

## Specifications

## Main unit

|  |   |   |  |  |
|--|---|---|--|--|
| Power supply   |   | AC 100 V-240 V, 50 Hz/60 Hz   |  |  |
| Power consumption <sup>1</sup>                       | Maximum power consumption               |   | 240 W (2.6-1.0 A) (245 VA)   |  |
|  | On-mode power consumption (Light power) | [NORMAL]  | 215 W (100-240V), 205 W (200-240V)   |  |
|  |   | [ECO]   | 165 W (100-240V), 160 W (200-241V)   |  |
|  |   | [QUIET]   | 160 W (100-240V), 155 W (200-240V)   |  |
| Standby mode power consumption                       | [NORMAL]                                | 14 W<br>When [IN STANDBY MODE] in [AUDIO SETTING] is set to [OFF], [QUICK STARTUP] is set to [OFF], and <DC OUT> terminal is not in use.  |  |  |
|  | [ECO]                                   | 0.5 W   |  |  |
| BTU value  |   | Max 820 BTU   |  |  |
| LCD panel  | Size                                    |   | 16.3 mm [0.64 in] diagonal (16:10 aspect ratio)  |  |
|  | Display system                          |   | Transparent LCD panel (x 3, R/G/B)   |  |
|  | Number of pixels                        |   | 2,304,000 (1920 x 1200) pixels   |  |
| Refresh rate   |   | 60 Hz Refresh rate varies depending on scanning frequency.  |  |  |
| Light source   |   | Laser diode   |  |  |
| Light output <sup>1</sup>                            | Light Power                             | [NORMAL]  | 4,600 lm<br>When [PICTURE MODE] is set to [DYNAMIC], [LIGHT POWER] is set to [NORMAL], [DAYLIGHT VIEW] is set to [OFF], and [AUTO POWER SAVE] is set to [OFF].                                 |  |
|  |   | [ECO/QUIET]   | 3,220 lm   |  |
| Time until light output declines to 50% <sup>2</sup> | Light Power                             | [NORMAL/QUIET]  | 20,000 hours   |  |
|  |   | [ECO]   | 24,000 hours   |  |
| Filter Replacement Cycle                             |   | 20,000 hours (Under the dust conditions of 0.08mg/m <sup>3</sup> )<br>10,000 hours (Under the dust conditions of 0.15mg/m <sup>3</sup> )<br>Filter cleaning cycle varies depending on environment. Filter can be washed and reused up to two times. |  |  |
| Resolution   |   | WUXGA (1920 x 1200 pixels)  |  |  |
| Contrast ratio <sup>1</sup>                          |   | 3,000,000:1 (Full On/Full Off)<br>(When [PICTURE MODE] is set to [DYNAMIC] and [DYNAMIC CONTRAST] is set to [1].)   |  |  |
| Screen size  |   | 0.76-7.62 m [30-300 in], 16:10 aspect ratio   |  |  |
| Center to corner zone ratio <sup>1</sup>             |   | 85%   |  |  |
| Lens   |   | 1.2x manual zoom (throw ratio: 1.36-1.64:1), manual focus lens, F 1.61-1.76, f 19.1-23.0 mm   |  |  |
| Digital Zoom Extender <sup>3</sup>                   |   | Throw ratio: 1.36-2.05:1 <sup>4</sup><br>(Corresponding value. When used together with optical zoom.)   |  |  |
| Keystone correction range                            |   | Vertical: ±25 ° (Auto, Manual), Horizontal: ±35 ° (Manual)  |  |  |
| Installation   |   | Ceiling/floor, front/rear, free 360-degree installation   |  |  |
| Built-in speaker                                     |   | 10 W (monaural)   |  |  |
| Compatible Signal                                    | COMPUTER signal input                   | Video signal resolution: 480i (525i), 576i (625i), 480/60p to 1080/50p<br>Computer signal resolution: 640 x 480 to 1920 x 1200 (non-interlace)<br>Dot clock frequency: 13.5 MHz to 162 MHz  |  |  |
|  | HDMI signal input                       | Video signal resolution: 480/60p, 576/50p to 4096 x 2160/30p<br>Computer signal resolution: 640 x 480 to 1920 x 1200 (non-interlace)<br>Dot clock frequency: 25 MHz to 297 MHz  |  |  |
| Terminals  | HDMI 1 IN/ 2 IN                         |   | HDMI 19pin x 2<br>Deep Color, compatible with HDCP 1.4, 4K/30p signal input <sup>5</sup> , CEC supported <sup>6</sup><br>Audio Signal: Linear PCM (Sampling frequency: 48 kHz/44.1 kHz/32 kHz) |  |
|  | COMPUTER 1 IN / 2 IN                    |   | D-sub 15pin (female) x 2   |  |
|  |   |   | RGB  | 0.7 V [p-p], 75 ohms (1.0 V [p-p], 75 ohms for sync on G)<br>HD/SYNC, VD: TTL, high impedance, positive/negative automatic |
|  |   |   | YPbPr  | Y: 1.0 V [p-p], including sync signal, Pb/Pr (Cb/Cr): 0.7 V [p-p], 75 ohms   |
|  | AUDIO 1 IN/ 2 IN                        |   | M3 stereo mini-jack x 2<br>0.5 V [rms], input Impedance 22 k Ohms and more   |  |
|  | AUDIO OUT                               |   | M3 stereo mini-jack x 1<br>0 V [rms] to 2.0 V [rms] variable, output Impedance 2.2 k ohms and less   |  |
| SERIAL IN  |   | D-sub 9-pin (female) x 1<br>for computer control (RS-232C compliant)  |  |  |
| LAN  |   | RJ-45 x 1<br>for network control, 10Base-T, 100Base-TX  |  |  |

|  |                                   |   |
|--|-----------------------------------|---|
| Terminals                              | USB<br>(VIEWER/WIRELESS/DC OUT)   | USB connector (Type A) x 1<br>for Memory Viewer function, optional Wireless Module AJ-WM50,<br>power supply (DC 5 V, maximum 2 A) |
| Supported Internet protocol version    |                                   | IPv4  |
| Power cord length                      |                                   | India: 3.0 m [9 ft 10 in]<br>Other countries or regions: 2.0 m [6 ft 7 in]  |
| Cabinet materials                      |                                   | Molded plastic  |
| Dimensions (W x H x D)                 |                                   | 349 x 105 x 309 mm [13 3/4 x 4 1/8 x 12 5/32 in] (with feet at shortest position)   |
| Weight with supplied lens <sup>8</sup> |                                   | Approx. 4.2 kg (9.3 lbs)  |
| Operating noise <sup>1</sup>           |                                   | 35 dB (NORMAL/ECO), 24 dB (QUIET)   |
| Laser Classification                   | Laser Class                       | Class 1 (IEC/EN 60825-1:2014)   |
|  | Risk Group                        | Risk Group 2 (IEC 62471-5:2015)   |
| Operating environment                  | Operating environment temperature | 0-45 °C (32-113 °F) <sup>9</sup>  |
|  | Operating environment humidity    | 20%-80% (no condensation)   |

### Remote control unit

|                        |  |
|------------------------|--|
| Power supply           | 3V DC (AAA/R03/LR03 battery x 2)   |
| Operation range        | Approx. 20 m [65 ft 7 in] (when operated directly in front of signal receptor) |
| Dimensions (W x H x D) | 44 x 105 x 20.5 mm [1-47/64 x 4-9/64 x 13/16 in]                               |
| Weight <sup>8</sup>    | Approx. 63 g (2.22 ozs.) including batteries                                   |

### Supplied accessories

- Wireless remote control unit (x 1)
- Power cord (x 2 for Europe & Asia model/ x 1 for other countries)
- Batteries for remote control (R03/AAA type x 2)

### Other Applications

- Multi Monitoring & Control Software (for Windows)
- Projector Network Setup Software (for Windows)
- Logo Transfer Software (for Windows)
- Presenter Light Software (for Windows)<sup>10</sup>
- Wireless Projector App (for iOS/Android)<sup>11</sup>

### Supported services of Control via LAN

- PJLink™ (Class2)
- Crestron Connected™
- AMX Device Discovery

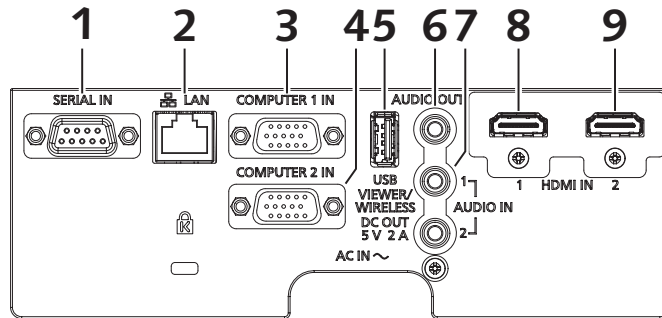
### Optional accessories

|                                      |                   |   |
|--------------------------------------|-------------------|---|
| Ceiling Mount Bracket                | for high ceilings | ET-PKL100H  |
|                                      | for low ceilings  | ET-PKL100S  |
| Projector Mount Bracket              |                   | ET-PKL420B  |
| Replacement Filter Unit              |                   | ET-RFL400   |
| Wireless Module                      |                   | AJ-WM50 Series<br>Note: product availability may vary by country or region. The suffix at the end of the model number is omitted. Operating Temperature: 0-40 °C (32-104 °F). |
| Early Warning Software               |                   | ET-SWA100 series<br>Note: part number suffix may differ depending on the license type.  |
| Wireless Presentation System PressIT |                   | TY-WPS1 (basic set)<br>Note: visit <a href="https://panasonic.net/cns/prodisplays/pressit/">https://panasonic.net/cns/prodisplays/pressit/</a> for more information.          |

Weights and dimensions shown are approximate. Specifications subject to change without notice.

- 1 Measurement, measuring conditions, and method of notation all comply with ISO/IEC 21118: 2020 international standards. Value is average of all products when shipped.
- 2 Around this time, light output will have decreased to approximately 50 % of its original level (PICTURE MODE: [DYNAMIC], [DYNAMIC CONTRAST] set to [2], temperature 30 °C (86 °F), elevation 700 m (2,297 ft) with 0.15 mg/m<sup>3</sup> of particulate matter). Estimated time until light output declines to 50 % varies depending on environment.
- 3 Resolution decreases when using this function. 6-Point Screen Correction, V/H Keystone Correction, and curved-screen correction are not available when using this function, and range of corner adjustment is limited.
- 4 When Digital Zoom Extender is set to 80 %.
- 5 4K signals are converted to the projector's resolution upon projection.
- 6 Depending on the connected CEC command-compatible device, the link control may not operate normally.
- 7 On standby, power supply is available with Quick Startup set to ON or Power Management set to Ready.
- 8 Average value. May differ depending on the actual unit.
- 9 Light output is limited at operating temperatures higher than 30 °C (86 °F), and projectors cannot be operated at altitudes higher than 2,700 m (8,858 ft) above sea level. When optional AJ-WM50 Series Wireless Module is attached, operating temperature range becomes 0-40 °C (32-104 °F).
- 10 When using Presenter Light Software, images are projected with 1280 x 800 dots or 1024 x 768 dots onto the screen. Also, your PC display resolution may be forcibly changed, and audio playback disrupted or become noisy, while images and sound are being transmitted.
- 11 When using the Wireless Projector app, display resolution differs depending on your iOS/Android™ device and the display device. The maximum supported display resolution is WXGA (1280 x 800).

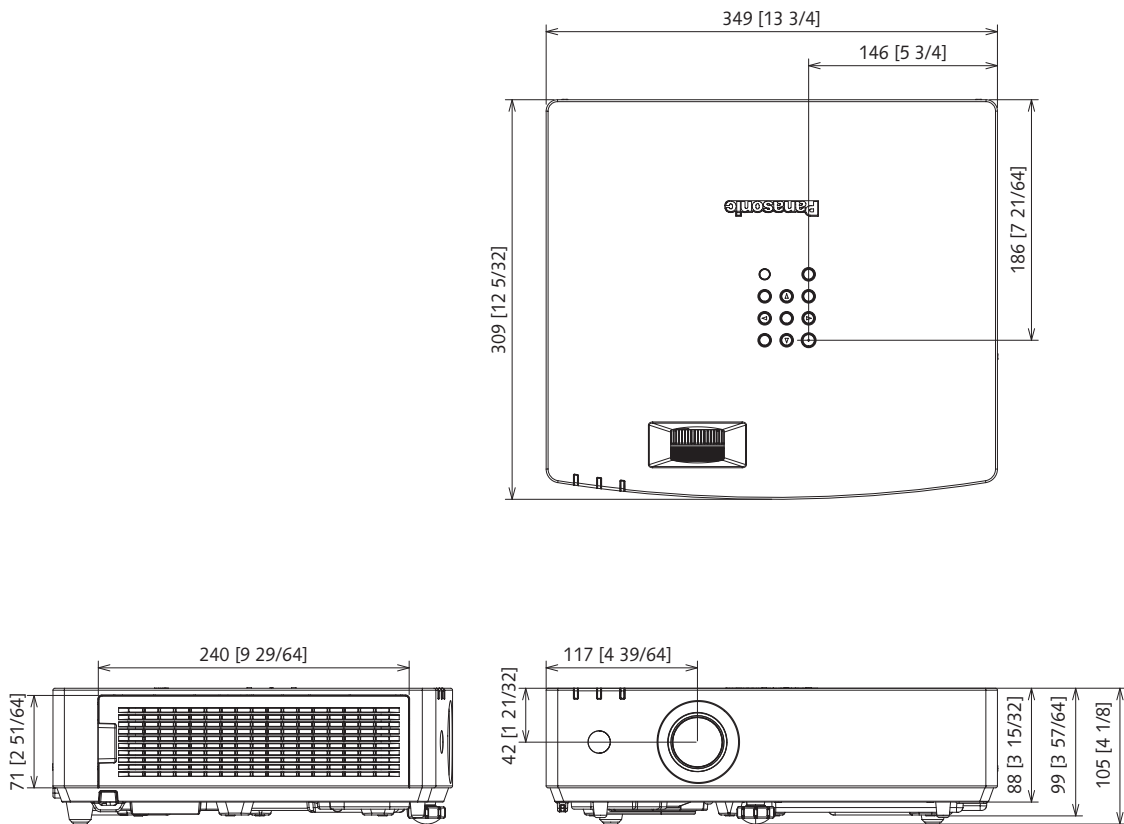
Terminals



|   |                              |   |                       |
|---|------------------------------|---|-----------------------|
| 1 | SERIAL IN                    | 6 | AUDIO OUT             |
| 2 | LAN                          | 7 | AUDIO 1 IN/AUDIO 2 IN |
| 3 | COMPUTER 1 IN                | 8 | HDMI 1 IN             |
| 4 | COMPUTER 2 IN                | 9 | HDMI 2 IN             |
| 5 | USB (VIEWER/WIRELESS/DC OUT) |   |                       |

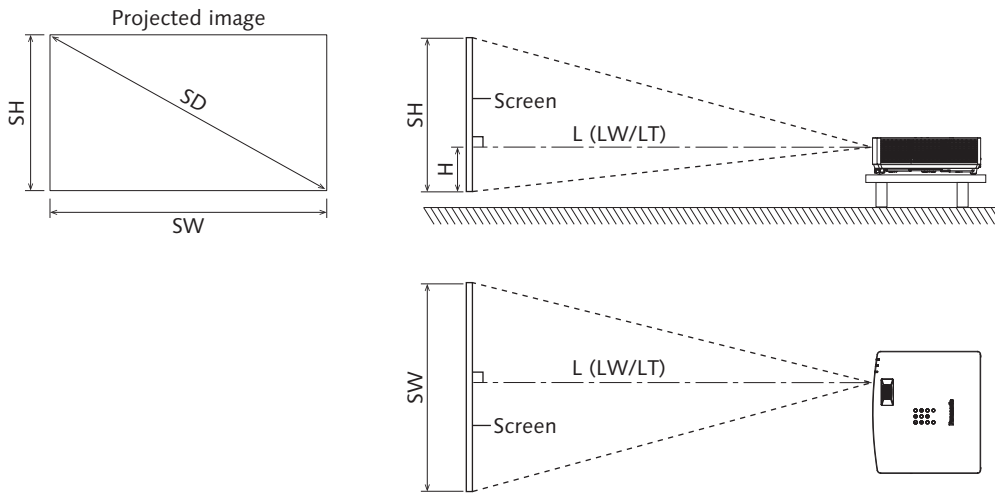
Dimensions

unit : mm [inch]  
NOTE: This illustration is not drawn to scale.



**Projected image and throw distance**

Install the projector referring to the projected image size and projection distance. Image size and image position can be adjusted in accordance with the screen size and screen position.



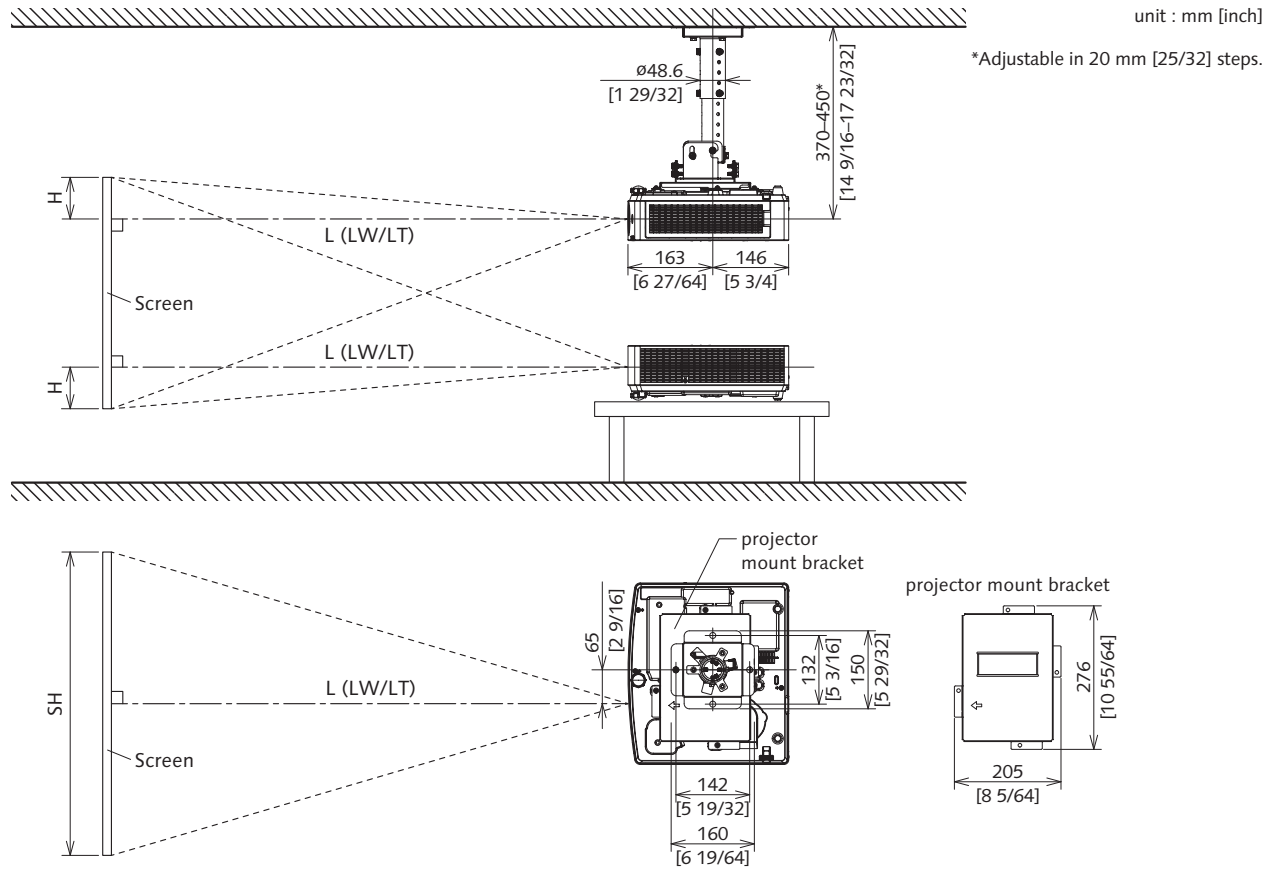
**Note**

- This illustration is prepared on the assumption that the projected image size and position have been aligned to fit full in the screen.
- This illustration is not drawn to scale.

|    |    |   |
|----|----|---|
| L  |    | Projection distance   |
|    | LW | Minimum distance  |
|    | LT | Maximum distance  |
| SH |    | Projected image height  |
| SW |    | Projected image width   |
| H  |    | Distance from the lens center to the bottom edge of the projected image |
| SD |    | Projected image size  |

**Standard setting position**

Illustrations show the projector installed using optional ceiling mount bracket ET-PKL100H and projector mount bracket ET-PKL420B.



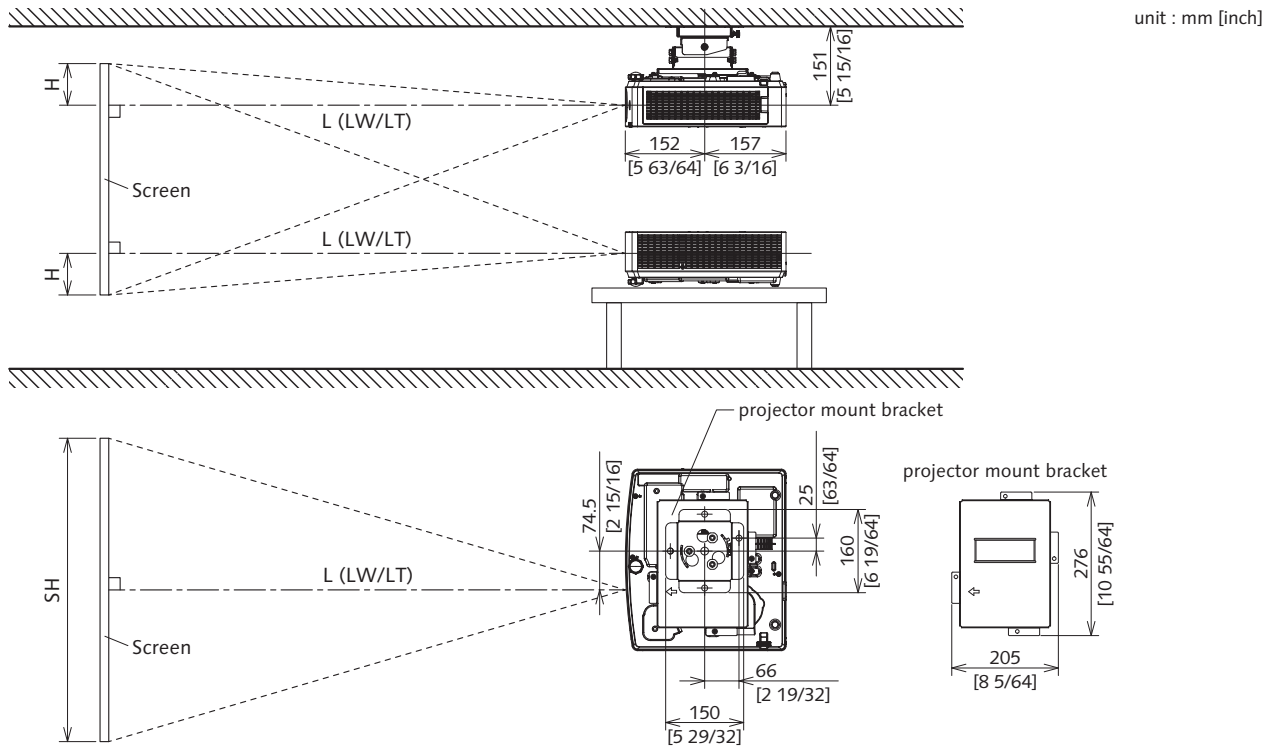
**Caution**

- All construction work should be done by a qualified technician.
- When mounting to the ceiling, use the special mounting bracket. Furthermore, in order to prevent it from falling down from the ceiling, use the supplied wire on the mounting bracket.

**Note**

- This illustration is prepared on the assumption that the projected image size and position have been aligned to fit full in the screen.
- This illustration is not drawn to scale.
- The values are approximate.

Illustrations show the projector installed using optional ceiling mount bracket ET-PKL100S and projector mount bracket ET-PKL420B.



**Caution**

- All construction work should be done by a qualified technician.
- When mounting to the ceiling, use the special mounting bracket.  
Furthermore, in order to prevent it from falling down from the ceiling, use the supplied wire on the mounting bracket.

**Note**

- This illustration is prepared on the assumption that the projected image size and position have been aligned to fit full in the screen.
- This illustration is not drawn to scale.
- The values are approximate.

## Projection distance

A  $\pm 5\%$  error in listed projection distances may occur.

When [SCREEN ADJUSTMENT] is used, distance is corrected to become smaller than the specified image size.

Screen aspect ratio 16:10

Unit: meters

| Throw ratio                 |             |            | Optical zoom            |           | Digital Zoom Extender <sup>1</sup>             | UD 7.7:1  |
|-----------------------------|-------------|------------|-------------------------|-----------|--|---|
|                             |             |            | 1.36-1.64:1             |           | 1.36-2.05:1 <sup>2</sup> (Corresponding Value) |   |
| Projected image size        |             |            | Projection distance (L) |           |  | Height from the edge of screen to center of lens (H) <sup>3</sup> |
| Diagonal (SD)<br>inches / m | Height (SH) | Width (SW) | Min. (LW)               | Max. (LT) | Max. (LT)                                      |   |
| 30 / 0.76                   | 0.40        | 0.64       | 0.86                    | 1.04      | 1.30   | 0.046   |
| 40 / 1.02                   | 0.54        | 0.86       | 1.16                    | 1.40      | 1.76   | 0.062   |
| 50 / 1.27                   | 0.67        | 1.08       | 1.45                    | 1.75      | 2.20   | 0.077   |
| 60 / 1.52                   | 0.81        | 1.29       | 1.74                    | 2.10      | 2.64   | 0.093   |
| 70 / 1.78                   | 0.94        | 1.51       | 2.04                    | 2.47      | 3.09   | 0.108   |
| 80 / 2.03                   | 1.08        | 1.72       | 2.33                    | 2.82      | 3.53   | 0.124   |
| 90 / 2.29                   | 1.21        | 1.94       | 2.63                    | 3.18      | 3.98   | 0.140   |
| 100 / 2.54                  | 1.35        | 2.15       | 2.92                    | 3.53      | 4.42   | 0.155   |
| 120 / 3.05                  | 1.62        | 2.59       | 3.52                    | 4.25      | 5.32   | 0.186   |
| 150 / 3.81                  | 2.02        | 3.23       | 4.40                    | 5.31      | 6.65   | 0.232   |
| 200 / 5.08                  | 2.69        | 4.31       | 5.87                    | 7.09      | 8.87   | 0.309   |
| 250 / 6.35                  | 3.37        | 5.38       | 7.35                    | 8.87      | 11.09  | 0.387   |
| 300 / 7.62                  | 4.04        | 6.46       | 8.82                    | 10.65     | 13.32  | 0.464   |

1 The display resolution decreases when the Digital Zoom Extender function is used. In addition, the 6-point correction, keystone correction and curved correction functions cannot be used, and the adjustable range of corner correction is reduced.

2 When optical zoom is used together and Digital Zoom Extender is set to 80%.

3 Only for optical zoom

Unit: feet

| Throw ratio                 |             |            | Optical zoom            |           | Digital Zoom Extender <sup>1</sup>             | UD 7.7:1  |
|-----------------------------|-------------|------------|-------------------------|-----------|--|---|
|                             |             |            | 1.36-1.64:1             |           | 1.36-2.05:1 <sup>2</sup> (Corresponding Value) |   |
| Projected image size        |             |            | Projection distance (L) |           |  | Height from the edge of screen to center of lens (H) <sup>3</sup> |
| Diagonal (SD)<br>inches / m | Height (SH) | Width (SW) | Min. (LW)               | Max. (LT) | Max. (LT)                                      |   |
| 30 / 0.76                   | 1.31        | 2.10       | 2.82                    | 3.41      | 4.27   | 0.15  |
| 40 / 1.02                   | 1.77        | 2.82       | 3.81                    | 4.59      | 5.77   | 0.20  |
| 50 / 1.27                   | 2.20        | 3.54       | 4.76                    | 5.74      | 7.22   | 0.25  |
| 60 / 1.52                   | 2.66        | 4.23       | 5.71                    | 6.89      | 8.66   | 0.31  |
| 70 / 1.78                   | 3.08        | 4.95       | 6.69                    | 8.10      | 10.14  | 0.35  |
| 80 / 2.03                   | 3.54        | 5.64       | 7.64                    | 9.25      | 11.58  | 0.41  |
| 90 / 2.29                   | 3.97        | 6.36       | 8.63                    | 10.43     | 13.06  | 0.46  |
| 100 / 2.54                  | 4.43        | 7.05       | 9.58                    | 11.58     | 14.50  | 0.51  |
| 120 / 3.05                  | 5.31        | 8.50       | 11.55                   | 13.94     | 17.45  | 0.61  |
| 150 / 3.81                  | 6.63        | 10.60      | 14.44                   | 17.42     | 21.82  | 0.76  |
| 200 / 5.08                  | 8.83        | 14.14      | 19.26                   | 23.26     | 29.10  | 1.01  |
| 250 / 6.35                  | 11.06       | 17.65      | 24.11                   | 29.10     | 36.38  | 1.27  |
| 300 / 7.62                  | 13.25       | 21.19      | 28.94                   | 34.94     | 43.70  | 1.52  |

1 The display resolution decreases when the Digital Zoom Extender function is used. In addition, the 6-point correction, keystone correction and curved correction functions cannot be used, and the adjustable range of corner correction is reduced.

2 When optical zoom is used together and Digital Zoom Extender is set to 80%.

3 Only for optical zoom

Screen aspect ratio 16:9

Unit: meters

| Throw ratio                 |             |            | Optical zoom            |           | Digital Zoom Extender <sup>1</sup> | UD 12.9:1   |
|-----------------------------|-------------|------------|-------------------------|-----------|------------------------------------|---|
| Projected image size        |             |            | Projection distance (L) |           |                                    | Height from the edge of screen to center of lens (H) <sup>3</sup> |
| Diagonal (SD)<br>inches / m | Height (SH) | Width (SW) | Min. (LW)               | Max. (LT) | Max. (LT)                          |   |
| 30 / 0.76                   | 0.37        | 0.66       | 0.88                    | 1.07      | 1.34                               | 0.027   |
| 40 / 1.02                   | 0.50        | 0.89       | 1.19                    | 1.44      | 1.81                               | 0.036   |
| 50 / 1.27                   | 0.62        | 1.11       | 1.49                    | 1.80      | 2.26                               | 0.045   |
| 60 / 1.52                   | 0.74        | 1.33       | 1.79                    | 2.16      | 2.71                               | 0.054   |
| 70 / 1.78                   | 0.87        | 1.55       | 2.10                    | 2.54      | 3.18                               | 0.063   |
| 80 / 2.03                   | 0.99        | 1.77       | 2.40                    | 2.90      | 3.63                               | 0.072   |
| 90 / 2.29                   | 1.12        | 2.00       | 2.71                    | 3.27      | 4.10                               | 0.081   |
| 100 / 2.54                  | 1.24        | 2.21       | 3.01                    | 3.63      | 4.55                               | 0.090   |
| 120 / 3.05                  | 1.49        | 2.66       | 3.61                    | 4.37      | 5.46                               | 0.108   |
| 150 / 3.81                  | 1.87        | 3.32       | 4.52                    | 5.46      | 6.83                               | 0.134   |
| 200 / 5.08                  | 2.49        | 4.43       | 6.04                    | 7.29      | 9.12                               | 0.179   |
| 250 / 6.35                  | 3.11        | 5.54       | 7.55                    | 9.12      | 11.40                              | 0.224   |
| 300 / 7.62                  | 3.73        | 6.64       | 9.07                    | 10.95     | 13.69                              | 0.269   |

1 The display resolution decreases when the Digital Zoom Extender function is used. In addition, the 6-point correction, keystone correction and curved correction functions cannot be used, and the adjustable range of corner correction is reduced.

2 When optical zoom is used together and Digital Zoom Extender is set to 80%.

3 Only for optical zoom

Unit: feet

| Throw ratio                 |             |            | Optical zoom            |           | Digital Zoom Extender <sup>1</sup> | UD 12.9:1   |
|-----------------------------|-------------|------------|-------------------------|-----------|------------------------------------|---|
| Projected image size        |             |            | Projection distance (L) |           |                                    | Height from the edge of screen to center of lens (H) <sup>3</sup> |
| Diagonal (SD)<br>inches / m | Height (SH) | Width (SW) | Min. (LW)               | Max. (LT) | Max. (LT)                          |   |
| 30 / 0.76                   | 1.21        | 2.17       | 2.89                    | 3.51      | 4.40                               | 0.09  |
| 40 / 1.02                   | 1.64        | 2.92       | 3.90                    | 4.72      | 5.94                               | 0.12  |
| 50 / 1.27                   | 2.03        | 3.64       | 4.89                    | 5.91      | 7.41                               | 0.15  |
| 60 / 1.52                   | 2.43        | 4.36       | 5.87                    | 7.09      | 8.89                               | 0.18  |
| 70 / 1.78                   | 2.85        | 5.09       | 6.89                    | 8.33      | 10.43                              | 0.21  |
| 80 / 2.03                   | 3.25        | 5.81       | 7.87                    | 9.51      | 11.91                              | 0.24  |
| 90 / 2.29                   | 3.67        | 6.56       | 8.89                    | 10.73     | 13.45                              | 0.27  |
| 100 / 2.54                  | 4.07        | 7.25       | 9.88                    | 11.91     | 14.93                              | 0.30  |
| 120 / 3.05                  | 4.89        | 8.73       | 11.84                   | 14.34     | 17.91                              | 0.35  |
| 150 / 3.81                  | 6.14        | 10.89      | 14.83                   | 17.91     | 22.41                              | 0.44  |
| 200 / 5.08                  | 8.17        | 14.53      | 19.82                   | 23.92     | 29.92                              | 0.59  |
| 250 / 6.35                  | 10.20       | 18.18      | 24.77                   | 29.92     | 37.40                              | 0.73  |
| 300 / 7.62                  | 12.24       | 21.78      | 29.76                   | 35.92     | 44.91                              | 0.88  |

1 The display resolution decreases when the Digital Zoom Extender function is used. In addition, the 6-point correction, keystone correction and curved correction functions cannot be used, and the adjustable range of corner correction is reduced.

2 When optical zoom is used together and Digital Zoom Extender is set to 80%.

3 Only for optical zoom



Screen aspect ratio 4:3

Unit: meters

| Throw ratio                 |             |            | Optical zoom            |           | Digital Zoom Extender <sup>1</sup> | UD 7.7:1  |
|-----------------------------|-------------|------------|-------------------------|-----------|------------------------------------|---|
| Projected image size        |             |            | Projection distance (L) |           |                                    | Height from the edge of screen to center of lens (H) <sup>3</sup> |
| Diagonal (SD)<br>inches / m | Height (SH) | Width (SW) | Min. (LW)               | Max. (LT) | Max. (LT)                          |   |
| 30 / 0.76                   | 0.46        | 0.61       | 0.97                    | 1.18      | 1.48                               | 0.052   |
| 40 / 1.02                   | 0.61        | 0.82       | 1.31                    | 1.59      | 2.00                               | 0.070   |
| 50 / 1.27                   | 0.76        | 1.02       | 1.64                    | 1.99      | 2.49                               | 0.088   |
| 60 / 1.52                   | 0.91        | 1.22       | 1.97                    | 2.38      | 2.99                               | 0.105   |
| 70 / 1.78                   | 1.07        | 1.42       | 2.31                    | 2.80      | 3.50                               | 0.123   |
| 80 / 2.03                   | 1.22        | 1.62       | 2.64                    | 3.19      | 4.00                               | 0.140   |
| 90 / 2.29                   | 1.37        | 1.83       | 2.98                    | 3.61      | 4.51                               | 0.158   |
| 100 / 2.54                  | 1.52        | 2.03       | 3.31                    | 4.00      | 5.01                               | 0.175   |
| 120 / 3.05                  | 1.83        | 2.44       | 3.98                    | 4.81      | 6.02                               | 0.210   |
| 150 / 3.81                  | 2.29        | 3.05       | 4.98                    | 6.02      | 7.53                               | 0.263   |
| 200 / 5.08                  | 3.05        | 4.06       | 6.65                    | 8.03      | 10.05                              | 0.350   |
| 250 / 6.35                  | 3.81        | 5.08       | 8.32                    | 10.05     | 12.56                              | 0.438   |
| 300 / 7.62                  | 4.57        | 6.10       | 9.99                    | 12.06     | 15.08                              | 0.526   |

1 The display resolution decreases when the Digital Zoom Extender function is used. In addition, the 6-point correction, keystone correction and curved correction functions cannot be used, and the adjustable range of corner correction is reduced.

2 When optical zoom is used together and Digital Zoom Extender is set to 80%.

3 Only for optical zoom

Unit: feet

| Throw ratio                 |             |            | Optical zoom            |           | Digital Zoom Extender <sup>1</sup> | UD 7.7:1  |
|-----------------------------|-------------|------------|-------------------------|-----------|------------------------------------|---|
| Projected image size        |             |            | Projection distance (L) |           |                                    | Height from the edge of screen to center of lens (H) <sup>3</sup> |
| Diagonal (SD)<br>inches / m | Height (SH) | Width (SW) | Min. (LW)               | Max. (LT) | Max. (LT)                          |   |
| 30 / 0.76                   | 1.51        | 2.00       | 3.18                    | 3.87      | 4.86                               | 0.17  |
| 40 / 1.02                   | 2.00        | 2.69       | 4.30                    | 5.22      | 6.56                               | 0.23  |
| 50 / 1.27                   | 2.49        | 3.35       | 5.38                    | 6.53      | 8.17                               | 0.29  |
| 60 / 1.52                   | 2.99        | 4.00       | 6.46                    | 7.81      | 9.81                               | 0.34  |
| 70 / 1.78                   | 3.51        | 4.66       | 7.58                    | 9.19      | 11.48                              | 0.40  |
| 80 / 2.03                   | 4.00        | 5.31       | 8.66                    | 10.47     | 13.12                              | 0.46  |
| 90 / 2.29                   | 4.49        | 6.00       | 9.78                    | 11.84     | 14.80                              | 0.52  |
| 100 / 2.54                  | 4.99        | 6.66       | 10.86                   | 13.12     | 16.44                              | 0.57  |
| 120 / 3.05                  | 6.00        | 8.01       | 13.06                   | 15.78     | 19.75                              | 0.69  |
| 150 / 3.81                  | 7.51        | 10.01      | 16.34                   | 19.75     | 24.70                              | 0.86  |
| 200 / 5.08                  | 10.01       | 13.32      | 21.82                   | 26.34     | 32.97                              | 1.15  |
| 250 / 6.35                  | 12.50       | 16.67      | 27.30                   | 32.97     | 41.21                              | 1.44  |
| 300 / 7.62                  | 14.99       | 20.01      | 32.78                   | 39.57     | 49.47                              | 1.73  |

1 The display resolution decreases when the Digital Zoom Extender function is used. In addition, the 6-point correction, keystone correction and curved correction functions cannot be used, and the adjustable range of corner correction is reduced.

2 When optical zoom is used together and Digital Zoom Extender is set to 80%.

3 Only for optical zoom

### Formula for calculating the projection distance

To use a projected image size not listed in this manual, check the projected image size SD (m) and use the respective formula to calculate the value.

The unit of all the formulae is m. (Values obtained by the following calculation formulae contain a slight error.)  
When calculating the value using image size designation (value in inches), multiply the value in inches by 0.0254 and substitute it into SD in the formula.

Unit: m

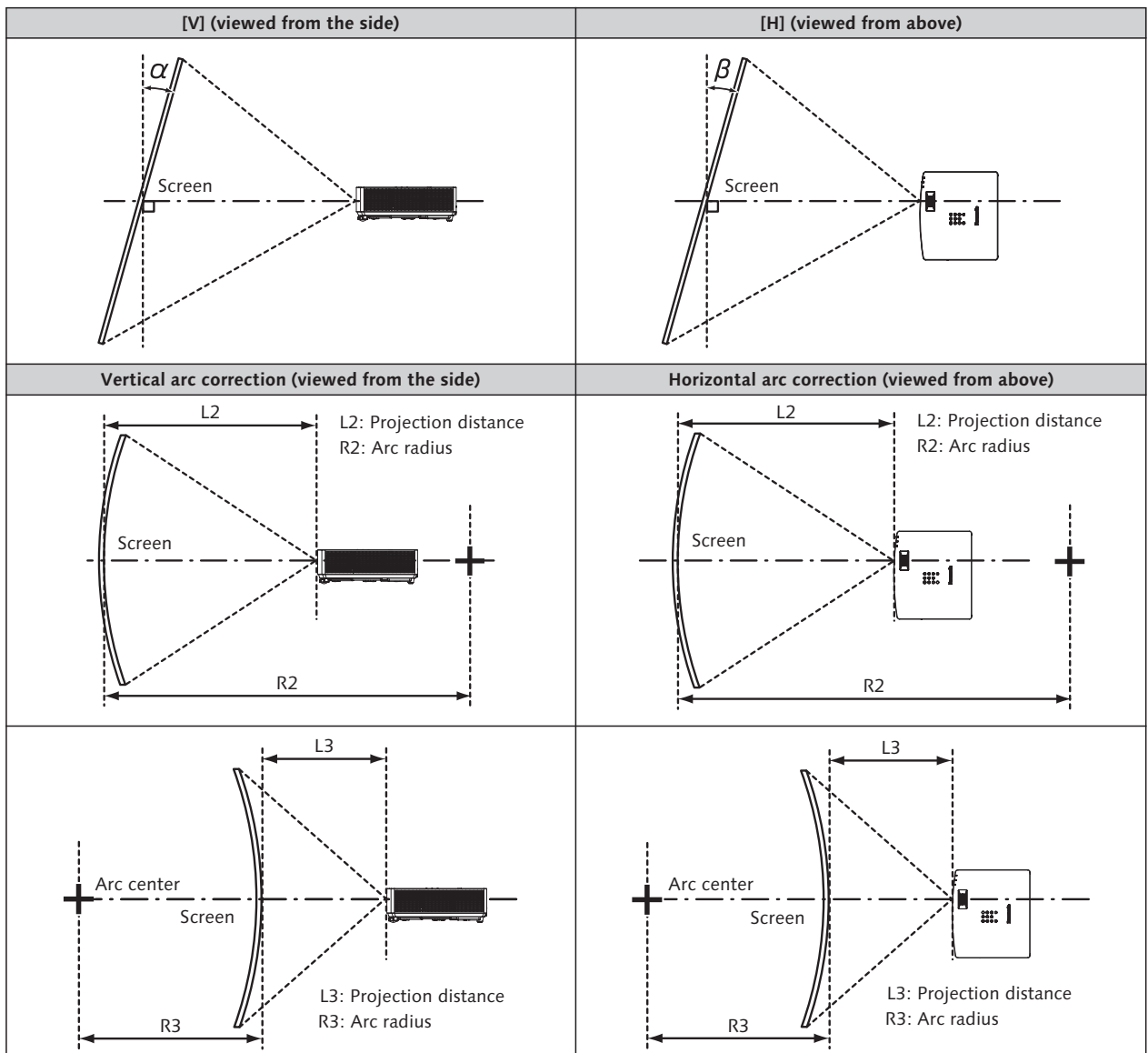
| Aspect ratio                         |              | 16:10                    | 16:9                     | 4:3                      |
|--------------------------------------|--------------|--------------------------|--------------------------|--------------------------|
| Screen height (SH)                   |              | = 0.530 x SD             | = 0.490 x SD             | = 0.6 x SD               |
| Screen width (SW)                    |              | = 0.848 x SD             | = 0.872 x SD             | = 0.8 x SD               |
| Projection distance (L) <sup>1</sup> | Minimum (LW) | = 1.1614 x SD/X - 0.0265 | = 1.1936 x SD/X - 0.0265 | = 1.3147 x SD/X - 0.0265 |
|                                      | Maximum (LT) | = 1.4011 x SD/X - 0.0264 | = 1.4400 x SD/X - 0.0264 | = 1.5861 x SD/X - 0.0264 |

<sup>1</sup> X in the formulas represents the setting value of [DIGITAL ZOOM EXTENDER] (100%=1.00, 99%=0.99, ...).

#### Note

- The value for L (distance to screen) varies slightly within ±5% depending on the zoom lens characteristics.
- When keystone correction is used, the image is corrected in the direction that reduces its projected size.

[SCREEN ADJUSTMENT] projection range



| Only [KEYSTONE] used                            |  | [KEYSTONE] and [CURVED CORRECTION] used together |  |                      |                      | Only [CURVED CORRECTION] used |                      |
|---|--|--|--|----------------------|----------------------|-------------------------------|----------------------|
| Vertical keystone correction angle $\alpha$ (°) | Horizontal keystone correction angle $\beta$ (°) | Vertical keystone correction angle $\alpha$ (°)  | Horizontal keystone correction angle $\beta$ (°) | Min. value of R2/ L2 | Min. value of R3/ L3 | Min. value of R2/ L2          | Min. value of R3/ L3 |
| ±25   | ±35  | ±25  | ±35  | 0.6                  | 0.5                  | 0.4                           | 0.4                  |

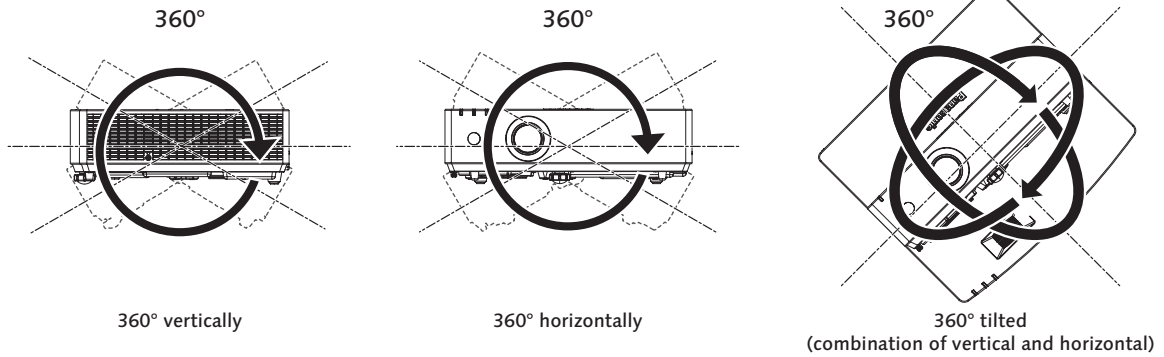
**Note**

- When [SCREEN ADJUSTMENT] is used, the focus may not be able to match the whole screen as correction increases.
- The curved screen should be in the shape of a circular arc part of a perfect circle.

**Installable angle**

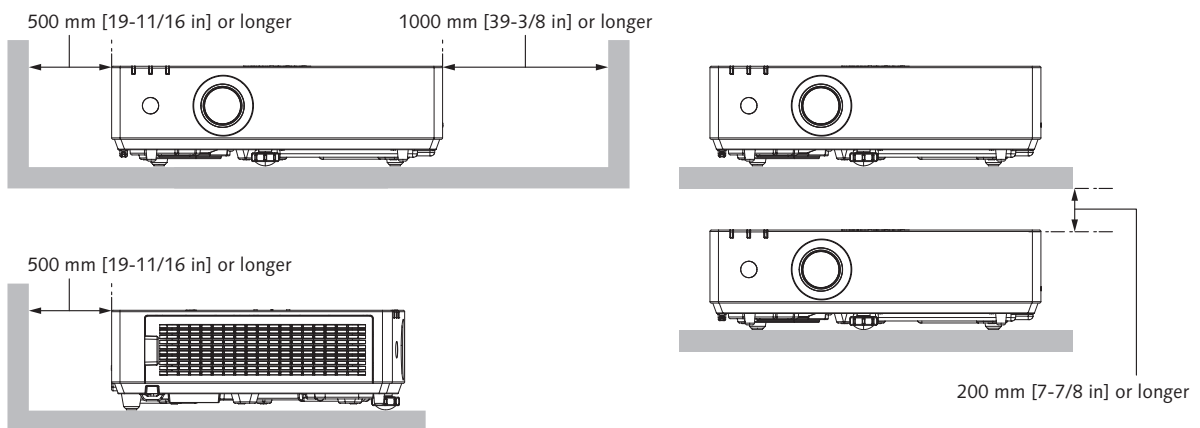
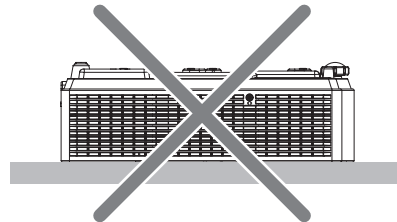
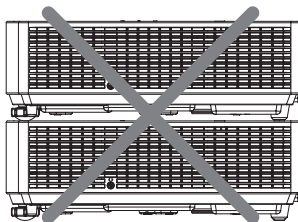
Install the projector at an angle within the range shown below.

**FULL 360-degree projection**



**Notes on projector placement and operation**

1. Never place objects on top of the projector while it is operating.
2. Make sure there is the unobstructed space as shown below or more around the projector's exhaust openings. In addition to this space, also ensure that there is a sufficient work space for removing and installing filter and other parts.
3. Make sure that nothing blocks the projector's air intake and exhaust openings. Also, install the projector so that cool or hot air from other air conditioning equipment does not flow directly toward the projector's air intake or exhaust openings.
4. Do not install the projector in an enclosed space. If it is necessary to install it in an enclosed space, add a separate ventilation system. If ventilation is insufficient, hot air will accumulate at the intake opening. This may cause the projector's protective circuit to interrupt projector operation.



## List of compatible signals

The following table specifies the type of signals compatible with the projector.

This projector supports the signal with ✓ in the compatible signal column.

| Signal type                 | Signal name     | Resolution<br>(Display Resolution) | Scanning freq.      |                   | Dot clock<br>freq.<br>(MHz) | compatible signal |      | Plug and play<br>correspondence |      |
|-----------------------------|-----------------|------------------------------------|---------------------|-------------------|-----------------------------|-------------------|------|---------------------------------|------|
|                             |                 |                                    | Horizontal<br>(kHz) | Vertical<br>(Hz)  |                             | COMPUTER          | HDMI | COMPUTER                        | HDMI |
| Video<br>Signal             | 480i (525i)     | 712 x 483i                         | 15.7                | 59.9              | 13.5                        | ✓                 | —    | —                               | —    |
|                             | 576i (625i)     | 702 x 575i                         | 15.6                | 50.0              | 13.5                        | ✓                 | —    | —                               | —    |
|                             | 480/60p         | 720 x 480                          | 31.5                | 59.9              | 27.0                        | ✓                 | ✓    | —                               | ✓    |
|                             | 576/50p         | 720 x 576                          | 31.3                | 50.0              | 27.0                        | ✓                 | ✓    | —                               | ✓    |
|                             | 720/60p         | 1280 x 720                         | 45.0                | 60.0 <sup>1</sup> | 74.3                        | ✓                 | ✓    | —                               | ✓    |
|                             | 720/50p         | 1280 x 720                         | 37.5                | 50.0              | 74.3                        | ✓                 | ✓    | —                               | ✓    |
|                             | 1080/60i        | 1920 x 1080i                       | 33.8                | 60.0 <sup>1</sup> | 74.3                        | ✓                 | ✓    | —                               | ✓    |
|                             | 1080/50i        | 1920 x 1080i                       | 28.1                | 50.0              | 74.3                        | ✓                 | ✓    | —                               | ✓    |
|                             | 1080/24p        | 1920 x 1080                        | 27.0                | 24.0 <sup>1</sup> | 74.3                        | ✓                 | ✓    | —                               | ✓    |
|                             | 1080/24sF       | 1920 x 1080i                       | 27.0                | 48.0 <sup>1</sup> | 74.3                        | ✓                 | ✓    | —                               | —    |
|                             | 1080/25p        | 1920 x 1080                        | 28.1                | 25.0              | 74.3                        | ✓                 | ✓    | —                               | —    |
|                             | 1080/30p        | 1920 x 1080                        | 33.8                | 30.0 <sup>1</sup> | 74.3                        | ✓                 | ✓    | —                               | —    |
|                             | 1080/60p        | 1920 x 1080                        | 67.5                | 60.0 <sup>1</sup> | 148.5                       | ✓                 | ✓    | —                               | ✓    |
|                             | 1080/50p        | 1920 x 1080                        | 56.3                | 50.0              | 148.5                       | ✓                 | ✓    | —                               | ✓    |
|                             | 3840 x 2160/24p | 3840 x 2160                        | 54.0                | 24.0 <sup>1</sup> | 297.0                       | —                 | ✓    | —                               | ✓    |
|                             | 3840 x 2160/25p | 3840 x 2160                        | 56.3                | 25.0              | 297.0                       | —                 | ✓    | —                               | ✓    |
|                             | 3840 x 2160/30p | 3840 x 2160                        | 67.5                | 30.0 <sup>1</sup> | 297.0                       | —                 | ✓    | —                               | ✓    |
|                             | 4096 x 2160/24p | 4096 x 2160                        | 54.0                | 24.0 <sup>1</sup> | 297.0                       | —                 | ✓    | —                               | ✓    |
| 4096 x 2160/25p             | 4096 x 2160     | 56.3                               | 25.0                | 297.0             | —                           | ✓                 | —    | ✓                               |      |
| 4096 x 2160/30p             | 4096 x 2160     | 67.5                               | 30.0 <sup>1</sup>   | 297.0             | —                           | ✓                 | —    | ✓                               |      |
| Computer<br>Signal          | 640 x 480/60    | 640 x 480                          | 31.5                | 59.9              | 25.2                        | ✓                 | ✓    | ✓                               | ✓    |
|                             | 800 x 600/60    | 800 x 600                          | 37.9                | 60.3              | 40.0                        | ✓                 | ✓    | ✓                               | ✓    |
|                             | 1024 x 768/50   | 1024 x 768                         | 39.6                | 50.0              | 51.9                        | ✓                 | ✓    | —                               | —    |
|                             | 1024 x 768/60   | 1024 x 768                         | 48.4                | 60.0              | 65.0                        | ✓                 | ✓    | ✓                               | ✓    |
|                             | 1024 x 768/70   | 1024 x 768                         | 56.5                | 70.1              | 75.0                        | ✓                 | ✓    | ✓                               | ✓    |
|                             | 1024 x 768/75   | 1024 x 768                         | 60.0                | 75.0              | 78.8                        | ✓                 | ✓    | ✓                               | ✓    |
|                             | 1152 x 864/75   | 1152 x 864                         | 67.5                | 75.0              | 108.0                       | ✓                 | ✓    | —                               | —    |
|                             | 1152 x 864/85   | 1152 x 864                         | 77.1                | 85.0              | 119.7                       | ✓                 | ✓    | —                               | —    |
|                             | 1280 x 720/60   | 1280 x 720                         | 44.8                | 59.9              | 74.5                        | ✓                 | ✓    | —                               | —    |
|                             | 1280 x 768/60   | 1280 x 768                         | 47.8                | 59.9              | 79.5                        | ✓                 | ✓    | —                               | —    |
|                             | 1280 x 800/50   | 1280 x 800                         | 41.3                | 50.0              | 68.0                        | ✓                 | ✓    | —                               | —    |
|                             | 1280 x 800/60   | 1280 x 800                         | 49.7                | 59.8              | 83.5                        | ✓                 | ✓    | —                               | —    |
|                             | 1280 x 800/75   | 1280 x 800                         | 62.8                | 74.9              | 106.5                       | ✓                 | ✓    | —                               | —    |
|                             | 1280 x 800/85   | 1280 x 800                         | 71.6                | 84.9              | 122.5                       | ✓                 | ✓    | —                               | —    |
|                             | 1280 x 960/60   | 1280 x 960                         | 60.0                | 60.0              | 108.0                       | ✓                 | ✓    | —                               | —    |
|                             | 1280 x 1024/60  | 1280 x 1024                        | 64.0                | 60.0              | 108.0                       | ✓                 | ✓    | —                               | —    |
|                             | 1280 x 1024/75  | 1280 x 1024                        | 80.0                | 75.0              | 135.0                       | ✓                 | ✓    | ✓                               | ✓    |
|                             | 1280 x 1024/85  | 1280 x 1024                        | 91.1                | 85.0              | 157.5                       | ✓                 | ✓    | —                               | —    |
|                             | 1366 x 768/60   | 1366 x 768                         | 47.7                | 59.8              | 85.5                        | ✓                 | ✓    | —                               | —    |
|                             | 1400 x 1050/60  | 1400 x 1050                        | 65.3                | 60.0              | 121.8                       | ✓                 | ✓    | —                               | —    |
|                             | 1400 x 1050/75  | 1400 x 1050                        | 82.2                | 75.0              | 155.9                       | ✓                 | ✓    | —                               | —    |
|                             | 1440 x 900/60   | 1440 x 900                         | 55.9                | 59.9              | 106.5                       | ✓                 | ✓    | —                               | —    |
|                             | 1600 x 900/60   | 1600 x 900                         | 55.9                | 60.0              | 119.0                       | ✓                 | ✓    | —                               | —    |
|                             | 1600 x 1200/60  | 1600 x 1200                        | 75.0                | 60.0              | 162.0                       | ✓                 | ✓    | ✓                               | ✓    |
| 1680 x 1050/60              | 1680 x 1050     | 65.3                               | 60.0                | 146.3             | ✓                           | ✓                 | —    | —                               |      |
| 1920 x 1080/50              | 1920 x 1080     | 55.6                               | 49.9                | 141.5             | ✓                           | ✓                 | —    | —                               |      |
| 1920 x 1200/50              | 1920 x 1200     | 61.8                               | 49.9                | 158.3             | ✓                           | ✓                 | —    | —                               |      |
| 1920 x 1200/60 <sup>2</sup> | 1920 x 1200     | 74.0                               | 60.0                | 154.0             | ✓                           | ✓                 | ✓    | ✓                               |      |

1 It also supports signals with vertical scanning frequency of 1 / 1.001 times.

2 VESA CVT-RB (Reduced Blanking)-compliant

### Note

- A signal with a different resolution is converted to the number of display dots. 1920 x 1200
- The "i" at the end of the resolution indicates an interlaced signal.
- When interlaced signals are connected, flickering may occur on the projected image.
- Even the above signals exist, some image signals recorded in special method may not be displayed.