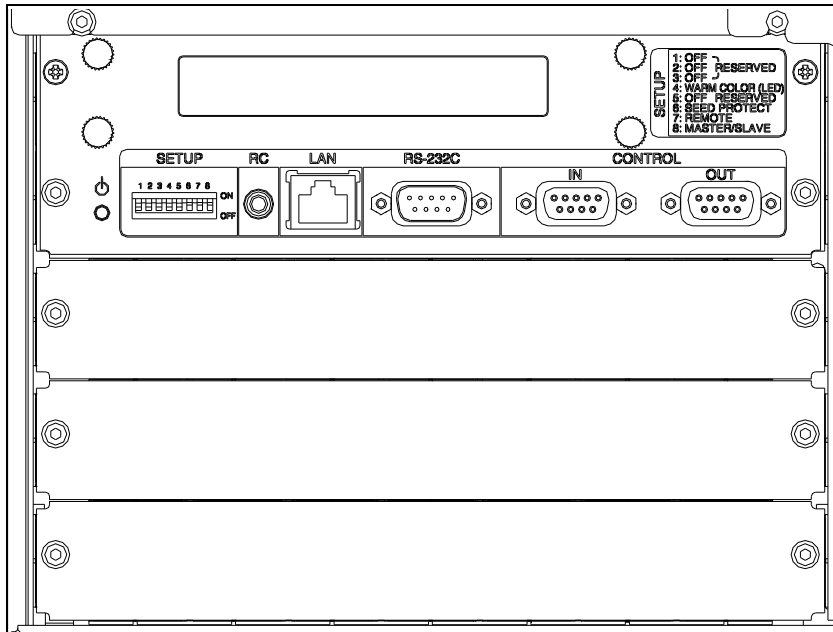
### RGB signals

Signal	Resolution	Refresh rate (Hz)	Line rate (kHz)
VESA	1920 x 1200	60.0	74.0
	1920 x 1080	60.0	67.5
	1680 x 1050	60.0	65.3
	1600 x 1200	60.0	75.0
	1440 x 900	59.9	55.9
	1400 x 1050	59.9	64.7
		60.0	65.3
		74.9	82.3
	1366 x 768	59.8	47.7
	1360 x 768	60.0	47.7
	1280 x 1024	60.0	64.0
		75.0	80.0
		85.0	91.1
	1280 x 960	60.0	60.0
	1280 x 800	59.8	49.7
	1280 x 768	59.9	47.8
	1280 x 720	60.0	45.0
	1152 x 864	75.0	67.5
	1024 x 768	60.0	48.4
		70.1	56.5
		75.0	60.0
		85.0	68.7
	848 x 480	60.0	31.0
	800 x 600	56.3	35.2
		60.3	37.9
		72.2	48.1
		75.0	46.9
		85.1	53.7
	720 x 400	85.0	37.9
	640 x 480	59.9	31.5
		72.8	37.9
		75.0	37.5
		85.0	43.3
640 x 400	85.1	37.9	
640 x 350	85.1	37.9	
PC	1400 x 1050	60.0	64.0
	1280 x 1024	60.0	63.4
	1280 x 960	75.0	75.0
	1152 x 864	70.0	63.9
		85.1	77.5
640 x 400	70.1	31.5	
	84.1	37.9	
Mac	1152 x 870	75.0	68.6
	1024 x 768	74.9	60.2
	832 x 624	74.5	49.7
	640 x 480	66.7	35.0
Unix	1280 x 1024	59.9	64.6
		71.2	75.1
		72.0	78.1
		76.1	81.1
HDTV	1920 x 1080	50.0	28.1
		59.9	33.7
	1280 x 720	50.0	37.5
		59.9	45.0

### Y/Cb/Cr ( Y/Pb/Pr ) signals

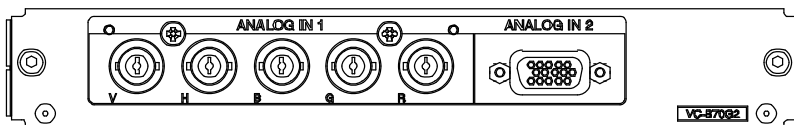
Signal	Resolution	Refresh rate (Hz)	Line rate (kHz)
1125p/1080p	1920 x 1080	50.0	56.3
		59.9	67.4
1125i/1080i	1920 x 1080	50.0	28.1
		59.9	33.7
750p/720p	1280 x 720	50.0	37.5
		59.9	45.0
625p/576p	720 x 576	50.0	31.3
525p/480p	720 x 480	59.9	31.5

### Terminal panel

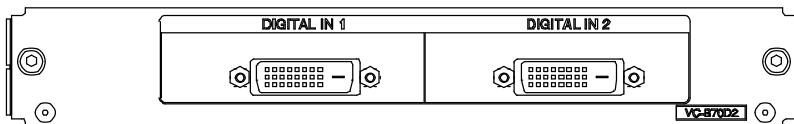


### Optional input board appearance

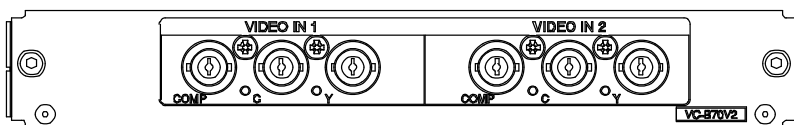
VC-B70G2



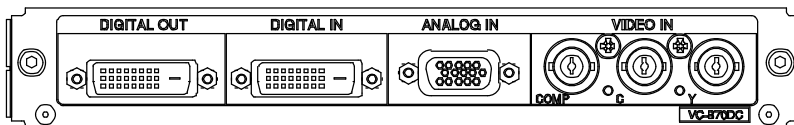
VC-B70D2



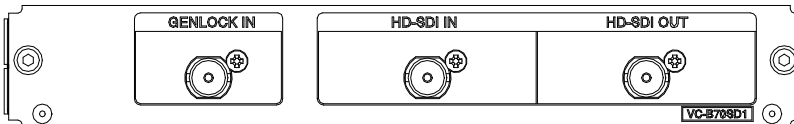
VC-B70V2



VC-B70DC

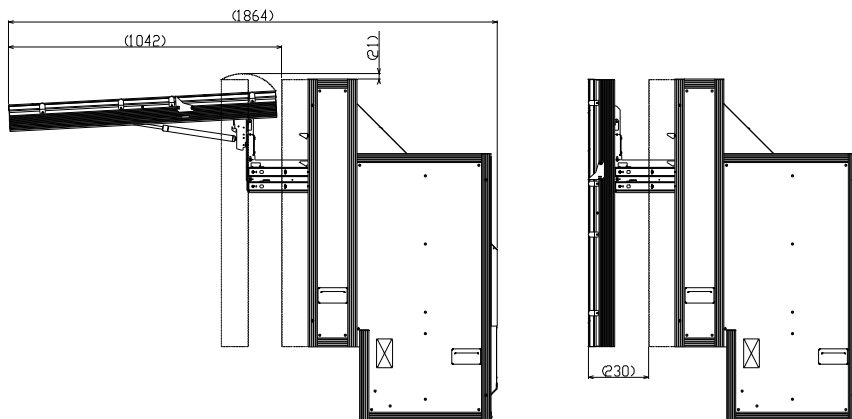
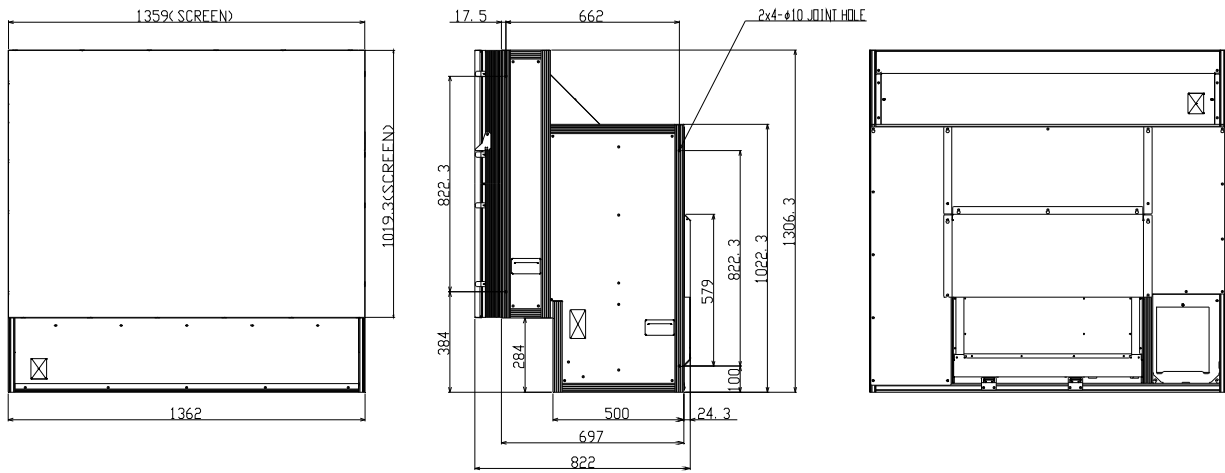
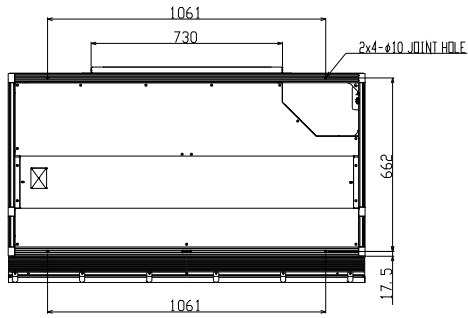


VC-B70SD1

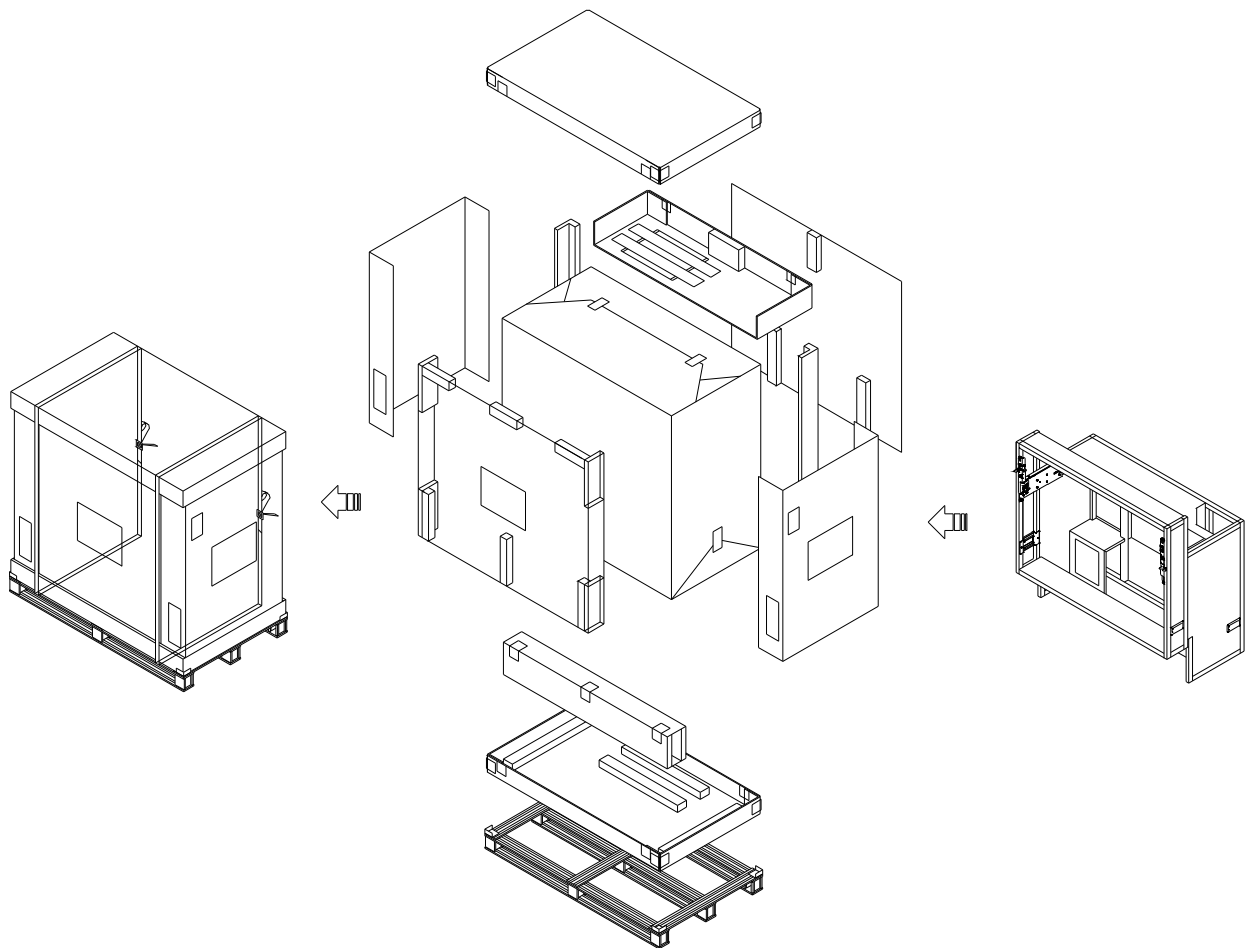




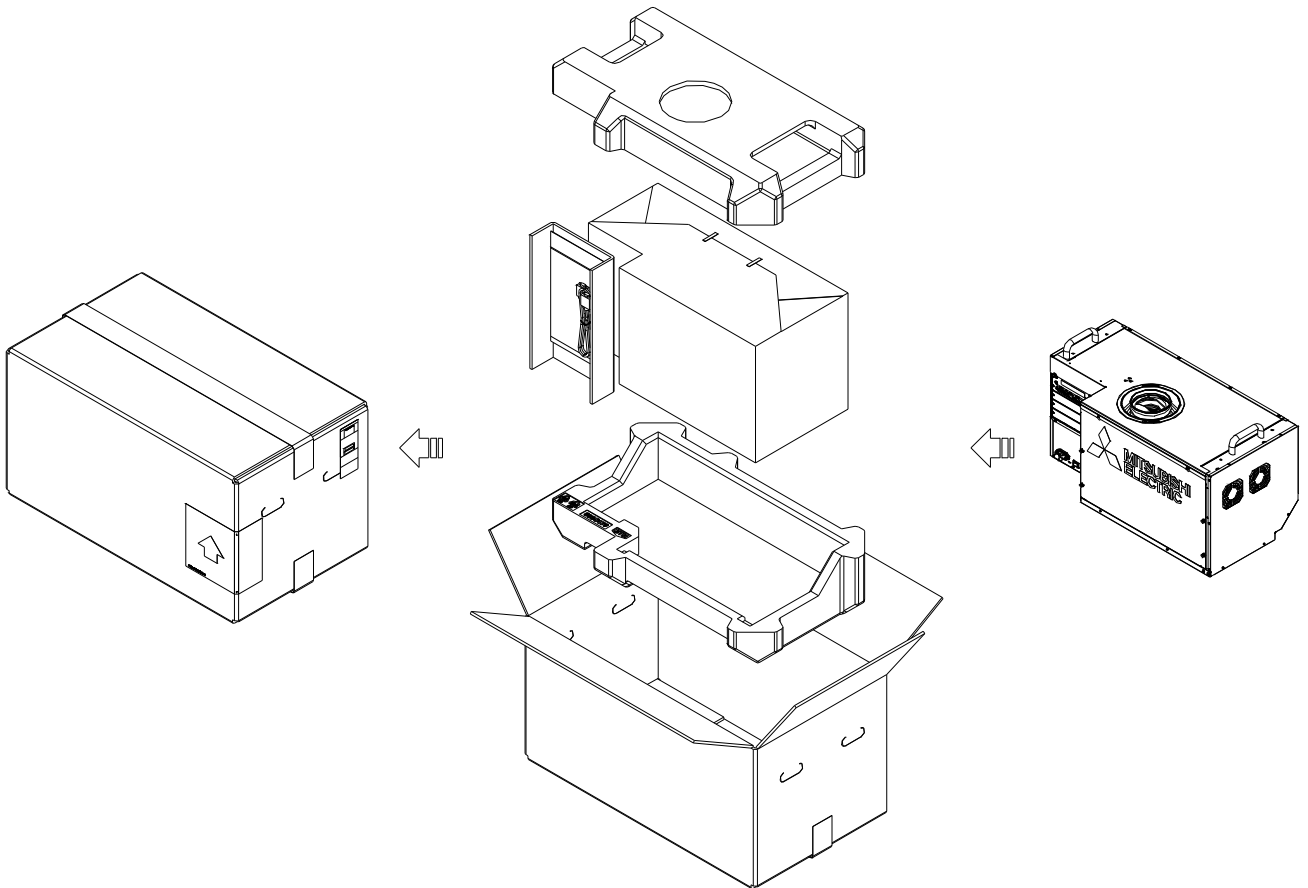
### External dimensions



**Packing specification**  
**[Cabinet unit:S-6770CAF]**



[Engine unit:VS-PE78U]



[Screen unit:SC-6775UF/LF, SC-6770BF]

