

**EPSON®**

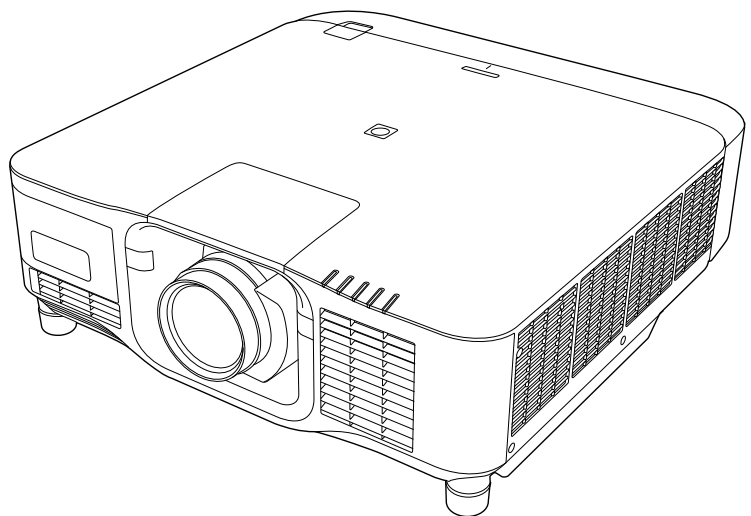
# Specifications

## Multimedia Projector

**EB-PU2220B      EB-PU2120W**

**EB-PU2216B      EB-PU2116W**

**EB-PU2213B      EB-PU2113W**



**Rev.C**

Contents . . . . .	2	3.1 Monitoring and Control Method . . . . .	63
<u>Chapter1 Projector Specifications</u>		3.2 ESC/VP21 Command List . . . . .	64
1.1 Projector Specifications . . . . .	4	3.3 Cable Layouts . . . . .	66
1.2 Optional Accessories Specifications . . . . .	8	3.4 PJLink Command List . . . . .	67
. . . . .	8	3.5 Art-Net Channel Specifications . . . . .	71
1.2.1 Supported Lens List . . . . .	8	<u>Chapter4 Appendix</u>	
1.2.2 Lens Specifications . . . . .	8	4.1 Getting the Latest Version of the	
1.2.3 Light Output . . . . .	9	Documents . . . . .	80
1.2.4 Lens Function Table . . . . .	9	4.2 Trademarks . . . . .	81
1.2.5 Available Lens Shift Adjustment		4.3 Copyright Notice . . . . .	82
Range . . . . .	11	4.4 Disclaimer . . . . .	83
1.2.6 Mounts Specifications . . . . .	13	4.5 Copyright Attribution . . . . .	84
1.2.7 External Devices Specifications . . . . .	13		
1.3 Projector Parts - Interface . . . . .	15		
1.4 Supported Monitor Display Resolutions . . . . .	16		
1.5 Supported Content Playback Mode File			
Types . . . . .	22		
<u>Chapter2 Installation Specifications</u>			
2.1 External Dimensions . . . . .	24		
2.2 Precautions on Installation . . . . .	30		
2.3 Screen Size and Projection Distance . . . . .	34		
. . . . .	34		
2.3.1 Projection Distance Formula . . . . .	34		
2.3.2 Projection Distance . . . . .	41		
2.4 Remote Control Operation . . . . .	53		
2.5 Keystone Correction Range . . . . .	54		
2.5.1 H/V-Keystone . . . . .	54		
2.5.2 Curved Surface . . . . .	54		
2.5.3 Corner Wall . . . . .	56		
2.6 Curved Surface Correction Range for Camera			
Assist . . . . .	59		
<u>Chapter3 Monitoring and Controlling the</u>			
<u>    Projector</u>			

# Chapter1 Projector Specifications

Check these sections for the technical specifications and important notices about your product.

## » Related Links

- "1.1 Projector Specifications" [p.4](#)
- "1.2 Optional Accessories Specifications" [p.8](#)
- "1.3 Projector Parts - Interface" [p.15](#)
- "1.4 Supported Monitor Display Resolutions" [p.16](#)
- "1.5 Supported Content Playback Mode File Types" [p.22](#)

Item	Specifications
Product name	EB-PU2220B/EB-PU2216B/EB-PU2213B/EB-PU2120W/EB-PU2116W/ EB-PU2113W
Dimensions	586 (W) × 185 (H) × 492 (D) mm (not including raised section)
Projection system	RGB liquid crystal shutter
LCD panel size (diagonal)	1.0"
Display method	Poly-silicon TFT active matrix
Resolution	2,304,000 pixels WUXGA (1920 (W) × 1200 (H) dots) × 3
Focus adjustment	Powered
Zoom adjustment *2	1.0 to 1.6 (Optical Zoom)
F-Number *2	1.8 to 2.3
Focal Length *2	36.0 to 57.4 mm
Projection lens	Optional lens supported. Standard lens: ELPLM15
Lens Shift *2	Powered Maximum vertical direction: Approx. ±60% Maximum horizontal direction: Approx. ±18%
Light source	Laser diode
Light source output power	<b>EB-PU2220B/EB-PU2120W:</b> Up to 48.4 W × 10 (484 W) <b>EB-PU2216B/EB-PU2116W:</b> Up to 48.4 W × 8 (387.2 W) <b>EB-PU2213B/EB-PU2113W:</b> Up to 48.4 W × 6 (290.4 W)
Wavelength	449 to 461 nm
Light source operation time *1	Light Source Mode: Normal, Quiet: Up to about 20,000 hours Light Source Mode: Extended: Up to about 30,000 hours
Brightness*2 *4	<b>EB-PU2220B/EB-PU2120W:</b> Light Source Mode: Normal: 20,000 lm Light Source Mode: Quiet, Extended: 14,000 lm <b>EB-PU2216B/EB-PU2116W:</b> Light Source Mode: Normal: 16,000 lm Light Source Mode: Quiet, Extended: 11,200 lm <b>EB-PU2213B/EB-PU2113W:</b> Light Source Mode: Normal: 13,000 lm Light Source Mode: Quiet, Extended: 9,100 lm

Item	Specifications
Contrast ratio *4	2,500,000:1 exceeded (Dynamic Contrast Normal/High Speed)
Color reproducibility	Up to 1,070 million colors (Depends on the interface)
Scanning frequency	<p><b>Analog:</b> Horizontal: 31 to 92 kHz Vertical: 50 to 85 Hz</p> <p><b>HDMI/HDBaseT:</b> Horizontal: 15 to 135 kHz Vertical: 23.98/24/25/29.97/30/50/59.94/60 Hz</p> <p><b>DVI-D:</b> Horizontal: 15 to 75 kHz Vertical: 23.98/24/29.97/30/50/59.94/60 Hz</p> <p><b>SDI (EB-PU2220B/EB-PU2216B/EB-PU2213B):</b> Horizontal: 15 to 67.5 kHz Vertical: 23.98/24/25/29.97/30/50/59.94/60 Hz</p>
Speaker	-
Power supply	<p><b>EB-PU2220B/EB-PU2120W:</b> 100 - 120VAC 50/60 Hz 8.2 A 200 - 240VAC 50/60 Hz 6.6 A</p> <p><b>EB-PU2216B/EB-PU2116W:</b> 100-240VAC ±10% 50/60Hz 11.2 – 5.0 A</p> <p><b>EB-PU2213B/EB-PU2113W:</b> 100-240VAC ±10% 50/60Hz 8.9 – 4.0 A</p>
Operating power consumption (100 to 120 V area)	<p><b>EB-PU2220B/EB-PU2120W:</b> Light Source Mode: Normal, Custom: 810 W</p> <p><b>EB-PU2216B/EB-PU2116W:</b> Light Source Mode: Normal, Custom: 1118 W Light Source Mode: Quiet, Extended: 791 W</p> <p><b>EB-PU2213B/EB-PU2113W:</b> Light Source Mode: Normal, Custom: 886 W Light Source Mode: Quiet, Extended: 646 W</p>
Operating power consumption (220 to 240 V area)	<p><b>EB-PU2220B/EB-PU2120W:</b> Light Source Mode: Normal, Custom: 1301 W Light Source Mode: Quiet, Extended: 899 W</p> <p><b>EB-PU2216B/EB-PU2116W:</b> Light Source Mode: Normal, Custom: 1083 W Light Source Mode: Quiet, Extended: 773 W</p> <p><b>EB-PU2213B/EB-PU2113W:</b> Light Source Mode: Normal, Custom: 864 W Light Source Mode: Quiet, Extended: 633 W</p>

Item	Specifications
Standby power consumption	Communication On: 2.0 W Communication Off: 0.4 W
Noise Level *4	<p><b>EB-PU2220B/EB-PU2120W:</b> Light Source Mode: Normal: 45 dB Light Source Mode: Quiet: 37 dB</p> <p><b>EB-PU2216B/EB-PU2116W:</b> Light Source Mode: Normal: 38 dB Light Source Mode: Quiet: 34 dB</p> <p><b>EB-PU2213B/EB-PU2113W:</b> Light Source Mode: Normal: 34 dB Light Source Mode: Quiet: 29 dB</p>
Thermal output (max.)	<p><b>EB-PU2220B/EB-PU2120W:</b> 100 to 120 V area: 2754 BTU/h 220 to 240 V area: 4423 BTU/h</p> <p><b>EB-PU2216B/EB-PU2116W:</b> 100 to 120 V area: 3081 BTU/h 220 to 240 V area: 3682 BTU/h</p> <p><b>EB-PU2213B/EB-PU2113W:</b> 100 to 120 V area: 3012 BTU/h 220 to 240 V area: 2938 BTU/h</p>
Air flow (max.)	436 CFM
Operating altitude	Altitude 0 to 3,048 m
Operating temperature*3	Altitude of 0 to 2,286 m: 0 to +50°C (Humidity of 20 to 80%, No condensation) Altitude of 2,287 to 3,048 m: 0 to +45°C (Humidity of 20 to 80%, No condensation)
Storage temperature	-10 to +60°C (Humidity of 10 to 90%, No condensation)
Mass (not including lens)	<p><b>EB-PU2220B/EB-PU2120W:</b> Approx. 24.4 kg</p> <p><b>EB-PU2216B:</b> Approx. 24.2 kg</p> <p><b>EB-PU2213B:</b> Approx. 23.7 kg</p> <p><b>EB-PU2116W:</b> Approx. 24.3 kg</p> <p><b>EB-PU2113W:</b> Approx. 23.8 kg</p>
Network	RJ45 (100BASE-TX/10BASE-T) x 1, USB connector (A type) x 1 (wireless LAN unit ELPAP11 Corresponding to IEEE802.11a(5GHz)/b(2.4GHz)/g(2.4GHz)/n(2.4GHz, 5GHz))

\*1 Approximate time until the light source brightness decreases to half of its original value. (Assuming the projector is being used in an environment containing airborne particles of 0.04 mg/m<sup>3</sup> or less. This is an approximate guide only and may change depending on the projector's usage and surroundings.)

\*2 The specifications are when the standard lens is attached.

\*3 Light source brightness automatically dims if the surrounding temperature gets too high. (Approximately 40°C at an altitude of 0 to 2,286 m, and approximately 35°C at an altitude of 2,287 to 3,048 m; however, this may vary depending on the surrounding environment.)

\*4 All average values for this product at time of shipping comply with the ISO 21118 international standards.

This product is also designed for IT power distribution system with phase-to-phase voltage 230V.



- You can use a 100 V power cord to operate the projector temporarily to determine the installation location. Use the 200 V power cord when adjusting the projected image or the lens (EB-PU2220B/EB-PU2120W).
- When projecting using the 100 V power cord, the brightness of the projected image is approximately 60% compared to when using a 200 V power cord (EB-PU2220B/EB-PU2120W).
- You cannot use the following functions with the 100 V power cord (EB-PU2220B/EB-PU2120W).
  - Light Source Mode
  - Estimated Remains
  - Refresh Mode
  - Light Source Calibration
- Be sure to ground the power plug using a grounding wire or a 3-core power plug.

The following sections explain the specifications of the optional accessories.

## 1.2.1 Supported Lens List

- ELPLX02S
- ELPLX02WS
- ELPLU03
- ELPLU03S
- ELPLU04
- ELPLW05
- ELPLW08
- ELPLW06
- ELPLM08
- ELPLM09
- ELPLM15
- ELPLM10
- ELPLM11
- ELPLL08

## 1.2.2 Lens Specifications

Lens Model Number	Projector Size when Lens Installed D (mm)	Amount of Lens Protrusion (mm)	Lens Diameter (mm)	Lens Mass (g)	F Value	Focal Length (mm)	Zoom Rate
ELPLX02S ELPLX02WS	560	68	-	5000	1.9	8.0	-
ELPLU03	552	60	φ149.9	1800	2.0 - 2.3	11.1 - 13.1	1.2
ELPLU03S	552	60	φ149.9	2300	2.0 - 2.3	11.1 - 13.1	1.2
ELPLU04	581	89	φ150	3100	2.0 - 2.1	14.8 - 17.7	1.2
ELPLW05	521	29	φ135	1450	2.0 - 2.2	17.6 - 24.3	1.4
ELPLW08	581	89	φ138.5	3050	2.0 - 2.2	19.7 - 27.5	1.4
ELPLW06	551	59	φ129.8	2950	1.8 - 2.3	27.3 - 37.0	1.4
ELPLM08	511	19	φ114.9	1200	1.7 - 2.3	24.0 - 38.2	1.6
ELPLM09	518	26	φ104.6	1900	1.8 - 2.3	36.0 - 57.4	1.6



Lens Model Number	Projector Size when Lens Installed D (mm)	Amount of Lens Protrusion (mm)	Lens Diameter (mm)	Lens Mass (g)	F Value	Focal Length (mm)	Zoom Rate
ELPLM15	518	26	φ104.6	1900	1.8 - 2.3	36.0 - 57.4	1.6
ELPLM10	561	69	φ104.6	2200	1.8 - 2.4	55.4 - 83.3	1.5
ELPLM11	568	76	φ104	2200	1.8 - 2.4	80.6 - 121.1	1.5
ELPLL08	566	74	φ104	2200	1.8 - 2.5	119.0 - 165.4	1.4

## 1.2.3 Light Output

Lens Model Number	EB-PU2220B/EB-PU2120W		EB-PU2216B/EB-PU2116W		EB-PU2213B/EB-PU2113W	
	Light Output (lm)	Brightness Limit (%)	Light Output (lm)	Brightness Limit (%)	Light Output (lm)	Brightness Limit (%)
ELPLX02S ELPLX02WS	16,900	100	13,500	100	11,000	100
ELPLU03	11,700	67 *	11,700	84 *	11,300	100
ELPLU03S	17,400	100	13,900	100	11,300	100
ELPLU04	19,000	100	15,200	100	12,300	100
ELPLW05	11,700	66 *	11,800	83 *	11,500	100
ELPLW08	19,100	100	15,300	100	12,400	100
ELPLW06	19,200	100	15,300	100	12,400	100
ELPLM08	10,000	50 *	10,000	63 *	10,000	77 *
ELPLM09	12,000	60 *	12,000	75 *	11,900	92 *
ELPLM15	20,000	100	16,000	100	13,000	100
ELPLM10	19,900	100	15,900	100	12,900	100
ELPLM11	19,000	100	15,200	100	12,300	100
ELPLL08	19,000	100	15,200	100	12,300	100

\* When you use this lens, **Light Source Mode** is automatically set to **Custom** and the maximum brightness is limited.

## 1.2.4 Lens Function Table

Lens Model Number	Function					
	Powered Zoom	Powered Focus	Powered Distortion	Powered Lens Shift	Lens Memory	Lens Type Recognition
ELPLX02S	-	✓	✓	✓	✓	✓
ELPLX02WS	-	✓	✓	✓	✓	✓
ELPLU03	✓	✓	✓	✓	✓	✓
ELPLU03S	✓	✓	✓	✓	✓	✓
ELPLU04	✓	✓	✓	✓	✓	✓
ELPLW05	✓	✓	✓	✓	✓	✓
ELPLW08	✓	✓	✓	✓	✓	✓
ELPLW06	✓	✓	-	✓	✓	✓
ELPLM08	✓	✓	-	✓	✓	✓
ELPLM09	✓	✓	-	✓	✓	✓
ELPLM15	✓	✓	-	✓	✓	✓
ELPLM10	✓	✓	-	✓	✓	✓
ELPLM11	✓	✓	-	✓	✓	✓
ELPLL08	✓	✓	-	✓	✓	✓

**External Camera Correspondence Table**

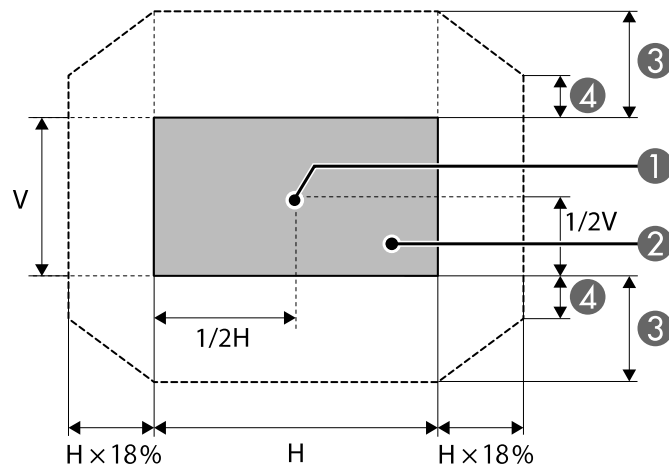
Lens Model Number	Function				
	Blending (flat screen/ concave screen/ convex screen)	Stacking (flat screen/ concave screen/ convex screen)	Color calibration (flat screen/ concave screen/ convex screen)	Screen matching (flat screen/ concave screen)	Remote camera access
ELPLX02S	✓	✓	✓	✓	✓
ELPLX02WS	✓	✓	✓	✓	✓
ELPLU03	✓	✓	✓	✓	✓
ELPLU03S	✓	✓	✓	✓	✓
ELPLU04	✓	✓	✓	✓	✓
ELPLW05	✓	✓	✓	✓	✓
ELPLW08	✓	✓	✓	✓	✓
ELPLW06	✓	✓	✓	✓	✓
ELPLM08	✓	✓	✓	✓	✓
ELPLM09	✓	✓	✓	✓	✓
ELPLM15	✓	✓	✓	✓	✓
ELPLM10	✓	✓	✓	✓	✓
ELPLM11	✓	✓	✓	✓	✓
ELPLL08	-	-	-	-	-

## 1.2.5 Available Lens Shift Adjustment Range

The ranges within which the image can be moved are shown below.

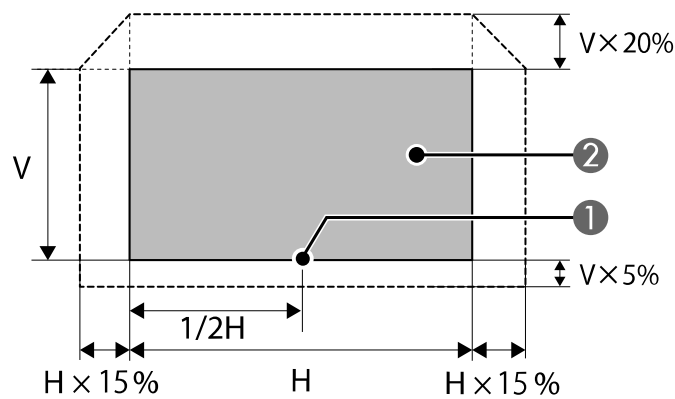
The position of the projected image cannot be moved to both the horizontal and vertical maximum values.

**When using ELPLU04/ELPLW08/ELPLW06/ELPLM09/ELPLM15/ELPLM10/ELPLM11/ELPLL08**



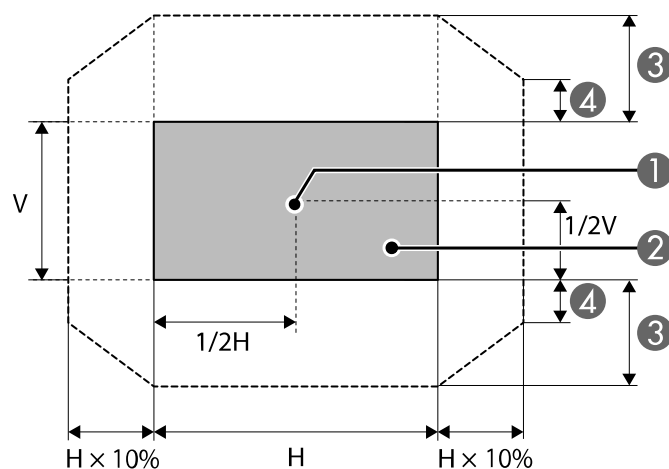
- ① Center of lens
- ② Projected image when the lens position is moved to the home position
- ③ Maximum motion range:  $V \times 60\%$
- ④ When the horizontal direction is at the maximum value:  $V \times 32\%$

### When using ELPLX02S/ELPLX02WS



- ① Center of lens
- ② Projected image when the lens position is moved to the standard position

### When using ELPLU03/ELPLU03S/ELPLW05/ELPLM08



- ① Center of lens
- ② Projected image when the lens position is moved to the home position
- ③ Maximum motion range:  $V \times 24\%$

④ When the horizontal direction is at the maximum value: V x 0%

## 1.2.6 Mounts Specifications

Product name	Dimensions	Weight	Maximum load capacity	Adjustment range
Ceiling Mount ELPMB67 *	356 (W) × 124 (H) × 330 (D) mm	Approx. 5.7 kg	Approx. 40 kg	Vertical tilt: -15 to 5° Horizontal tilt: ±5° Horizontal rotation: ±5° Front/rear slide: ±36 mm
Ceiling Mount ELPMB48 *	400 (W) × 428 (H) × 330 (D) mm	Approx. 16 kg	Approx. 75 kg	Vertical tilt: -25 to 5° Horizontal tilt: ±5° Horizontal rotation: ±5° Front/rear slide: ±30 mm
Ceiling Mount ELPMB47 *	400 (W) × 124 (H) × 330 (D) mm	Approx. 11 kg	Approx. 75 kg	Vertical tilt: ±5° Horizontal tilt: ±5° Horizontal rotation: ±5° Front/rear slide: ±30 mm
Suspension Adapter ELPFP15	Φ270 × 352 (D) mm	Approx. 4.4 kg	-	460 to 680 mm Using in combination with the Ceiling Mount (ELPMB67)

\* Special expertise is required to suspend the projector from a ceiling. Contact Epson for help.

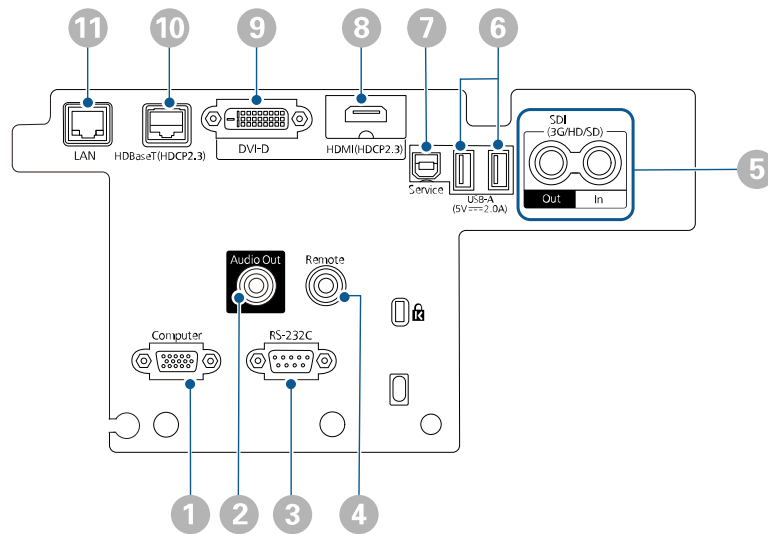
## 1.2.7 External Devices Specifications

### Wireless LAN Module

Product name	Dimensions	Weight	Specifications
ELPAP11	24 (W) × 10 (H) × 61 (D) mm	Approx. 11 g	Electrical rating: DC 5V, 500 mA

### External Camera

Product name	Dimensions	Weight	Specifications
ELPEC01	103 (W) × 49 (H) × 47 (D) mm	Approx. 150 g	Image sensor: CMOS Sensor size: 1/2.9 inches Resolution: 2 million pixels Frame rate: 15 fps Power voltage: 5V (USB power supply) Power consumption (while operating): Less than 1.5 W (300 mA)



	Name	Note
①	Computer port (Mini D-Sub15-pin, female)	-
②	Audio Out port (Stereo mini pin jack)	Outputs audio from the current input source (HDMI/HDBaseT/LAN/USB).
③	RS-232C port (Mini D-Sub 9-pin, male)	-
④	Remote port (Stereo mini pin jack)	Connects the remote control using a commercially available 3.5 mm stereo mini-jack audio cable and inputs signals from the remote control. When the remote control is connected, the remote receiver on the projector is disabled.
⑤	SDI Out/In ports (BNC)	(EB-PU2220B/EB-PU2216B/EB-PU2213B only) The SDI Out port outputs the signal input from the SDI In port.
⑥	USB-A port (USB connector Type A)	When supplying power: Up to 5V/2A
⑦	Service port (USB connector Type B)	-
⑧	HDMI port (HDMI)	This port is compatible with HDCP2.3. (Audio is only supported by PCM)
⑨	DVI-D port (DVI-D 24-pin single)	This port is compatible with HDCP1.4.
⑩	HDBaseT port (RJ-45)	You can use a network cable up to 100 m in length. To ensure proper data transmission, use a Category 5e STP cable or better. However, operation is not guaranteed for all input/output devices and environments. This port is compatible with HDCP2.3.
⑪	LAN port (RJ-45)	Use a 100Base-TX or 10Base-T network cable. To ensure proper data transmission, use a Category 5 shielded cable or better.

The table here lists the compatible refresh rate and resolution for each compatible video display format.

## PC

Mode	Resolution (dot)		V Sync (Hz)	Computer		HDMI/HDBaseT				DVI-D
				YCb Cr	RGB HV	YCbCr			RGB	RGB
						4:2:0	4:2:2	4:4:4		
						8	8	8	8	8
VGA60	640	480	60		✓				✓	✓
VGA72	640	480	72		✓					
VGA75	640	480	75		✓					
VGA85	640	480	85		✓					
SVGA60	800	600	60		✓				✓	✓
SVGA72	800	600	72		✓					
SVGA75	800	600	75		✓					
SVGA85	800	600	85		✓					
XGA60	1024	768	60		✓				✓	✓
XGA70	1024	768	70		✓					
XGA75	1024	768	75		✓					
XGA85	1024	768	85		✓					
WXGA60-1	1280	768	60		✓					
WXGA60	1280	800	60		✓				✓	✓
WXGA75	1280	800	75		✓					
WXGA85	1280	800	85		✓					
WXGA60-3	1366	768	60		✓				✓	✓
WXGA+60	1440	900	60		✓				✓	✓
WXGA+75	1440	900	75		✓					
WXGA+85	1440	900	85		✓					
WXGA++	1600	900	60		✓				✓	✓
SXGA1_70	1152	864	70		✓					
SXGA1_75	1152	864	75		✓					



Mode	Resolution (dot)		V Sync (Hz)	Computer		HDMI/HDBaseT				DVI-D
				YCb Cr	RGB HV	YCbCr			RGB	RGB
						4:2:0	4:2:2	4:4:4		
						8	8	8		
SXGA1_85	1152	864	85		✓					
SXGA2_60	1280	960	60		✓				✓	✓
SXGA2_75	1280	960	75		✓					
SXGA2_85	1280	960	85		✓					
SXGA3_60	1280	1024	60		✓				✓	✓
SXGA3_75	1280	1024	75		✓					
SXGA3_85	1280	1024	85		✓					
SXGA+60	1400	1050	60		✓				✓	✓
SXGA+75	1400	1050	75		✓					
WSXGA+60	1680	1050	60		✓*				✓	✓
UXGA60	1600	1200	60		✓				✓	✓
1920×1080_50	1920	1080	50		✓				✓	✓
1920×1080_60	1920	1080	60		✓				✓	✓
WUXGA60 (Reduced Blanking)	1920	1200	60		✓				✓	✓
QXGA	2048	1536	60						✓	
WQHD	2560	1440	60						✓	
WQXGA (Reduced Blanking)	2560	1600	60						✓	

\* Only compatible when **Wide** is selected as the **Resolution** setting in the projector's **Image** menu.

## Unique Aspect

Mode	Resolution (dot)		V Sync (Hz)	HDMI/HDBaseT			
				YCbCr			RGB
				4:4:4	4:2:2	4:2:0	
				8	8	8	8
Unique aspect (21:9)	3440	1440	30				✓

If the image is not projected correctly, set the timing settings on your computer to match the values in the following tables. (You may not be able to change these settings, depending on your computer.)

Mode	Dotclk (MHz)	H Freq (KHz)	V Freq (Hz)	H active (dot)	H Front Porch (dot)	H Sync Width (dot)	H Back Porch (dot)
Unique aspect (21:9)	165.090	45.33	30	3440	69	32	101

Mode	V active (Line)	V Front Porch (Line)	V Sync Width (Line)	V Back Porch (Line)	H Sync Polarity	V Sync Polarity	Scan Type
Unique aspect (21:9)	1440	32	8	31	Positive	Negative	Progressive

## SD

Mode	Resolution (dot)		V Sync (Hz)	Computer		HDMI/HDBaseT									DVI-D		
				YCbCr	RGBHV	YCbCr						RGB			RGB		
						4:2:2			4:4:4			RGB					
						8	10	12	8	10	12	8	10	12		8	
SDTV (480i)	720	480	59.94			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
SDTV (576i)	720	576	50			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
SDTV (480p)	720	480	59.94		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
SDTV (576p)	720	576	50		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

## HD

Mode	Resolution (dot)		V Sync (Hz)	Compu ter		HDMI/HDBaseT									D VI -D	
				Y C b C r	R G B H V	YCbCr						RGB				R G B
						4:2:2			4:4:4			8	10	12		
						8	10	12	8	10	12					
HDTV (720p)_50	1280	720	50		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
HDTV (720p)_59.94	1280	720	59.94		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
HDTV (720p)_60	1280	720	60		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
HDTV (1080i)_50	1920	1080	50			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
HDTV (1080i)_59.94	1920	1080	59.94			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
HDTV (1080i)_60	1920	1080	60			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
HDTV (1080p)_23.98	1920	1080	23.98			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
HDTV (1080p)_24	1920	1080	24			✓	✓ *	✓ *	✓	✓ *	✓ *	✓	✓ *	✓ *	✓	✓
HDTV (1080p)_29.97	1920	1080	29.97			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
HDTV (1080p)_30	1920	1080	30			✓	✓ *	✓ *	✓	✓ *	✓ *	✓	✓ *	✓ *	✓	✓
HDTV (1080p)_50	1920	1080	50		✓	✓	✓ *	✓ *	✓	✓ *	✓ *	✓	✓ *	✓ *	✓	✓
HDTV (1080p)_59.94	1920	1080	59.94		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
HDTV (1080p)_60	1920	1080	60		✓	✓	✓ *	✓ *	✓	✓ *	✓ *	✓	✓ *	✓ *	✓	✓

\* Supports HDR (HDR10 and HLG).

## 21:9

Mode	Resolution (dot)		V Sync (Hz)	HDMI/HDBaseT			
				YCbCr			RGB
				4:4:4	4:2:2	4:2:0	
				8	8	8	8
2560×1080	2560	1080	60				✓

## 4K

Mode	Resolution (dot)		V Sync (Hz)	HDMI/HDBaseT											
				YCbCr									RGB		
				4:2:0			4:2:2			4:4:4					
				8	10	12	8	10	12	8	10	12	8	10	12
4K_23.98	3840	2160	23.98				✓	✓	✓	✓			✓		
4K_24	3840	2160	24				✓	✓*	✓*	✓			✓		
4K_25	3840	2160	25				✓	✓*	✓*	✓			✓		
4K_29.97	3840	2160	29.97				✓	✓	✓	✓			✓		
4K_30	3840	2160	30				✓	✓*	✓*	✓			✓		
4K_50	3840	2160	50	✓											
4K_59.94	3840	2160	59.94	✓											
4K_60	3840	2160	60	✓											
4K (SMPTE) _23.98	4096	2160	23.98				✓	✓	✓	✓			✓		
4K (SMPTE) _24	4096	2160	24				✓	✓	✓	✓			✓		
4K (SMPTE) _50	4096	2160	50	✓											
4K (SMPTE) _59.94	4096	2160	59.94	✓											
4K (SMPTE) _60	4096	2160	60	✓											

\* Supports HDR (HDR10 and HLG).

## SDI-In

Mode	Resolution (dot)		V Sync (Hz)	SDI		
				YCbCr		
				4:2:2		
				8	10	12
SD-SDI (NTSC)	720	480	59.94		✓	
SD-SDI (PAL)	720	576	50		✓	
HD-SDI (720p)_50	1280	720	50		✓	
HD-SDI (720p)_59.94	1280	720	59.94		✓	
HD-SDI (720p)_60	1280	720	60		✓	
HD-SDI (1080i)_50	1920	1080	50		✓	
HD-SDI (1080i)_59.94	1920	1080	59.94		✓	
HD-SDI (1080i)_60	1920	1080	60		✓	
HD-SDI (1080p)_23.98	1920	1080	23.98		✓	
HD-SDI (1080p)_24	1920	1080	24		✓	
HD-SDI (1080p)_25	1920	1080	25		✓	
HD-SDI (1080p)_29.97	1920	1080	29.97		✓	
HD-SDI (1080p)_30	1920	1080	30		✓	
3G-SDI (1080p)_50*	1920	1080	50		✓	
3G-SDI (1080p)_59.94*	1920	1080	59.94		✓	
3G-SDI (1080p)_60*	1920	1080	60		✓	

\* 3G-SDI only supports Level A.

# 1.5 Supported Content Playback Mode File Types 22

You can project these types of files using the projector's Content Playback feature.

File contents	File type (extension)	Details
Image	.jpg	<ul style="list-style-type: none"><li>• We recommend JPEGs taken with a digital still camera that complies with the Exif standard.</li><li>• The number of vertical and horizontal pixels must be a multiple of 8.</li><li>• Make sure the file is not:<ul style="list-style-type: none"><li>• Progressive format</li><li>• Above 8192 × 8192 resolution</li></ul></li></ul>
	.bmp	Make sure the file is not: <ul style="list-style-type: none"><li>• Above 1280 × 800 resolution</li></ul>
	.gif	<ul style="list-style-type: none"><li>• The image must be a transparent gif with a black background.</li><li>• Make sure the file is not:<ul style="list-style-type: none"><li>• Above 1280 × 800 resolution</li><li>• Animated</li><li>• Interlaced</li></ul></li></ul>
	.png	Make sure the file is not: <ul style="list-style-type: none"><li>• Above 1280 × 800 resolution</li><li>• Interlaced</li></ul>
Movie	.avi (Motion JPEG)	<ul style="list-style-type: none"><li>• Version: AVI 1.0 only</li><li>• Resolution: 1280 × 800 or less</li><li>• Size: 2 GB or less</li><li>• Movie Codec: Motion JPEG</li><li>• Audio Codec: LPCM, IMA ADPCM, or no audio</li><li>• Audio Sampling Rate: 11.025 kHz, 22.05 kHz, 44.1 kHz, 16 kHz, 24 kHz, 32 kHz, or 48 kHz</li></ul>

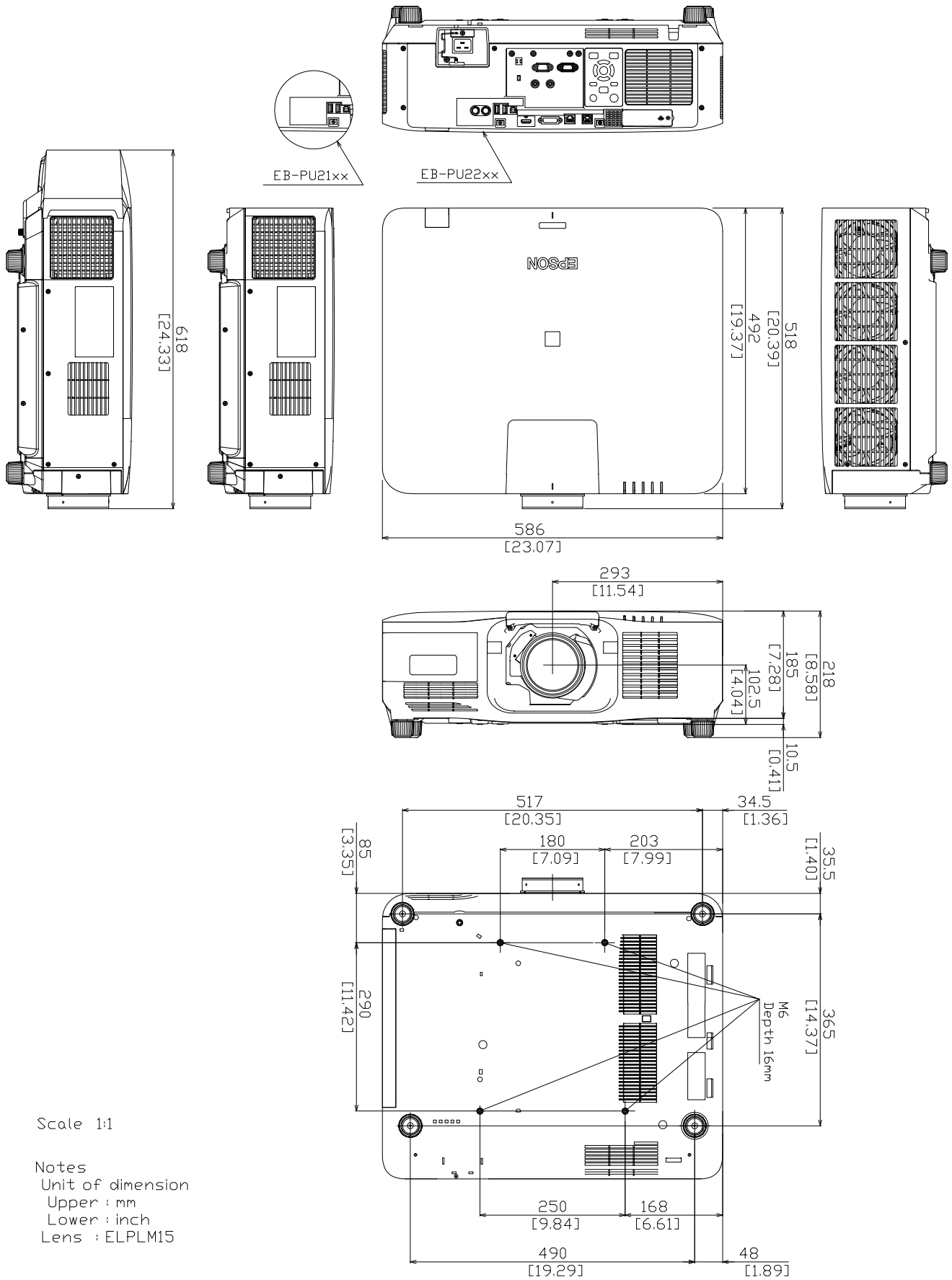
# Chapter2 Installation Specifications

Check these sections for the technical specifications and important notices to install the projector.

## ▶▶ Related Links

- "2.1 External Dimensions" [p.24](#)
- "2.2 Precautions on Installation" [p.30](#)
- "2.3 Screen Size and Projection Distance" [p.34](#)
- "2.4 Remote Control Operation" [p.53](#)
- "2.5 Keystone Correction Range" [p.54](#)
- "2.6 Curved Surface Correction Range for Camera Assist" [p.59](#)

## When Lens Unit ELPLM15 is Installed

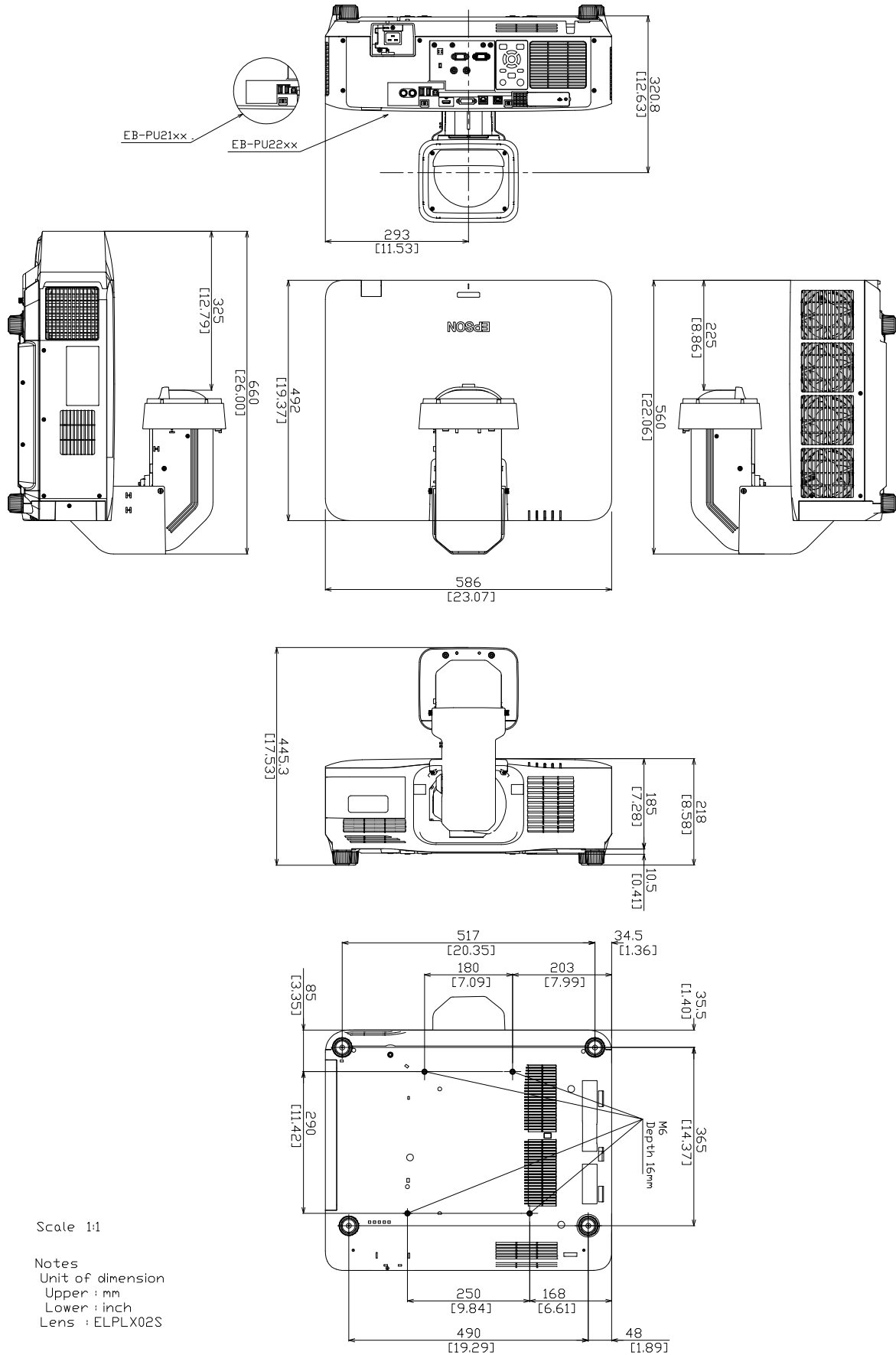


Scale 1:1

Notes  
 Unit of dimension  
 Upper : mm  
 Lower : inch  
 Lens : ELPLM15



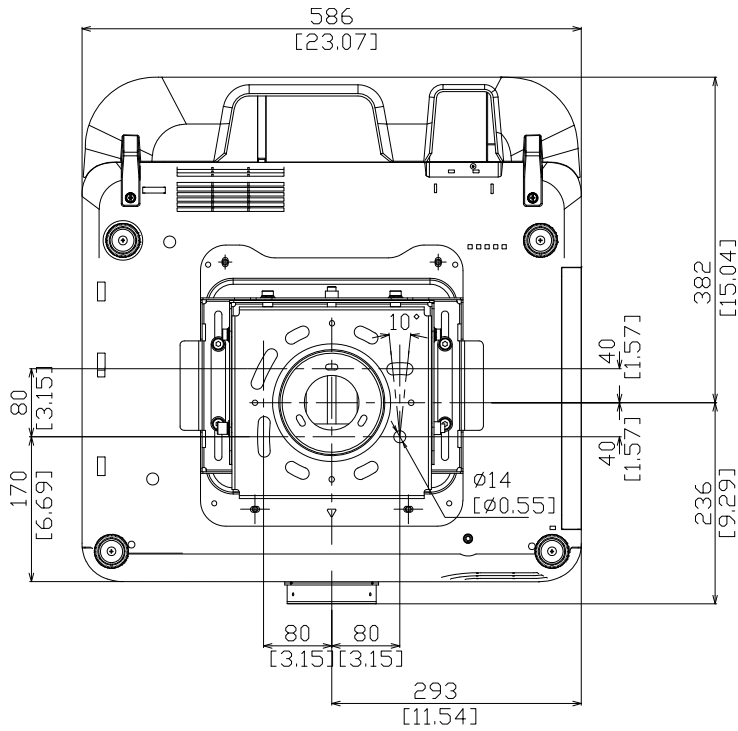
## When Lens Unit ELPLX02S/ELPLX02WS is Installed



Scale 1:1

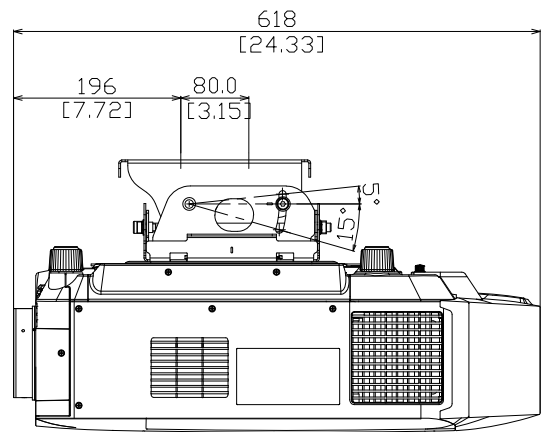
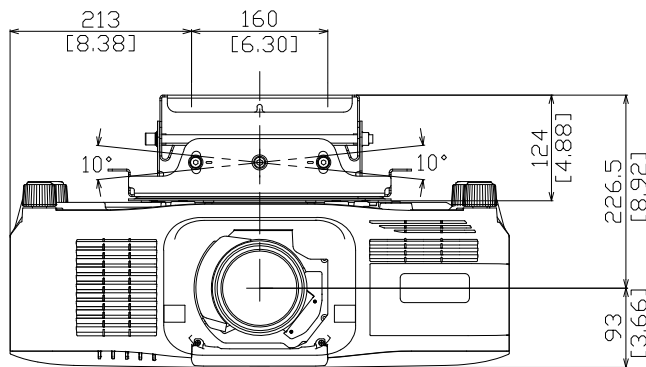
Notes  
 Unit of dimension  
 Upper : mm  
 Lower : inch  
 Lens : ELPLX02S

## Lens Unit ELPLM15 + Ceiling Mount ELPMB67

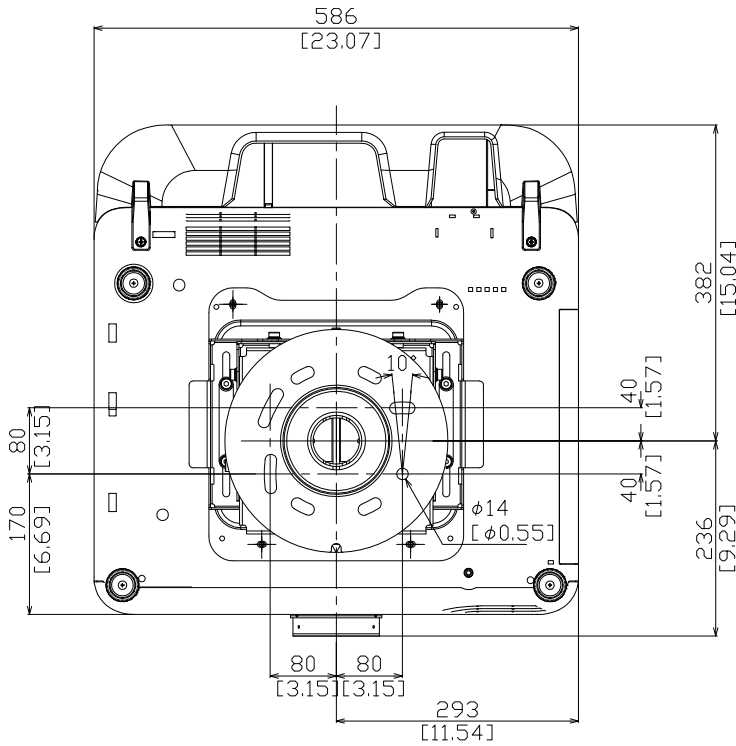


Scale 1:1

Notes  
 Unit of dimension  
 Upper : mm  
 Lower : inch  
 Lens : ELPLM15

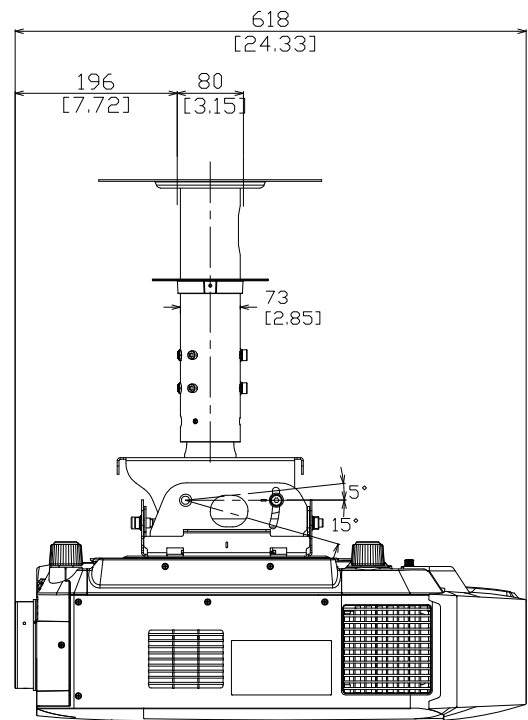
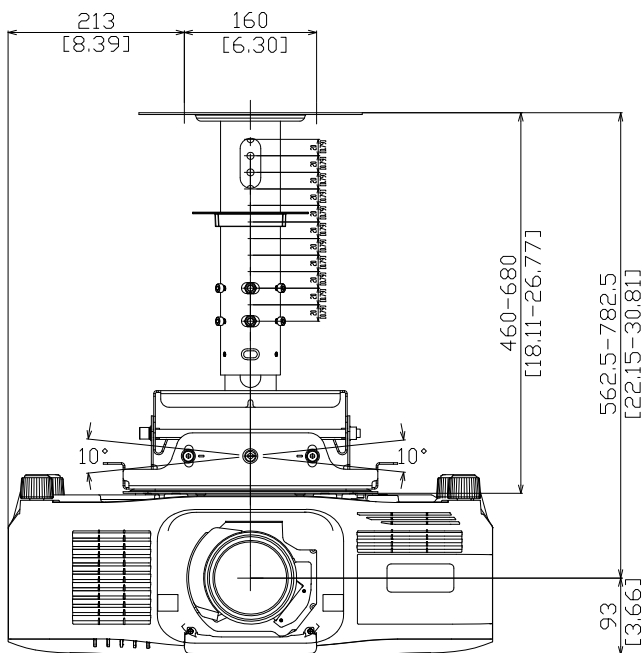


## Lens Unit ELPLM15 + Ceiling Mount ELPMB67 + Suspension Adapter ELPFP15

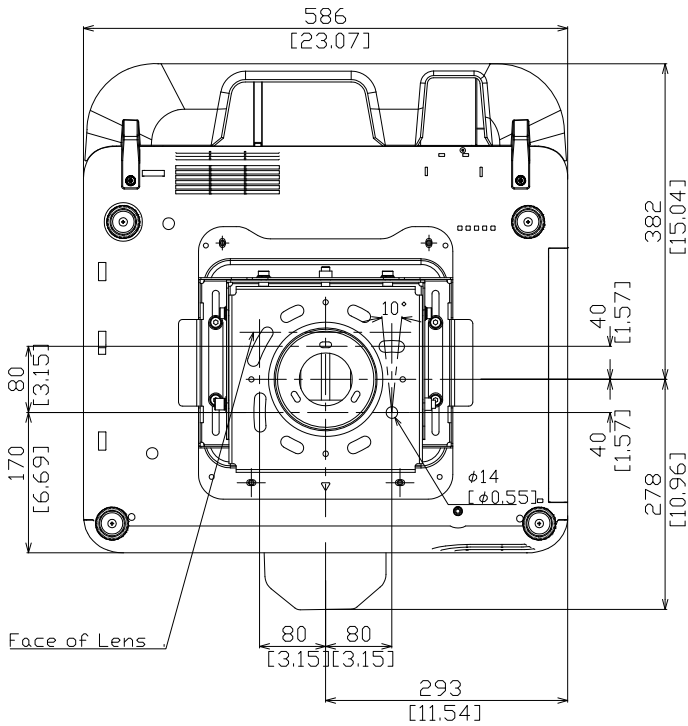


Scale 1:1

Notes  
 Unit of dimension  
 Upper : mm  
 Lower : inch  
 Lens : ELPLM15

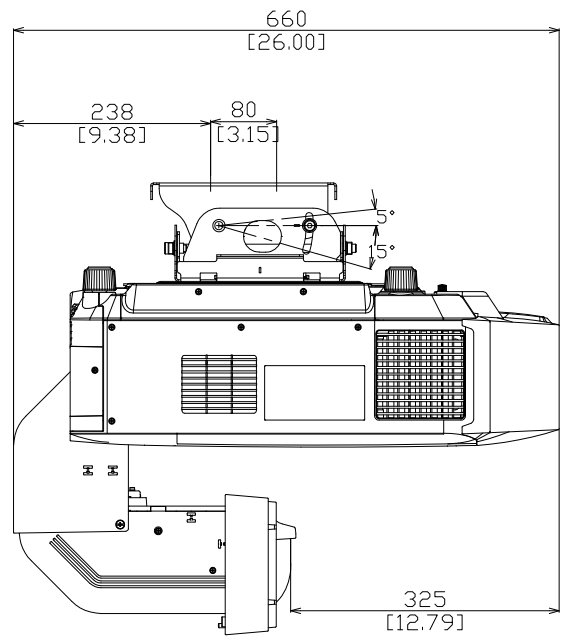
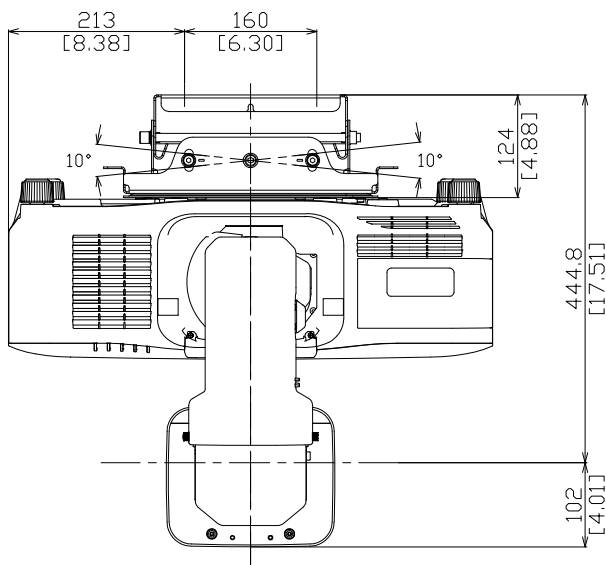


## Lens Unit ELPLX02S/ELPLX02WS + Ceiling Mount ELPMB67

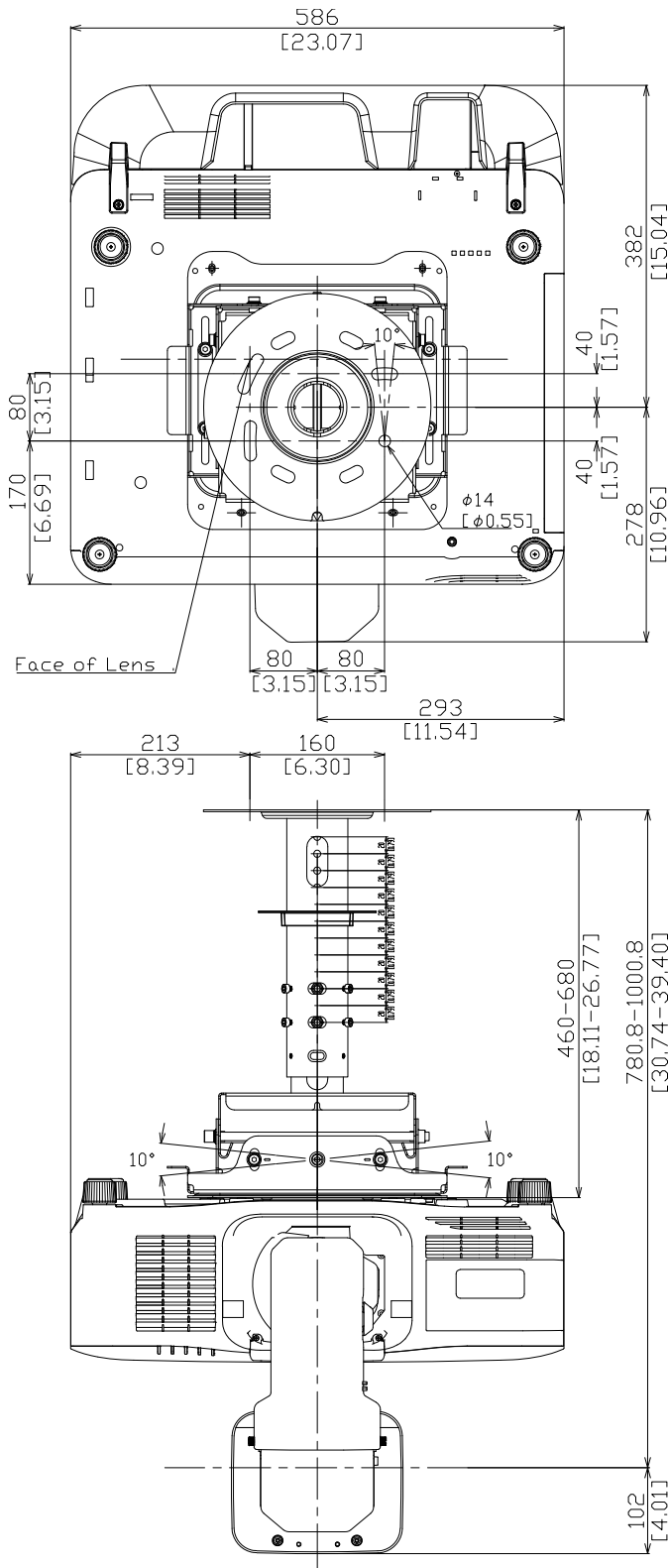


Scale 1:1

- Notes  
Unit of dimension  
Upper : mm  
Lower : inch  
Lens : ELPLX02S



## Lens Unit ELPLX02S/ELPLX02WS + Ceiling Mount ELPMB67 + Suspension Adapter ELPPF15



Scale 1:1

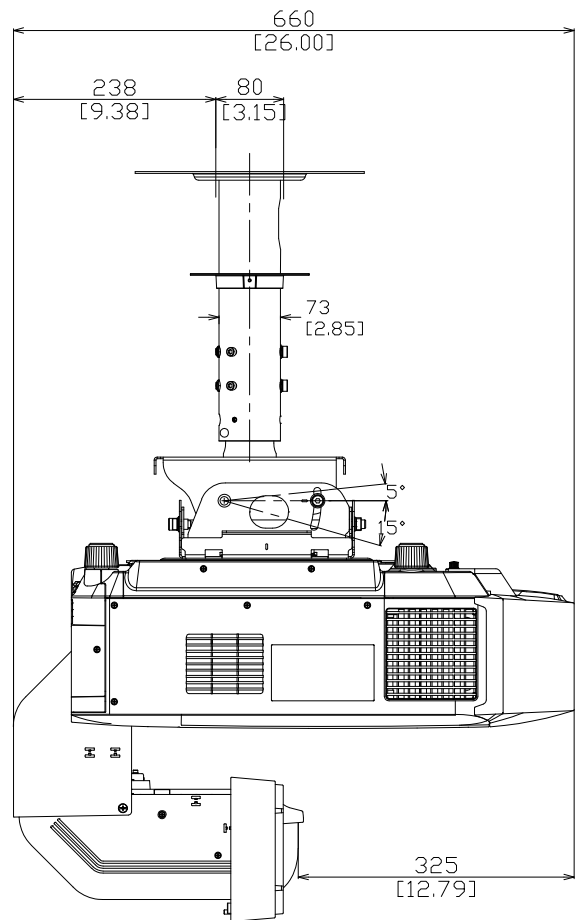
Notes

Unit of dimension

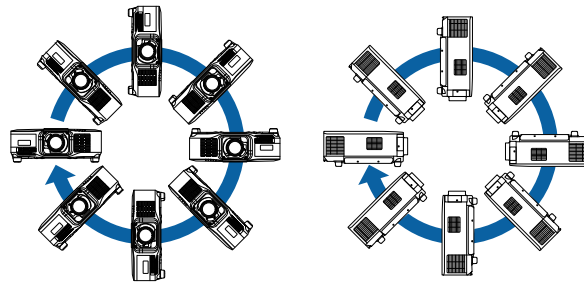
Upper : mm

Lower : inch

Lens : ELPLX02S



You can install the projector or mount it to the ceiling at any horizontal or vertical angle. Note the following precautions when installing the projector.



### WARNING

EB-PU2220B/EB-PU2120W are class A products. In a domestic environment these products may cause radio interference in which case the user may be required to take adequate measures.

### WARNING

- Do not use adhesives on the ceiling mount fixing points to prevent the screws from loosening, or use lubricants, oils, or similar substances on the projector; the projector case may crack causing it to fall from its ceiling mount. This could cause serious injury to anyone under the ceiling mount and could damage the projector.
- Do not install the projector in a location subject to high levels of dust or humidity, or in a location subject to smoke or steam. Otherwise, it could cause a fire or electric shock to occur. The projector's case could also deteriorate and be damaged causing the projector to fall from the mount.

#### **Examples of environments that could cause the projector to fall due to case deterioration**

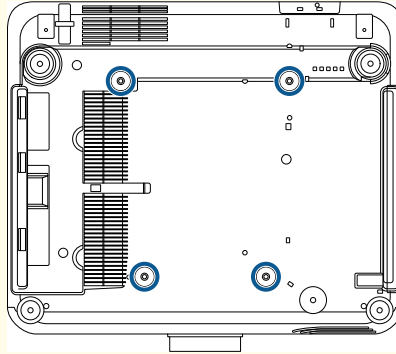
- Locations subject to excessive smoke or airborne oil particles, such as factories or kitchens
- Locations containing volatile solvents or chemicals, such as factories or laboratories
- Locations where the projector could be subjected to detergents or chemicals, such as factories or kitchens
- Locations in which aroma oils are often used, such as relaxation rooms
- Near devices that produce excessive smoke, airborne oil particles, or foam at events

### Attention

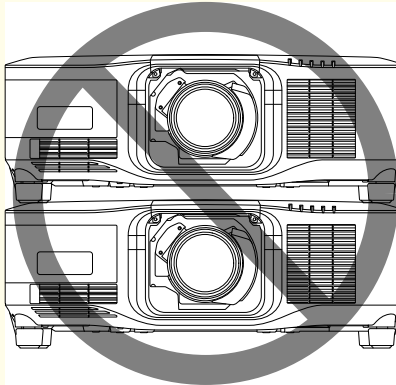
Install the current breaker for 13 A to 20 A to the wiring in the building that supplies electricity to the projector(EB-PU2220B/EB-PU2120W). Do not connect other devices to the wiring where the current breaker is installed, and use the wiring only for the projector.

### Attention

- Use M6 screws (up to a depth of 14 mm) to fix the projector's ceiling mount fixing points and the mounting hardware at four points.



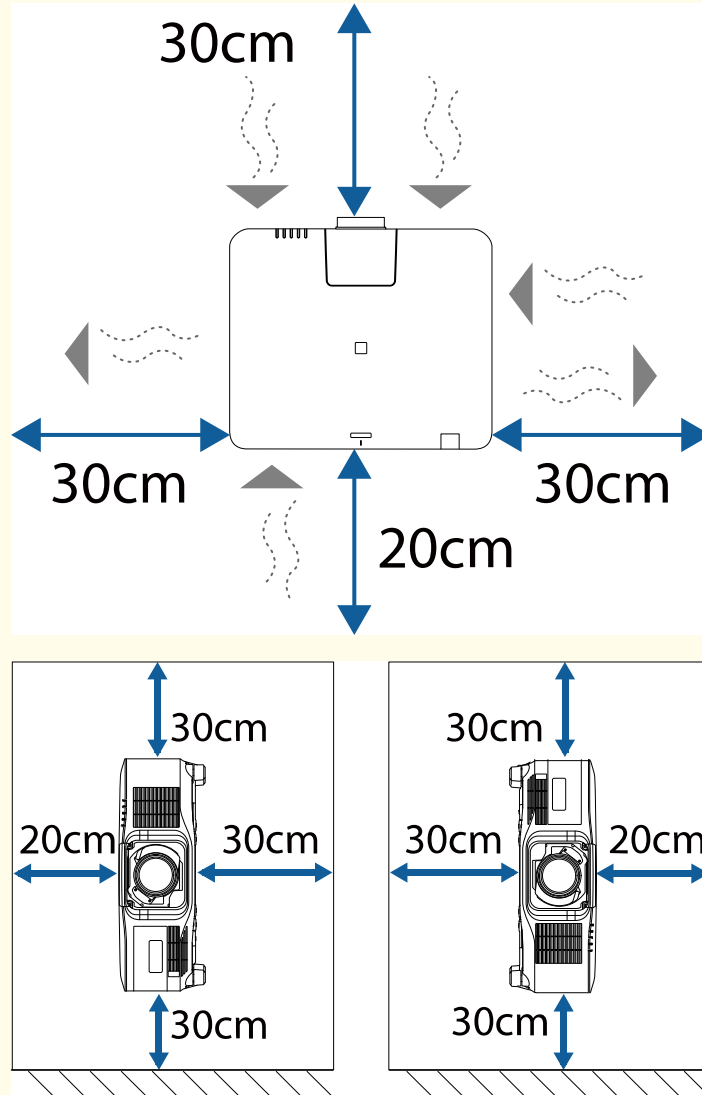
- Do not stack projectors directly on top of each other.



### Installation space

#### Attention

- Be sure to leave the following amount of space around the projector so as not to block the air exhaust and intake vents.



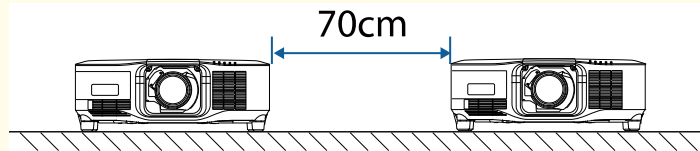
- Do not install the projector in a location that does not allow air to circulate, such as on a shelf or in a box.



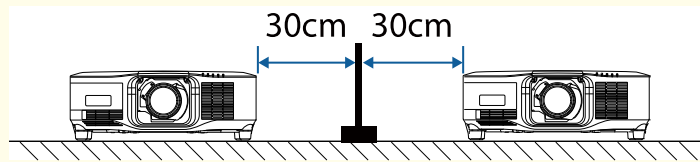
### Installation space (When installing multiple projectors side by side)

#### Attention

- If you are installing multiple projectors next to each other, make sure hot air from the exhaust vent does not go into the air intake vent of another projector.

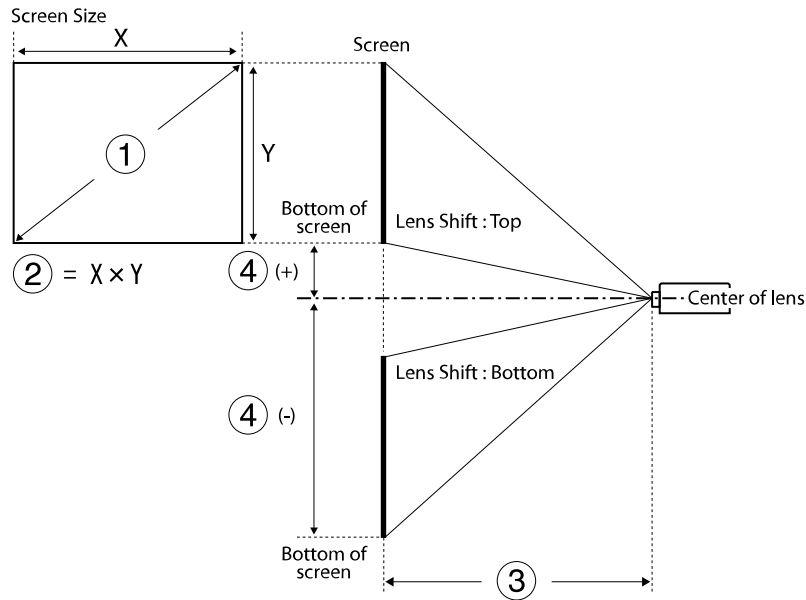


- If you use a partition, you can narrow the space between the projectors.



Check the tables in these sections to determine how far to place the projector from the screen based on the size of the projected image.

## 2.3.1 Projection Distance Formula



- ① Screen size (inches)
- ② Screen size (Width × Height)
- ③ Projection distance (Minimum: Wide to Maximum: Tele)
- ④ Distance from the center of the lens to the bottom of the screen

### 16:10

Lens	Projection distance formula		Throw ratio (projection distance/x)
ELPLX02S ELPLX02WS	-	③ (cm) = ① (inches) × 0.77 - 3.40	0.35
ELPLU03 ELPLU03S	Minimum	③ (cm) = ① (inches) × 1.05 - 3.49	0.48 - 0.57
	Maximum	③ (cm) = ① (inches) × 1.26 - 3.28	
ELPLU04	Minimum	③ (cm) = ① (inches) × 1.42 - 5.65	0.64 - 0.77
	Maximum	③ (cm) = ① (inches) × 1.71 - 5.52	
ELPLW05	Minimum	③ (cm) = ① (inches) × 1.70 - 7.86	0.77 - 1.07
	Maximum	③ (cm) = ① (inches) × 2.35 - 5.80	
ELPLW08	Minimum	③ (cm) = ① (inches) × 1.88 - 3.92	0.86 - 1.21
	Maximum	③ (cm) = ① (inches) × 2.64 - 5.10	

Lens	Projection distance formula		Throw ratio (projection distance/x)
ELPLW06	Minimum	③ (cm) = ① (inches) × 2.61 - 7.51	1.19 - 1.62
	Maximum	③ (cm) = ① (inches) × 3.55 - 6.99	
ELPLM08	Minimum	③ (cm) = ① (inches) × 2.31 - 5.10	1.06 - 1.69
	Maximum	③ (cm) = ① (inches) × 3.70 - 4.54	
ELPLM09 ELPLM15	Minimum	③ (cm) = ① (inches) × 3.45 - 8.18	1.57 - 2.56
	Maximum	③ (cm) = ① (inches) × 5.57 - 8.02	
ELPLM10	Minimum	③ (cm) = ① (inches) × 5.33 - 13.21	2.42 - 3.71
	Maximum	③ (cm) = ① (inches) × 8.10 - 13.08	
ELPLM11	Minimum	③ (cm) = ① (inches) × 7.81 - 23.86	3.54 - 5.41
	Maximum	③ (cm) = ① (inches) × 11.83 - 23.55	
ELPLL08	Minimum	③ (cm) = ① (inches) × 11.59 - 31.52	5.27 - 7.41
	Maximum	③ (cm) = ① (inches) × 16.21 - 31.81	

Lens	Distance from the center of the lens to the base of the screen
ELPLX02S ELPLX02WS	④ (+) (cm) = ① (inches) × 0.27 ④ (-) (cm) = ① (inches) × -0.07
ELPLU03 ELPLU03S ELPLW05 ELPLM08	④ (+) (cm) = ① (inches) × -0.35 ④ (-) (cm) = ① (inches) × -1.00
ELPLU04 ELPLW08 ELPLW06 ELPLM09 ELPLM15 ELPLM10 ELPLM11 ELPLL08	④ (+) (cm) = ① (inches) × 0.14 ④ (-) (cm) = ① (inches) × -1.48

### 16:9

Lens	Projection distance formula		Throw ratio (projection distance/x)
ELPLX02S ELPLX02WS	-	③ (cm) = ① (inches) × 0.79 - 3.40	0.35
ELPLU03 ELPLU03S	Minimum	③ (cm) = ① (inches) × 1.08 - 3.49	0.48 - 0.57
	Maximum	③ (cm) = ① (inches) × 1.29 - 3.28	
ELPLU04	Minimum	③ (cm) = ① (inches) × 1.46 - 5.65	0.64 - 0.77
	Maximum	③ (cm) = ① (inches) × 1.76 - 5.52	
ELPLW05	Minimum	③ (cm) = ① (inches) × 1.75 - 7.86	0.77 - 1.07
	Maximum	③ (cm) = ① (inches) × 2.42 - 5.80	
ELPLW08	Minimum	③ (cm) = ① (inches) × 1.93 - 3.92	0.86 - 1.21
	Maximum	③ (cm) = ① (inches) × 2.72 - 5.10	
ELPLW06	Minimum	③ (cm) = ① (inches) × 2.69 - 7.51	1.19 - 1.62
	Maximum	③ (cm) = ① (inches) × 3.65 - 6.99	
ELPLM08	Minimum	③ (cm) = ① (inches) × 2.38 - 5.10	1.06 - 1.69
	Maximum	③ (cm) = ① (inches) × 3.81 - 4.54	
ELPLM09 ELPLM15	Minimum	③ (cm) = ① (inches) × 3.55 - 8.18	1.57 - 2.56
	Maximum	③ (cm) = ① (inches) × 5.73 - 8.02	
ELPLM10	Minimum	③ (cm) = ① (inches) × 5.47 - 13.21	2.42 - 3.71
	Maximum	③ (cm) = ① (inches) × 8.32 - 13.08	
ELPLM11	Minimum	③ (cm) = ① (inches) × 8.03 - 23.86	3.54 - 5.41
	Maximum	③ (cm) = ① (inches) × 12.16 - 23.55	
ELPLL08	Minimum	③ (cm) = ① (inches) × 11.92 - 31.52	5.27 - 7.41
	Maximum	③ (cm) = ① (inches) × 16.66 - 31.81	
Lens	Distance from the center of the lens to the base of the screen		
ELPLX02S ELPLX02WS	④ (+) (cm) = 0 to ① (inches) × 0.35		

Lens	Distance from the center of the lens to the base of the screen
ELPLU03 ELPLU03S ELPLW05 ELPLM08	$\text{④ (+) (cm)} = \text{① (inches)} \times -0.29$ $\text{④ (-) (cm)} = \text{① (inches)} \times -0.96$
ELPLU04 ELPLW08 ELPLW06 ELPLM09 ELPLM15 ELPLM10 ELPLM11 ELPLL08	$\text{④ (+) (cm)} = \text{① (inches)} \times 0.21$ $\text{④ (-) (cm)} = \text{① (inches)} \times -1.45$

### 4:3

Lens	Projection distance formula		Throw ratio (projection distance/x)
ELPLX02S ELPLX02WS	-	③ (cm) = ① (inches) × 0.87 - 3.40	0.42
ELPLU03 ELPLU03S	Minimum	③ (cm) = ① (inches) × 1.19 - 3.49	0.57 - 0.69
	Maximum	③ (cm) = ① (inches) × 1.43 - 3.28	
ELPLU04	Minimum	③ (cm) = ① (inches) × 1.61 - 5.65	0.77 - 0.93
	Maximum	③ (cm) = ① (inches) × 1.93 - 5.52	
ELPLW05	Minimum	③ (cm) = ① (inches) × 1.93 - 7.86	0.92 - 1.29
	Maximum	③ (cm) = ① (inches) × 2.66 - 5.80	
ELPLW08	Minimum	③ (cm) = ① (inches) × 2.13 - 3.92	1.03 - 1.46
	Maximum	③ (cm) = ① (inches) × 2.99 - 5.10	
ELPLW06	Minimum	③ (cm) = ① (inches) × 2.96 - 7.51	1.42 - 1.95
	Maximum	③ (cm) = ① (inches) × 4.02 - 6.99	
ELPLM08	Minimum	③ (cm) = ① (inches) × 2.62 - 5.10	1.27 - 2.03
	Maximum	③ (cm) = ① (inches) × 4.19 - 4.54	
ELPLM09 ELPLM15	Minimum	③ (cm) = ① (inches) × 3.91 - 8.18	1.89 - 3.07
	Maximum	③ (cm) = ① (inches) × 6.31 - 8.02	
ELPLM10	Minimum	③ (cm) = ① (inches) × 6.03 - 13.21	2.91 - 4.45
	Maximum	③ (cm) = ① (inches) × 9.17 - 13.08	
ELPLM11	Minimum	③ (cm) = ① (inches) × 8.84 - 23.86	4.25 - 6.49
	Maximum	③ (cm) = ① (inches) × 13.39 - 23.55	
ELPLL08	Minimum	③ (cm) = ① (inches) × 13.13 - 31.52	6.32 - 8.89
	Maximum	③ (cm) = ① (inches) × 18.35 - 31.81	
Lens	Distance from the center of the lens to the base of the screen		
ELPLX02S ELPLX02WS	④ (+) (cm) = ① (inches) × 0.30 ④ (-) (cm) = ① (inches) × -0.08		

Lens	Distance from the center of the lens to the base of the screen
ELPLU03 ELPLU03S ELPLW05 ELPLM08	$\text{④ (+) (cm)} = \text{① (inches)} \times -0.40$ $\text{④ (-) (cm)} = \text{① (inches)} \times -1.13$
ELPLU04 ELPLW08 ELPLW06 ELPLM09 ELPLM15 ELPLM10 ELPLM11 ELPLL08	$\text{④ (+) (cm)} = \text{① (inches)} \times 0.15$ $\text{④ (-) (cm)} = \text{① (inches)} \times -1.68$

### 21:9

Lens	Projection distance formula		Throw ratio (projection distance/x)
ELPLX02S ELPLX02WS	-	③ (cm) = ① (inches) × 0.84 - 3.40	0.35
ELPLU03 ELPLU03S	Minimum	③ (cm) = ① (inches) × 1.14 - 3.49	0.48 - 0.57
	Maximum	③ (cm) = ① (inches) × 1.36 - 3.28	
ELPLU04	Minimum	③ (cm) = ① (inches) × 1.54 - 5.65	0.64 - 0.77
	Maximum	③ (cm) = ① (inches) × 1.85 - 5.52	
ELPLW05	Minimum	③ (cm) = ① (inches) × 1.85 - 7.86	0.77 - 1.07
	Maximum	③ (cm) = ① (inches) × 2.55 - 5.80	
ELPLW08	Minimum	③ (cm) = ① (inches) × 2.04 - 3.92	0.86 - 1.21
	Maximum	③ (cm) = ① (inches) × 2.87 - 5.10	
ELPLW06	Minimum	③ (cm) = ① (inches) × 2.83 - 7.51	1.19 - 1.62
	Maximum	③ (cm) = ① (inches) × 3.85 - 6.99	
ELPLM08	Minimum	③ (cm) = ① (inches) × 2.51 - 5.10	1.06 - 1.69
	Maximum	③ (cm) = ① (inches) × 4.01 - 4.54	
ELPLM09 ELPLM15	Minimum	③ (cm) = ① (inches) × 3.74 - 8.18	1.57 - 2.56
	Maximum	③ (cm) = ① (inches) × 6.04 - 8.02	
ELPLM10	Minimum	③ (cm) = ① (inches) × 5.77 - 13.21	2.42 - 3.71
	Maximum	③ (cm) = ① (inches) × 8.78 - 13.08	
ELPLM11	Minimum	③ (cm) = ① (inches) × 8.46 - 23.86	3.54 - 5.41
	Maximum	③ (cm) = ① (inches) × 12.82 - 23.55	
ELPLL08	Minimum	③ (cm) = ① (inches) × 12.57 - 31.52	5.27 - 7.41
	Maximum	③ (cm) = ① (inches) × 17.57 - 31.81	
Lens	Distance from the center of the lens to the base of the screen		
ELPLX02S ELPLX02WS	④ (+) (cm) = ① (inches) × 0.16 ④ (-) (cm) = ① (inches) × 0.52		



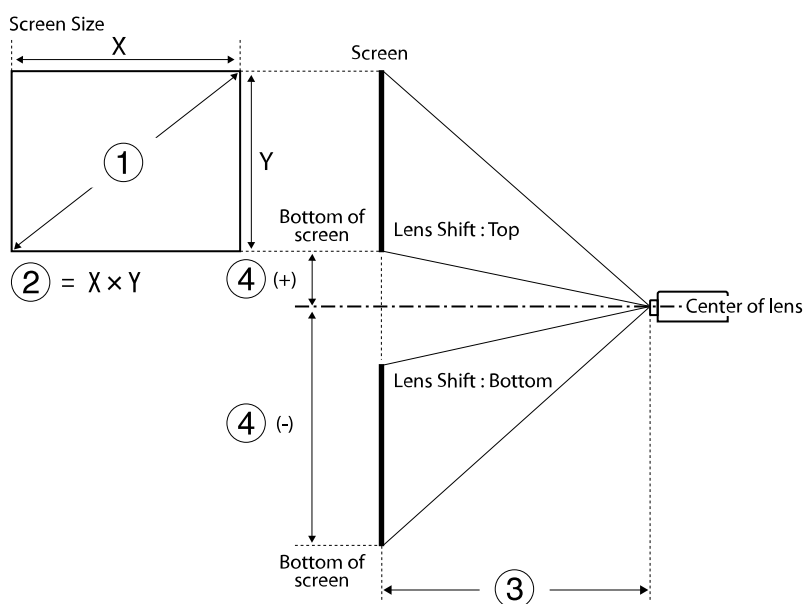
Lens	Distance from the center of the lens to the base of the screen
ELPLU03 ELPLU03S ELPLW05 ELPLM08	$\textcircled{4} (+) \text{ (cm)} = \textcircled{1} \text{ (inches)} \times -0.85$ $\textcircled{4} (-) \text{ (cm)} = \textcircled{1} \text{ (inches)} \times -0.15$
ELPLU04 ELPLW08 ELPLW06 ELPLM09 ELPLM15 ELPLM10 ELPLM11 ELPLL08	$\textcircled{4} (+) \text{ (cm)} = \textcircled{1} \text{ (inches)} \times 0.38$ $\textcircled{4} (-) \text{ (cm)} = \textcircled{1} \text{ (inches)} \times -1.38$

## 2.3.2 Projection Distance

The projection distances are approximate values.

Detailed projection simulations are available on our Web site. Please use them, as needed.

<http://www.epson.com/>



- $\textcircled{1}$  Screen size (inches)
- $\textcircled{2}$  Screen size (Width  $\times$  Height) (cm)
- $\textcircled{3}$  Projection distance (Minimum: Wide to Maximum: Tele) (cm)
- $\textcircled{4}$  Distance from the center of the lens to the bottom of the screen (cm)

When you project an over 500 inches image, the image may become a little bit blurred.

### 16:10

#### ELPLX02S/ELPLX02WS

①	②	③	④
Inches	Width × Height	ELPLX02S/ELPLX02WS	
100	215 × 135	74	-7 - 27
120	258 × 162	89	-8 - 32
150	323 × 202	112	-10 - 40
200	431 × 269	151	-13 - 54
300	646 × 404	228	-20 - 81
400	862 × 538	306	-27 - 108
500	1077 × 673	383	-34 - 135
800	1723 × 1077	615	-54 - 215
1000	2154 × 1346	769	-67 - 269

### 16:9

#### ELPLX02S/ELPLX02WS

①	②	③	④
Inches	Width × Height	ELPLX02S/ELPLX02WS	
98	217 × 122	74	0 - 34
100	221 × 125	76	0 - 35
120	266 × 149	92	0 - 42
150	332 × 187	116	0 - 52
200	443 × 249	155	0 - 69
300	664 × 374	235	0 - 104
400	886 × 498	314	0 - 138
500	1107 × 623	394	0 - 173
800	1771 × 996	632	0 - 277
950	2103 × 1183	751	0 - 329

### 4:3

#### ELPLX02S/ELPLX02WS

①	②	③	④
Inches	Width × Height	ELPLX02S/ELPLX02WS	
89	181 × 136	74	-7 - 27
100	203 × 152	84	-8 - 30
120	244 × 183	102	-9 - 37
150	305 × 229	128	-11 - 46
200	406 × 305	172	-15 - 61
250	508 × 381	215	-19 - 76
300	610 × 457	259	-23 - 91
400	813 × 610	346	-30 - 122
500	1016 × 762	434	-38 - 152
800	1626 × 1219	696	-61 - 244
850	1727 × 1295	740	-65 - 259

### 21:9

#### ELPLX02S/ELPLX02WS

①	②	③	④
Inches	Width × Height	ELPLX02S/ELPLX02WS	
98	229 × 98	79	15 - 51
100	233 × 100	80	16 - 52
120	280 × 120	97	19 - 63
150	350 × 150	122	23 - 78
200	467 × 200	164	31 - 104
300	700 × 300	248	47 - 156
400	934 × 400	332	63 - 208
500	1167 × 500	415	78 - 261
600	1401 × 600	499	94 - 313
800	1868 × 800	666	125 - 417
900	2101 × 900	750	141 - 469

### 16:10

#### ELPLU03/ELPLU03S/ELPLU04/ELPLW05/ELPLW08

①	②	③				④	
Inches	Width × Height	ELPLU03 ELPLU03S	ELPLU04	ELPLW05	ELPLW08	ELPLU03 ELPLU03S ELPLW05	ELPLU04 ELPLW08
60	129 × 81	-	80 - 97	94 - 135	109 - 154	-60 - -21 *	-89 - 8
80	172 × 108	80 - 97	108 - 131	129 - 182	146 - 206	-80 - -28	-119 - 11
100	215 × 135	101 - 123	136 - 165	163 - 229	184 - 259	-100 - -35	-148 - 14
120	258 × 162	122 - 148	165 - 199	197 - 276	222 - 312	-120 - -42	-178 - 16
150	323 × 202	154 - 186	207 - 251	248 - 347	278 - 391	-150 - -52	-222 - 20
200	431 × 269	206 - 249	278 - 336	333 - 464	372 - 524	-199 - -70	-296 - 27
250	538 × 337	259 - 312	349 - 421	418 - 582	466 - 656	-249 - -87	-370 - 34
300	646 × 404	311 - 374	420 - 507	504 - 699	560 - 788	-299 - -105	-444 - 41
500	1077 × 673	521 - 626	704 - 848	844 - 1169	936 - 1317	-499 - -175	-741 - 68
800	1723 × 1077	836 - 1004	1131 - 1361	1356 - 1874	1500 - 2110	-798 - -279	-1185 - 108
1000	2154 × 1346	1045 - 1256	1415 - 1702	1697 - 2344	1876 - 2639	-997 - -349	-1482 - 135

\* Except for ELPLU03/ELPLU03S.

#### ELPLW06/ELPLM08

①	②	③		④	
Inches	Width × Height	ELPLW06	ELPLM08	ELPLW06	ELPLM08
60	129 × 81	149 - 206	-	-89 - 8	-
80	172 × 108	202 - 277	180 - 292	-119 - 11	-80 - -28
100	215 × 135	254 - 348	226 - 366	-148 - 14	-100 - -35
120	258 × 162	306 - 419	273 - 440	-178 - 16	-120 - -42
150	323 × 202	385 - 526	342 - 551	-222 - 20	-149 - -53
200	431 × 269	515 - 703	458 - 736	-296 - 27	-199 - -70
250	538 × 337	646 - 881	573 - 921	-370 - 34	-249 - -88
300	646 × 404	777 - 1058	689 - 1106	-444 - 41	-299 - -105
500	1077 × 673	1299 - 1769	1152 - 1847	-741 - 68	-498 - -175
800	1723 × 1077	2084 - 2834	1846 - 2957	-1185 - 108	-797 - -280

①	②	③		④	
Inches	Width × Height	ELPLW06	ELPLM08	ELPLW06	ELPLM08
1000	2154 × 1346	2606 - 3544	2309 - 3698	-1482 - 135	-996 - -350

### ELPLM09/ELPLM15/ELPLM10/ELPLM11/ELPLL08

①	②	③				④
Inches	Width × Height	ELPLM09 ELPLM15	ELPLM10	ELPLM11	ELPLL08	
60	129 × 81	199 - 326	306 - 473	445 - 686	664 - 941	-89 - 8
80	172 × 108	268 - 438	413 - 635	601 - 923	896 - 1265	-119 - 11
100	215 × 135	337 - 549	519 - 797	757 - 1160	1128 - 1589	-148 - 14
120	258 × 162	406 - 661	626 - 959	913 - 1396	1360 - 1913	-178 - 16
150	323 × 202	509 - 828	786 - 1202	1147 - 1751	1708 - 2399	-222 - 20
200	431 × 269	682 - 1106	1052 - 1607	1538 - 2343	2287 - 3209	-296 - 27
250	538 × 337	855 - 1385	1318 - 2012	1928 - 2934	2867 - 4020	-370 - 34
300	646 × 404	1027 - 1663	1585 - 2417	2319 - 3526	3447 - 4830	-444 - 41
500	1077 × 673	1717 - 2777	2650 - 4036	3881 - 5892	5765 - 8071	-741 - 68
800	1723 × 1077	2753 - 4449	4248 - 6466	6223 - 9441	9244 - 12933	-1185 - 108
1000	2154 × 1346	3443 - 5563	5313 - 8086	7785 - 11807	11562 - 16174	-1482 - 135

## 16:9

### ELPLU03/ELPLU03S/ELPLU04/ELPLW05/ELPLW08

①	②	③				④	
Inches	Width × Height	ELPLU03 ELPLU03S	ELPLU04	ELPLW05	ELPLW08	ELPLU03 ELPLU03S ELPLW05	ELPLU04 ELPLW08
60	133 × 75	-	82 - 100	97 - 139	112 - 158	-57 - -17 *	-87 - 13
80	177 × 100	83 - 100	111 - 135	132 - 187	151 - 212	-76 - -23	-116 - 17
100	221 × 125	104 - 126	140 - 170	167 - 236	189 - 267	-96 - -29	-145 - 21
120	266 × 149	126 - 152	170 - 205	202 - 284	228 - 321	-115 - -35	-174 - 25
150	332 × 187	158 - 191	213 - 258	255 - 357	286 - 403	-143 - -43	-218 - 31
200	443 × 249	212 - 256	286 - 346	343 - 477	383 - 538	-191 - -58	-291 - 42
250	553 × 311	266 - 320	359 - 433	430 - 598	479 - 674	-239 - -72	-363 - 52
300	664 × 374	320 - 385	432 - 521	518 - 719	576 - 810	-287 - -87	-436 - 63
500	1107 × 623	535 - 644	724 - 872	868 - 1202	962 - 1354	-478 - -145	-727 - 104
800	1771 × 996	859 - 1032	1162 - 1399	1394 - 1927	1542 - 2169	-764 - -232	-1163 - 167
950	2103 × 1183	1021 - 1226	1381 - 1662	1657 - 2289	1832 - 2576	-908 - -275	-1381 - 198

\* Except for ELPLU03/ELPLU03S.

### ELPLW06/ELPLM08

①	②	③		④	
Inches	Width × Height	ELPLW06	ELPLM08	ELPLW06	ELPLM08
60	133 × 75	154 - 212	-	-87 - 13	-
80	177 × 100	207 - 285	185 - 300	-116 - 17	-76 - -23
100	221 × 125	261 - 358	233 - 376	-145 - 21	-95 - -29
120	266 × 149	315 - 431	280 - 452	-174 - 25	-115 - -35
150	332 × 187	395 - 540	352 - 566	-218 - 31	-143 - -44
200	443 × 249	530 - 723	471 - 757	-291 - 42	-191 - -58
250	553 × 311	664 - 905	589 - 947	-363 - 52	-239 - -73
300	664 × 374	798 - 1088	708 - 1137	-436 - 63	-286 - -87
500	1107 × 623	1336 - 1818	1184 - 1898	-727 - 104	-477 - -145
800	1771 × 996	2142 - 2913	1897 - 3040	-1163 - 167	-764 - -233

①	②	③		④	
Inches	Width × Height	ELPLW06	ELPLM08	ELPLW06	ELPLM08
950	2103 × 1183	2545 - 3460	-	-1381 - 198	-

### ELPLM09/ELPLM15/ELPLM10/ELPLM11/ELPLL08

①	②	③				④
Inches	Width × Height	ELPLM09 ELPLM15	ELPLM10	ELPLM11	ELPLL08	
60	133 × 75	205 - 336	315 - 486	458 - 706	683 - 968	-87 - 13
80	177 × 100	276 - 450	425 - 653	618 - 949	922 - 1301	-116 - 17
100	221 × 125	347 - 565	534 - 819	799 - 1192	1160 - 1634	-145 - 21
120	266 × 149	417 - 679	644 - 986	939 - 1436	1398 - 1967	-174 - 25
150	332 × 187	524 - 851	808 - 1236	1180 - 1800	1756 - 2467	-218 - 31
200	443 × 249	701 - 1137	1082 - 1652	1581 - 2408	2352 - 3300	-291 - 42
250	553 × 311	879 - 1423	1355 - 2068	1983 - 3016	2948 - 4132	-363 - 52
300	664 × 374	1056 - 1710	1629 - 2484	2384 - 3624	3543 - 4965	-436 - 63
500	1107 × 623	1765 - 2855	2724 - 4149	3989 - 6056	5927 - 8296	-727 - 104
800	1771 × 996	2829 - 4573	4366 - 6646	6397 - 9704	9502 - 13293	-1163 - 167
950	2103 × 1183	3361 - 5432	5187 - 7895	7601 - 11528	11289 - 15792	-1381 - 198



### 4:3

#### ELPLU03/ELPLU03S/ELPLU04/ELPLW05/ELPLW08

①	②	③				④	
Inches	Width × Height	ELPLU03 ELPLU03S	ELPLU04	ELPLW05	ELPLW08	ELPLU03 ELPLU03S ELPLW05	ELPLU04 ELPLW08
60	122 × 91	-	91 - 110	108 - 154	124 - 174	-68 - -24 *	-101 - 9
80	163 × 122	91 - 111	123 - 149	147 - 207	166 - 234	-90 - -32	-134 - 12
100	203 × 152	115 - 139	155 - 188	185 - 260	209 - 294	-113 - -40	-168 - 15
120	244 × 183	139 - 168	187 - 226	224 - 313	251 - 354	-135 - -47	-201 - 18
150	305 × 229	175 - 211	236 - 284	282 - 393	315 - 444	-169 - -59	-252 - 23
200	406 × 305	234 - 282	316 - 381	378 - 526	422 - 594	-226 - -79	-335 - 31
250	508 × 381	293 - 353	396 - 478	475 - 659	528 - 743	-282 - -99	-419 - 38
300	610 × 457	353 - 424	477 - 574	571 - 792	635 - 893	-339 - -119	-503 - 46
500	1016 × 762	590 - 709	798 - 961	957 - 1324	1060 - 1491	-564 - -198	-839 - 77
800	1626 × 1219	946 - 1137	1281 - 1541	1536 - 2123	1699 - 2389	-903 - -316	-1342 - 123
850	1727 × 1295	1006 - 1208	1361 - 1638	1632 - 2256	1805 - 2539	-959 - -336	-1426 - 130

\* Except for ELPLU03/ELPLU03S.

#### ELPLW06/ELPLM08

①	②	③		④	
Inches	Width × Height	ELPLW06	ELPLM08	ELPLW06	ELPLM08
60	122 × 91	170 - 234	-	-101 - 9	-
80	163 × 122	229 - 315	204 - 331	-134 - 12	-90 - -32
100	203 × 152	288 - 395	257 - 415	-168 - 15	-113 - -40
120	244 × 183	348 - 475	309 - 498	-201 - 18	-135 - -48
150	305 × 229	436 - 596	388 - 624	-252 - 23	-169 - -59
200	406 × 305	584 - 797	519 - 834	-335 - 31	-226 - -79
250	508 × 381	732 - 998	650 - 1043	-419 - 38	-282 - -99
300	610 × 457	880 - 1199	781 - 1253	-503 - 46	-338 - -119
500	1016 × 762	1472 - 2003	1305 - 2091	-839 - 77	-564 - -198
800	1626 × 1219	2360 - 3209	2090 - 3349	-1342 - 123	-902 - -317

①	②	③		④	
Inches	Width × Height	ELPLW06	ELPLM08	ELPLW06	ELPLM08
850	1727 × 1295	2508 - 3410	-	-1426 - 130	-

### ELPLM09/ELPLM15/ELPLM10/ELPLM11/ELPLL08

①	②	③				④
Inches	Width × Height	ELPLM09 ELPLM15	ELPLM10	ELPLM11	ELPLL08	
60	122 × 91	226 - 370	349 - 537	507 - 780	756 - 1069	-101 - 9
80	163 × 122	304 - 497	469 - 720	683 - 1048	1019 - 1436	-134 - 12
100	203 × 152	383 - 623	590 - 904	860 - 1316	1281 - 1803	-168 - 15
120	244 × 183	461 - 749	710 - 1087	1037 - 1584	1544 - 2170	-201 - 18
150	305 × 229	578 - 938	891 - 1362	1302 - 1985	1937 - 2720	-252 - 23
200	406 × 305	773 - 1253	1193 - 1821	1744 - 2655	2594 - 3637	-335 - 31
250	508 × 381	969 - 1569	1494 - 2279	2186 - 3325	3250 - 4555	-419 - 38
300	610 × 457	1164 - 1884	1796 - 2738	2628 - 3995	3906 - 5472	-503 - 46
500	1016 × 762	1945 - 3145	3002 - 4571	4396 - 6673	6531 - 9141	-839 - 77
800	1626 × 1219	3117 - 5037	4810 - 7322	7048 - 10691	10469 - 14645	-1342 - 123
850	1727 × 1295	3313 - 5353	5112 - 7780	7490 - 11361	11125 - 15563	-1426 - 130

## 21:9

### ELPLU03/ELPLU03S/ELPLU04/ELPLW05/ELPLW08

①	②	③				④	
Inches	Width × Height	ELPLU03 ELPLU03S	ELPLU04	ELPLW05	ELPLW08	ELPLU03 ELPLU03S ELPLW05	ELPLU04 ELPLW08
60	140 × 60	-	87 - 106	103 - 147	118 - 167	-51 - -9 *	-83 - 23
80	187 × 80	87 - 106	118 - 143	140 - 198	159 - 224	-68 - -12	-110 - 30
100	233 × 100	110 - 133	148 - 180	177 - 249	200 - 281	-85 - -15	-138 - 38
120	280 × 120	133 - 161	179 - 217	214 - 300	241 - 339	-102 - -18	-165 - 45
150	350 × 150	167 - 201	225 - 272	269 - 376	302 - 425	-128 - -22	-206 - 56
200	467 × 200	224 - 270	302 - 365	362 - 504	404 - 568	-170 - -30	-275 - 75
300	700 × 300	338 - 406	456 - 550	546 - 758	607 - 855	-255 - -45	-413 - 113
500	1167 × 500	565 - 679	764 - 920	916 - 1268	1015 - 1428	-426 - -75	-688 - 188
800	1868 × 800	906 - 1089	1226 - 1475	1470 - 2032	1626 - 2287	-681 - -119	-1101 - 301
900	2101 × 900	1020 - 1225	1380 - 1660	1655 - 2287	1830 - 2574	-766 - -134	-1239 - 338

\* Except for ELPLU03/ELPLU03S.

### ELPLW06/ELPLM08

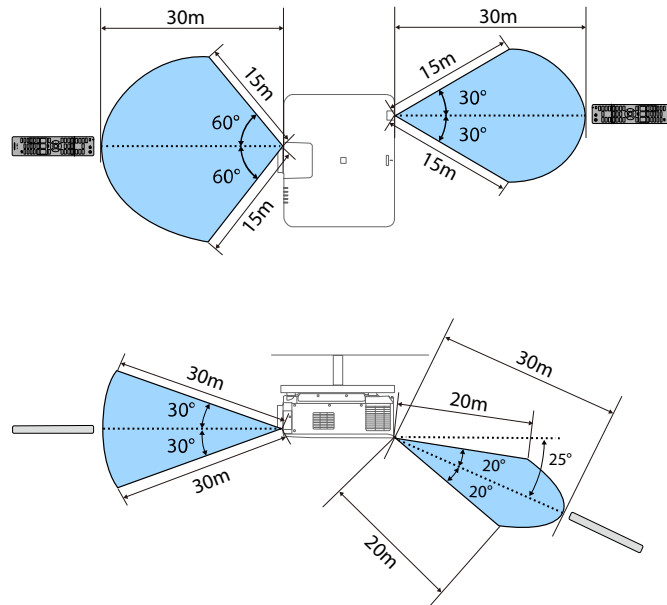
①	②	③		④	
Inches	Width × Height	ELPLW06	ELPLM08	ELPLW06	ELPLM08
60	140 × 60	162 - 224	-	-83 - 23	-
80	187 × 80	219 - 301	196 - 317	-110 - 30	-68 - -12
100	233 × 100	276 - 378	246 - 397	-138 - 38	-85 - -15
120	280 × 120	332 - 455	296 - 477	-165 - 45	-102 - -18
150	350 × 150	417 - 570	371 - 597	-206 - 56	-128 - -23
200	467 × 200	559 - 763	496 - 798	-275 - 75	-170 - -30
300	700 × 300	842 - 1148	747 - 1199	-413 - 113	-255 - -45
500	1167 × 500	1409 - 1917	1249 - 2002	-688 - 188	-425 - -75
800	1868 × 800	2259 - 3072	1500 - 2403	-1101 - 301	-510 - -90
900	2101 × 900	2542 - 3457	2001 - 3206	-1239 - 338	-680 - -120

### ELPLM09/ELPLM15/ELPLM10/ELPLM11/ELPLL08

①	②	③				④
Inches	Width × Height	ELPLM09 ELPLM15	ELPLM10	ELPLM11	ELPLL08	
60	140 × 60	216 - 354	333 - 514	484 - 746	722 - 1022	-83 - 23
80	187 × 80	291 - 475	449 - 689	653 - 1002	974 - 1373	-110 - 30
100	233 × 100	366 - 596	564 - 865	823 - 1259	1225 - 1725	-138 - 38
120	280 × 120	441 - 717	680 - 1040	992 - 1515	1476 - 2076	-165 - 45
150	350 × 150	553 - 898	853 - 1304	1246 - 1900	1853 - 2603	-206 - 56
200	467 × 200	740 - 1200	1141 - 1743	1669 - 2541	2482 - 3481	-275 - 75
300	700 × 300	1114 - 1804	1719 - 2620	2515 - 3824	3738 - 5238	-413 - 113
500	1167 × 500	1862 - 3011	2873 - 4376	4208 - 6388	6252 - 8751	-688 - 188
800	1868 × 800	2984 - 4823	4605 - 7010	6747 - 10235	10022 - 14021	-1101 - 301
900	2101 × 900	3358 - 5427	5182 - 7888	7594 - 11518	11279 - 15777	-1239 - 338

The remote control lets you control the projector from almost anywhere in the room.

Make sure that you aim the remote control at the projector's receivers within the distance and angles listed here.



- Depending on your installation environment, the available distance and angles may be shortened.
- Avoid using the remote control in conditions with bright fluorescent lights or in direct sunlight, or the projector may not respond to commands. If you are not going to use the remote control for a long time, remove the batteries.
- When you use multiple projectors in the same room or when there are obstacles around the remote receiver, connect the remote control to the projector using a commercially available 3.5 mm stereo mini-jack audio cable. When the remote control is connected, the remote receiver on the projector is disabled.

The table here lists the adjustment range for each correction method.

### 2.5.1 H/V-Keystone

If the projector's angle of tilt is within the following range, you can correct distortion in the projected image by using the H/V-Keystone correction function.

Lens Model Number	Vertical Direction	Horizontal Direction
ELPLX02S ELPLX02WS	-16°- 16°	-16°- 16°
ELPLU03 ELPLU03S	-28°- 28°	-28°- 28°
ELPLU04	-31°- 31°	-30°- 30°
ELPLW05	-41°- 41°	-30°- 30°
ELPLW08	-35°- 35°	-30°- 30°
ELPLW06	-41°- 41°	-30°- 30°
ELPLM08	-45°- 45°	-30°- 30°
ELPLM09 ELPLM15	-44°- 44°	-30°- 30°
ELPLM10 ELPLM11	-45°- 45°	-30°- 30°
ELPLL08	-45°- 45°	-30°- 30°

### 2.5.2 Curved Surface

You can correct the image shape if the curved surface is a part of an exact circle.

The values in the table are the minimum values for R/L in the illustration. (Approximate value when projecting at maximum zoom.) If the R/L value is lower than the value in the table, you cannot correct the image shape.

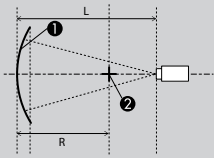
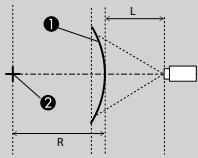
You can confirm the maximum projection distance (L) using the following formula.

$$L = R/\text{value in the table}$$

## Horizontally curved surface

Lens Model Number	Concave		Convex	
	<p>①: Screen ②: Center of the circle of which the curved surface is an arc L: Projection distance R: Radius of the circle of which the curved surface is an arc</p>		<p>①: Screen ②: Center of the circle of which the curved surface is an arc L: Projection distance R: Radius of the circle of which the curved surface is an arc</p>	
	Vertical Lens Shift: Home Position	Vertical Lens Shift: Top	Vertical Lens Shift: Home Position	Vertical Lens Shift: Top
ELPLX02S ELPLX02WS	-	2.84	-	8.20
ELPLU03 ELPLU03S	0.40	0.40	3.52	3.52
ELPLU04	0.45	0.53	2.22	2.35
ELPLW05	0.41	0.41	1.63	1.64
ELPLW08	0.39	0.40	1.32	1.39
ELPLW06	0.33	0.34	0.79	0.82
ELPLM08	0.35	0.35	0.94	0.95
ELPLM09 ELPLM15	0.27	0.28	0.52	0.54
ELPLM10	0.19	0.20	0.29	0.30
ELPLM11	0.14	0.14	0.18	0.19
ELPLL08	0.10	0.10	0.12	0.12

## Vertically curved surface

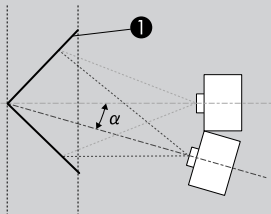
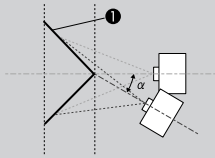
Lens Model Number	Concave		Convex	
	 <p>①: Screen ②: Center of the circle of which the curved surface is an arc L: Projection distance R: Radius of the circle of which the curved surface is an arc</p>		 <p>①: Screen ②: Center of the circle of which the curved surface is an arc L: Projection distance R: Radius of the circle of which the curved surface is an arc</p>	
	Vertical Lens Shift: Home Position	Vertical Lens Shift: Top	Vertical Lens Shift: Home Position	Vertical Lens Shift: Top
ELPLX02S ELPLX02WS	-	2.09	-	4.22
ELPLU03 ELPLU03S	0.31	0.32	0.87	0.92
ELPLU04	0.37	0.63	1.10	1.29
ELPLW05	0.33	0.35	0.82	0.85
ELPLW08	0.31	0.42	0.68	0.80
ELPLW06	0.24	0.29	0.41	0.48
ELPLM08	0.27	0.28	0.49	0.51
ELPLM09 ELPLM15	0.19	0.22	0.28	0.33
ELPLM10	0.13	0.15	0.16	0.19
ELPLM11	0.10	0.11	0.11	0.12
ELPLL08	0.08	0.08	0.08	0.08

### 2.5.3 Corner Wall

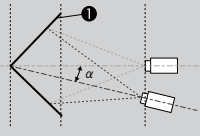
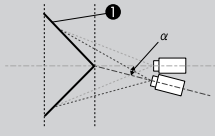
The  $\alpha$  in the illustration is the maximum angle in which the projector can move. See the table below for detailed values. (Approximate value when projecting at maximum zoom.)



## Horizontal corner (correction to bilateral symmetry by using corners as the center line)

Lens Model Number	Concave		Convex	
	 <p>①: Screen <math>\alpha</math>: Movable angle of the projector</p>		 <p>①: Screen <math>\alpha</math>: Movable angle of the projector</p>	
	Vertical Lens Shift: Home Position	Vertical Lens Shift: Top	Vertical Lens Shift: Home Position	Vertical Lens Shift: Top
ELPLX02S ELPLX02WS	-	-	-	-
ELPLU03 ELPLU03S	30°	23°	1°	1°
ELPLU04	29°	11°	0°	-
ELPLW05	30°	24°	3°	3°
ELPLW08	31°	16°	5°	5°
ELPLW06	32°	21°	11°	11°
ELPLM08	33°	28°	10°	10°
ELPLM09 ELPLM15	31°	25°	15°	15°
ELPLM10	30°	30°	19°	19°
ELPLM11	29°	29°	22°	21°
ELPLL08	29°	28°	23°	23°

## Vertical corner (correction to horizontal symmetry by using corners as the center line)

Lens Model Number	Concave		Convex	
	 <p>①: Screen  <math>\alpha</math>: Movable angle of the projector</p>		 <p>①: Screen  <math>\alpha</math>: Movable angle of the projector</p>	
	Vertical Lens Shift: Home Position	Vertical Lens Shift: Top	Vertical Lens Shift: Home Position	Vertical Lens Shift: Top
ELPLX02S ELPLX02WS	-	-	-	-
ELPLU03 ELPLU03S	32°	20°	11°	2°
ELPLU04	33°	2°	9°	-
ELPLW05	32°	21°	12°	3°
ELPLW08	32°	9°	14°	-
ELPLW06	31°	13°	17°	3°
ELPLM08	31°	23°	17°	10°
ELPLM09 ELPLM15	29°	14°	20°	8°
ELPLM10	25°	16°	22°	13°
ELPLM11	24°	17°	22°	16°
ELPLL08	23°	19°	22°	17°

You can correct the image shape if the curved surface is a part of an exact circle.

The values in the table are the minimum values for R/L shown in the illustration. They are determined in the following conditions:

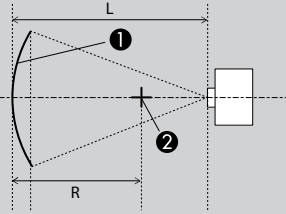
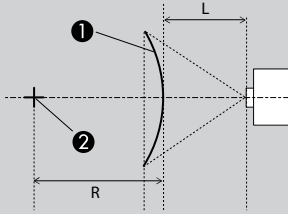
- Projecting at maximum zoom
- R is 280 cm or more
- Projecting a 150 inch image per one projector

You may not be able to correct the image shape if the value is lower than the R/L value in the table.

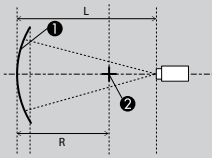
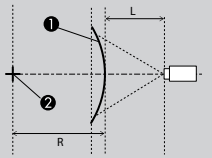
You can confirm the maximum projection distance (L) using the following formula.

$L = R/\text{value in the table}$

## Horizontally curved surface

Lens Model Number	Concave		Convex	
	 <p>①: Screen ②: Center of the circle of which the curved surface is an arc L: Projection distance R: Radius of the circle of which the curved surface is an arc</p>		 <p>①: Screen ②: Center of the circle of which the curved surface is an arc L: Projection distance R: Radius of the circle of which the curved surface is an arc</p>	
	Vertical Lens Shift: Home Position	Vertical Lens Shift: Top	Vertical Lens Shift: Home Position	Vertical Lens Shift: Top
ELPLX02S ELPLX02WS	-	2.84	-	8.20
ELPLU03 ELPLU03S	1.81	1.81	7.10	7.10
ELPLU04	1.35	1.35	3.60	3.60
ELPLW05	1.13	1.13	2.30	2.30
ELPLW08	1.01	1.01	1.32	1.39
ELPLW06	0.73	0.73	0.79	0.82
ELPLM08	0.82	0.82	0.94	0.95
ELPLM09 ELPLM15	0.55	0.55	0.55	0.55
ELPLM10	0.36	0.36	0.36	0.36
ELPLM11	0.24	0.24	0.24	0.24
ELPLL08	not supported	not supported	not supported	not supported

## Vertically curved surface

Lens Model Number	Concave		Convex	
	 <p>①: Screen ②: Center of the circle of which the curved surface is an arc L: Projection distance R: Radius of the circle of which the curved surface is an arc</p>		 <p>①: Screen ②: Center of the circle of which the curved surface is an arc L: Projection distance R: Radius of the circle of which the curved surface is an arc</p>	
	Vertical Lens Shift: Home Position	Vertical Lens Shift: Top	Vertical Lens Shift: Home Position	Vertical Lens Shift: Top
ELPLX02S ELPLX02WS	-	2.48	-	4.22
ELPLU03 ELPLU03S	1.81	1.81	1.81	1.81
ELPLU04	1.35	1.35	1.35	1.35
ELPLW05	1.13	1.13	1.13	1.13
ELPLW08	1.01	1.01	1.01	1.01
ELPLW06	0.73	0.73	0.73	0.73
ELPLM08	0.82	0.82	0.82	0.82
ELPLM09 ELPLM15	0.55	0.55	0.55	0.55
ELPLM10	0.36	0.36	0.36	0.36
ELPLM11	0.24	0.24	0.24	0.24
ELPLL08	not supported	not supported	not supported	not supported

# Chapter3 Monitoring and Controlling the Projector

Check these sections to monitor and control the projector over a network.

## ▶▶ Related Links

- "3.1 Monitoring and Control Method" [p.63](#)
- "3.2 ESC/VP21 Command List" [p.64](#)
- "3.3 Cable Layouts" [p.66](#)
- "3.4 PJLink Command List" [p.67](#)
- "3.5 Art-Net Channel Specifications" [p.71](#)

You can check the status of networked projectors and perform various projector operations using these methods.

Method	Details
Epson Projector Management	Allows you to control and monitor multiple Epson projectors on a network. You can download Epson Projector Management from the following Web site. <a href="http://epson.sn">epson.sn</a>
Epson Professional Tool	You can adjust the images projected by the projector and monitor the status of the projector over a network. You can download Epson Projector Professional Tool from the following Web site. <a href="http://epson.sn">epson.sn</a>
ESC/VP21 command	When the projector is connected to a computer with an RS-232C cable, you can control the projector with communication commands.
ESC/VP.net command	You can monitor the projector using ESC/VP.net commands.
Epson Web Control	By using the Web browser of a computer connected to the projector on a network, you can set the projector's functions and control the projector.
Web API	You can control the projector by Web API communication using API authentication (Digest authentication). For details, see the "Web API Specifications for Projectors" on the following website. <a href="http://epson.sn">epson.sn</a>
SNMP	Network administrators can install SNMP (Simple Network Management Protocol) software on network computers so they can monitor projectors. This projector supports SNMP agent version 1 (SNMPv1).
PJLink command	The projector complies with the PJLink Class2 standard established by the JBMIA. From a computer connected to the projector on a network, you can control the projector with PJLink commands. For more details on PJLink, see the following Web site. <a href="http://pjlink.jbmia.or.jp/english/">http://pjlink.jbmia.or.jp/english/</a>
Art-Net command	Art-Net is an Ethernet communication protocol based on the TCP/IP protocol. You can control the projector by using a DMX controller or an application system.
Crestron Connected	If you are using the Crestron Connected network monitoring and control system, you can set up your projector for use on the system. For additional information on Crestron Connected, visit the Crestron Web site. <a href="https://www.crestron.com/products/line/crestron-connected">https://www.crestron.com/products/line/crestron-connected</a>

When a command is input, the projector executes the command and returns a ":", and then accepts the next command.

If the command being processed terminates abnormally, an error message is output and a ":" is returned.

The following list shows the frequently used commands.

You can check all available commands in the *ESC/VP21 Command List*.

Function		Command	Setting Value/Response Value
Power	On	PWR ON	-
	Off	PWR OFF	-
Acquire power status		PWR?	00: Standby condition 01: Projecting 02: Warm-up status 03: Cooling status 04: Network monitoring status/ communication status 05: Error standby status 09: A/V standby
Source selection		SOURCE xx	10: Computer 30: HDMI 52: USB 53: LAN 60: SDI (EB-PU2220B/ EB-PU2216B/EB-PU2213B) 80: HDBaseT A0: DVI-D F0: Cycle through all sources F1: Cycle through DVI-D, Computer, USB and LAN F2: Cycle through HDMI, HDBaseT and SDI
Acquire Source		SOURCE?	10: Computer 30: HDMI 52: USB 53: LAN 60: SDI (EB-PU2220B/ EB-PU2216B/EB-PU2213B) 80: HDBaseT A0: DVI-D
A/V Mute or Shutter	On	MUTE ON	-
	Off	MUTE OFF	-



Function		Command	Setting Value/Response Value
Acquire A/V Mute or Shutter status		MUTE?	EB-PU2220B/EB-PU2216B/ EB-PU2213B: ON: Close Shutter OFF: Open Shutter EB-PU2120W/EB-PU2116W/ EB-PU2113W: ON: Execute A/V Mute OFF: Release A/V Mute
Freeze	On	FREEZE ON	-
	Off	FREEZE OFF	-
Acquire freeze status		FREEZE?	ON: Execute Freeze OFF: Release Freeze
Volume	Up	VOL INC	-
	Down	VOL DEC	-
	Specify	VOL xxx	0-255
Acquire volume settings		VOL?	0-255
Acquire Laser Hours		LAMP?	Laser On Hours
Acquire Operation Hours		ONTIME?	Operation Hours

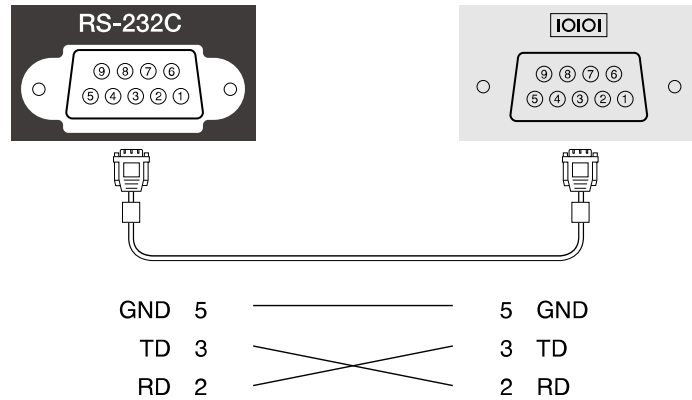
Add a Carriage Return (CR) code (0Dh) to the end of each command and transmit.

Contact Epson for more details.

## Serial connection

- Connector shape: D-Sub 9-pin (male)
- Projector input port name: RS-232C
- Cable type: Crossover (null modem) cable

In the following illustration, the projector side is shown on the left, and the computer side on the right:



Signal name	Function
GND	Signal wire ground
TD	Transmit data
RD	Receive data

## Communications protocol

- Default baud rate setting: 9600 bps
- Data length: 8 bit
- Parity: None
- Stop-bit: 1 bit
- Flow control: None

The port number used for the PJLink search function is 4352 (UDP).

Function	Command	Setting Value/Response Value	Content	Notes
Power control instruction	POWR	0	Power-off (Standby/ Error standby)	-
		1	Power-on (Light source on)	-
Power status query	POWR ?	0	Power-off (Standby/ Error standby)	-
		1	Power-on (Light source on)	-
		2	Cooling status	-
		3	Warm-up status	-
Input switch instruction Input switch query	INPT INPT ?	11	Computer	-
		31	DVI-D	-
		32	HDMI	-
		34	SDI (EB-PU2220B/ EB-PU2216B/ EB-PU2213B)	-
		41	USB	-
		52	LAN	-
		56	HDBaseT	-
Input toggling list query	INST ?	11	Computer	Displays a list of the available input sources of the projector.
		31	DVI-D	
		32	HDMI	
		34	SDI (EB-PU2220B/ EB-PU2216B/ EB-PU2213B)	
		41	USB	
		52	LAN	
		56	HDBaseT	

Function	Command	Setting Value/Response Value		Content	Notes
Error status query	ERST ?	First character	2	Fan Error	"0" is displayed when no error has occurred.
		Second character	2	Laser error Laser on error	
		Third character	1	High Temp Warning	
			2	Temperature error	
		Fourth character	2	Upper case open error	
		Sixth character	1	Other warnings	
2	Other errors				
A/V Mute Settings	AVMT	30		A/V mute off	Does not support video mute off/on (10/11) or audio mute off/on (20/21).
		31		A/V mute on	
A/V Mute status query	AVMT ?	30		A/V mute off	
		31		A/V mute on	
Projector name query	NAME ?	-		Projector Name	Displays the name set in [Network] - [Basic] - [Projector Name] in the projector's menu.
Manufacture name information query	INF1 ?	EPSON		Manufacture name	-
Model name information query	INF2 ?	EPSON PU2120W		EB-PU2120W	-
		EPSON PU2116W		EB-PU2116W	-
		EPSON PU2113W		EB-PU2113W	-
		EPSON PU2220B		EB-PU2220B	-
		EPSON PU2216B		EB-PU2216B	-
		EPSON PU2213B		EB-PU2213B	-
Class information query	CLSS ?	2		-	-
Light source number, lighting hour query	LAMP ?	[L1 light source usage time] [L1 light source query] (ESC/VP21 command: LAMP?, PWSTATUS?)		-	-

**Class2 Command List**

Function	Command	Setting Value/Response Value	Content	Notes
Request to search projector	SRCH ?	-	-	-
Response to projector search	ACKN	-	-	-
Status notification (link up)	LKUP =	-	-	- When address is confirmed.
Status notification (error occurred)	ERST =	-	-	-
Status notification (changing power status)	POWR =	-	-	-
Status notification (changing input source)	INPT =	-	-	-
Serial number query	SNUM ?	11 digit numbers	Serial number of projector being used	-
Software version query	SVER ?	-	Firmware version of projector being used	-
Input port name query	INNM ?xx	(Source name)	-	xx is a 2 digit number used in the input toggling list query.
Input signal resolution query	IRES ?	(Horizontal resolution) x (Vertical resolution)	-	-
Panel resolution query	RRES ?	(Horizontal resolution) x (Vertical resolution)	Panel resolution of your projector	The value may vary depending on the [Screen Type] setting in the projector's menu.

Function	Command	Setting Value/Response Value	Content	Notes
Static function setting Static status query	FREZ FREZ ?	0	Freeze off	-
		1	Freeze on	-

Channel/Function	Operation	Parameters	Default value	Description
1 Adjusting light (dimming)	0% to 100%	0 to 255	0	Adjusts the image brightness.
2 Shutter and A/V Mute control	A/V Mute off Shutter open	0 to 63	128	<b>EB-PU2220B/ EB-PU2216B/ EB-PU2213B:</b> Closes/opens the Shutter.  <b>EB-PU2120W/ EB-PU2116W/ EB-PU2113W:</b> Enables/disables A/V Mute.
	Non-operational	64 to 191		
	A/V Mute on Shutter closed	192 to 255		
3 Switch source	Non-operational	0 to 7	0	Switches to the specified source.
	HDMI	8 to 15		
	Non-operational	16 to 23		
	HDBaseT	24 to 31		
	DVI-D	32 to 39		
	Non-operational	40 to 47		
	SDI (EB-PU2220B/ EB-PU2216B/ EB-PU2213B)	48 to 55		
	Computer	56 to 63		
	Non-operational	64 to 71		
	Non-operational	72 to 79		
	LAN	80 to 87		
	Non-operational	88 to 95		
	USB	96 to 103		
	Non-operational	104 to 255		
4 Lens Position	Non-operational	0 to 31	0	Moves the lens shift to the home position.
	Move to home position	32 to 63		

Channel/Function	Operation	Parameters	Default value	Description
	Non-operational	64 to 255		
5 Horizontal Lens Shift	(+) lens adjustment (large)	0 to 31	128	Performs horizontal lens shift using the amount of movement specified.
	(+) lens adjustment (medium)	32 to 63		
	(+) lens adjustment (small)	64 to 95		
	Non-operational	96 to 159		
	(-) lens adjustment (small)	160 to 191		
	(-) lens adjustment (medium)	192 to 223		
	(-) lens adjustment (large)	224 to 255		
6 Vertical Lens Shift	(+) lens adjustment (large)	0 to 31	128	Performs vertical lens shift using the amount of movement specified.
	(+) lens adjustment (medium)	32 to 63		
	(+) lens adjustment (small)	64 to 95		
	Non-operational	96 to 159		
	(-) lens adjustment (small)	160 to 191		
	(-) lens adjustment (medium)	192 to 223		
	(-) lens adjustment (large)	224 to 255		
7 Electronic Zoom	(+) lens adjustment (large)	0 to 31	128	Performs electronic zoom using the specified amount of movement.
	(+) lens adjustment (medium)	32 to 63		
	(+) lens adjustment (small)	64 to 95		
	Non-operational	96 to 159		



Channel/Function	Operation	Parameters	Default value	Description
	(-) lens adjustment (small)	160 to 191		
	(-) lens adjustment (medium)	192 to 223		
	(-) lens adjustment (large)	224 to 255		
8 Electronic focus	(+) lens adjustment (large)	0 to 31	128	Performs electronic focus using the specified amount of movement.
	(+) lens adjustment (medium)	32 to 63		
	(+) lens adjustment (small)	64 to 95		
	Non-operational	96 to 159		
	(-) lens adjustment (small)	160 to 191		
	(-) lens adjustment (medium)	192 to 223		
	(-) lens adjustment (large)	224 to 255		
9 Electronic distortion	(+) lens adjustment (large)	0 to 31	128	Performs electronic distortion using the amount of movement specified.
	(+) lens adjustment (medium)	32 to 63		
	(+) lens adjustment (small)	64 to 95		
	Non-operational	96 to 159		
	(-) lens adjustment (small)	160 to 191		
	(-) lens adjustment (medium)	192 to 223		
	(-) lens adjustment (large)	224 to 255		
10 Load Lens Memory	Non-operational	0 to 15	0	Loads the specified lens memory.
	Memory 1	16 to 31		

Channel/Function	Operation	Parameters	Default value	Description
	Memory 2	32 to 47		
	Memory 3	48 to 63		
	Memory 4	64 to 79		
	Memory 5	80 to 95		
	Memory 6	96 to 111		
	Memory 7	112 to 127		
	Memory 8	128 to 143		
	Memory 9	144 to 159		
	Memory 10	160 to 175		
	Non-operational	176 to 255		
11 Power control	Power off	0 to 63	128	Turns the projector power on or off.
	Non-operational	64 to 191		
	Power on	192 to 255		
12 Geometry Correction	Off	0 to 15	255	Corrects the image shape.
	H/V-Keystone	16 to 31		
	Quick Corner	32 to 47		
	Point Correction	48 to 63		
	Arc Correction	64 to 79		
	Corner Wall Correction	80 to 95		
	Load Memory1	96 to 111		Loads image shape setting from memory.
	Load Memory2	112 to 127		
	Load Memory3	128 to 143		
	Non-operational	144 to 255		
13 Lock	Cannot control	0 to 127	0	Enables/disables Art-Net operations.
	Can control	128 to 255		
14 Freeze	Non-operational	0 to 31	128	Enables/disables Freeze.

Channel/Function	Operation	Parameters	Default value	Description
	Freeze off	32 to 95		
	Non-operational	96 to 159		
	Freeze on	160 to 223		
	Non-operational	224 to 255		
15 Fade-in	0.0s	0 to 15	255	Specifies Fade-in time when the Shutter is released or the A/V Mute is turned off.
	0.5s	16 to 31		
	1.0s	32 to 47		
	1.5s	48 to 63		
	2.0s	64 to 79		
	2.5s	80 to 95		
	3.0s	96 to 111		
	3.5s	112 to 127		
	4.0s	128 to 143		
	5.0s	144 to 159		
	7.0s	160 to 175		
	10.0s	176 to 191		
	Non-operational	192 to 255		
16 Fade-out	0.0s	0 to 15	255	Specifies Fade-out time when the Shutter is executed or the A/V Mute is turned on.
	0.5s	16 to 31		
	1.0s	32 to 47		
	1.5s	48 to 63		
	2.0s	64 to 79		
	2.5s	80 to 95		
	3.0s	96 to 111		
	3.5s	112 to 127		
	4.0s	128 to 143		

Channel/Function	Operation	Parameters	Default value	Description
	5.0s	144 to 159		
	7.0s	160 to 175		
	10.0s	176 to 191		
	Non-operational	192 to 255		
17 Light Source Control	0% - 100% (1% increments)	0 to 255	255	Executes LUMLEVEL command for the specified brightness level when selecting 100-8%. Executes A/V Mute when selecting less than 8%. Fade-in/Fade-out settings are ignored.
18 Content playback	Non-operational	0 to 3	0	Plays the specified playlist.
	Playlist 1	4 to 7		
	Playlist 2	8 to 11		
	Playlist 3	12 to 15		
	Playlist 4	16 to 19		
	Playlist 5	20 to 23		
	Playlist 6	24 to 27		
	Playlist 7	28 to 31		
	Playlist 8	32 to 35		
	Playlist 9	36 to 39		
	Playlist 10	40 to 43		
	Playlist 11	44 to 47		
	Playlist 12	48 to 51		
	Playlist 13	52 to 55		
	Playlist 14	56 to 59		
	Playlist 15	60 to 63		
	Playlist 16	64 to 67		
Playlist 17	68 to 71			

Channel/Function	Operation	Parameters	Default value	Description
	Playlist 18	72 to 75		
	Playlist 19	76 to 79		
	Playlist 20	80 to 83		
	Playlist 21	84 to 87		
	Playlist 22	88 to 91		
	Playlist 23	92 to 95		
	Playlist 24	96 to 99		
	Playlist 25	100 to 103		
	Playlist 26	104 to 107		
	Playlist 27	108 to 111		
	Playlist 28	112 to 115		
	Playlist 29	116 to 119		
	Playlist 30	120 to 123		
	Playlist 31	124 to 127		
	Playlist 32	128 to 131		
	Playlist 33	132 to 135		
	Playlist 34	136 to 139		
	Playlist 35	140 to 143		
	Playlist 36	144 to 147		
	Playlist 37	148 to 151		
	Playlist 38	152 to 155		
	Playlist 39	156 to 159		
	Playlist 40	160 to 163		
	Playlist 41	164 to 167		
	Playlist 42	168 to 171		
	Playlist 43	172 to 175		
	Playlist 44	176 to 179		
	Playlist 45	180 to 183		
	Playlist 46	184 to 187		

Channel/Function	Operation	Parameters	Default value	Description
	Playlist 47	188 to 191		
	Playlist 48	192 to 195		
	Playlist 49	196 to 199		
	Playlist 50	200 to 203		
	Non-operational	204 to 255		

When controlling the projector using Art-Net and operating the projector using the remote control or control panel, the settings and projector status for the DMX controller or application system may differ. When you want to control all channels in the projector, set channel 13 to "Cannot operate", and then return it to "Can operate".

# Chapter4 Appendix

Check these sections for the notices about your product.


## » Related Links

- "4.1 Getting the Latest Version of the Documents" [p.80](#)
- "4.2 Trademarks" [p.81](#)
- "4.3 Copyright Notice" [p.82](#)
- "4.4 Disclaimer" [p.83](#)
- "4.5 Copyright Attribution" [p.84](#)

You can get the latest version of the manuals and specifications on the Epson Web site. Visit [epson.sn](http://epson.sn), and enter your model name.



EPSON is a registered trademark of Seiko Epson Corporation.

HDMI, the HDMI Logo and High-Definition Multimedia Interface are trademarks or registered trademarks of HDMI Licensing Administrator, Inc. 

PJLink trademark is a trademark applied for registration or is already registered in Japan, the United States of America and other countries and areas.

Crestron<sup>®</sup>, Crestron Connected<sup>®</sup>, Crestron Fusion<sup>®</sup>, Crestron Control<sup>®</sup>, and Crestron RoomView<sup>®</sup> are registered trademarks of Crestron Electronics, Inc.

Art-Net<sup>™</sup> Designed by and Copyright Artistic Licence Holdings Ltd.

HDBaseT<sup>™</sup> and the HDBaseT Alliance logo are trademarks of the HDBaseT Alliance.

Other product names used herein are also for identification purposes only and may be trademarks of their respective owners. Epson disclaims any and all rights in those marks.

All rights reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted in any form or by any means, electronic, mechanical, photocopying, recording, or otherwise, without the prior written permission of Seiko Epson Corporation. No patent liability is assumed with respect to the use of the information contained herein. Neither is any liability assumed for damages resulting from the use of the information contained herein.

Neither Seiko Epson Corporation nor its affiliates shall be liable to the purchaser of this product or third parties for damages, losses, costs, or expenses incurred by the purchaser or third parties as a result of: accident, misuse, or abuse of this product or unauthorized modifications, repairs, or alterations to this product, or (excluding the U.S.) failure to strictly comply with Seiko Epson Corporation's operating and maintenance instructions.

Seiko Epson Corporation shall not be liable against any damages or problems arising from the use of any options or any consumable products other than those designated as Original Epson Products or Epson Approved Products by Seiko Epson Corporation.

The contents of this guide may be changed or updated without further notice.

Illustrations in this guide and the actual projector may differ.

1. The contents of this document are subject to change without notice.
2. While every precaution has been taken in the preparation of this document, Seiko Epson Corporation assumes no responsibility for errors or omissions. Neither is any liability assumed for damages resulting from the use of the information contained herein.
3. Responsibility for use of this document lies with the user. Seiko Epson Corporation shall not be liable to the purchaser of this document or third parties for damages, losses, costs, or expenses incurred by the purchaser or third parties as a result of use of this document.

This information is subject to change without notice.

© 2022 Seiko Epson Corporation

2024.1 EN