
S P E C F I L E

Product Number : **PT-LB332**

Product Name : LCD Projectors

Specifications

Main unit

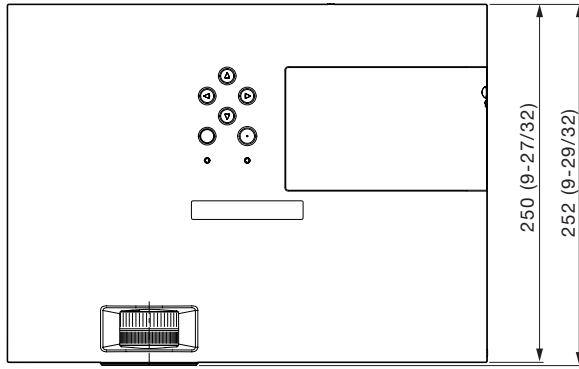
| | | |
|---------------------------------|---|--|
| Power supply | | AC100–240V 3.5A 50/60 Hz |
| Power consumption | | 300W 6W when Standby mode set to Normal, 0.5W when Standby mode set to Eco*1 |
| LCD panel | Panel size | 16.0 mm (0.63 inches) diagonal (4:3 aspect ratio) |
| | Display method | Transparent LCD panel (× 3, R/G/B) |
| | Drive method | Active matrix method |
| | Pixels | 786,432 (1,024 × 768) × 3, total of 2,359,296 pixels |
| | Pixel configuration | Stripe |
| Lens | | Manual zoom (1.2×), manual focus F 1.6–1.76, f 19.16–23.02 mm |
| Throw ratio | | 1.47–1.77:1 |
| Lamp | | 230 W UHM lamp |
| Lamp/Filter*2 Replacement Cycle | | Normal: 5,000hrs / Eco1: 6,000hrs / Eco2: 10,000hrs |
| Screen size | | 30–300 inches (0.76–7.62 m) diagonally, 4:3 aspect ratio |
| Colors | | Full color (16,777,216 colors) |
| Brightness*3 | | 3,300 lumens (LAMP POWER: NORMAL) |
| Center-to-corner uniformity*3 | | 80% |
| Contrast*3 | | 12,000:1 (all white/all black, Image mode:Dynamic, Lamp control: Normal, Iris: On) |
| Resolution | | 1,024 × 768 pixels (Input signals that exceed this resolution will be converted to 1,024 × 768 pixels.) |
| Optical axis shift | | 6:1 (fixed) |
| Keystone correction range | | Vertical: ±30°, horizontal: ±15° |
| Installation | | Ceiling/floor, front/rear (menu selection) |
| Built-in speaker | Output power | 10 W (monaural) × 1 |
| Terminals | HDMI IN | HDMI 19-pin × 1, HDCP and Deep Color compatible Audio signal: linear PCM (sampling frequencies: 48 kHz, 44.1 kHz, 32 kHz) |
| | COMPUTER (RGB) 1 IN | D-sub HD 15-pin (female) × 1 |
| | R, G, B | R, G, B: 0.7 Vp-p, 75 ohms; HD/VD, SYNC: high impedance, TTL (positive/negative automatic) |
| | Y, P _B (C _B), P _R (C _R) | Y: 1.0 Vp-p (including sync signal), 75 ohms P _B (C _B), P _R (C _R): 0.7 Vp-p, 75 ohms |
| | S-VIDEO | Y: 1.0 Vp-p; C: 0.286 Vp-p, 75 ohms NOTE: D-Sub -S video conversion cable (ET-ADSV) is required. |
| | COMPUTER (RGB) 2 IN | D-sub HD 15-pin (female) × 1 |
| | R, G, B | R, G, B: 0.7 Vp-p, 75 ohms; HD/VD, SYNC: TTL (positive/negative automatic) |
| | MONITOR OUT | D-sub HD 15-pin (female) × 1 |
| | R, G, B | R, G, B: 0.7 Vp-p, 75 ohms; HD/VD, SYNC: TTL (positive/negative polarity compatible) |
| | VIDEO IN | Pin jack × 1, 1.0 Vp-p, 75 ohms |
| | AUDIO IN 1 | M3 (L, R) × 1, 0.5 Vrms |
| | AUDIO IN 2 | Pin jack × 2 (L, R × 1), 0.5 Vrms |
| | AUDIO OUT | M3 (L, R) × 1 (monitor out: 0–2.0 Vrms, variable) |
| | SERIAL IN | D-sub 9-pin (female) × 1, for external control (RS-232C compliant) |
| | LAN | RJ-45 × 1, for network connection, compliant with PjLink™, 100Base-TX/10Base-T |
| | USB | USB A (type A) connector × 1, for Memory Viewer/Wireless Module (Out put 5V MAX 500mA) USB B (type B) connector × 1, for USB Display |

| | |
|----------------------------------|---|
| Power cord length | 1.8 m (5 ft 11 in) |
| Cabinet materials | Molded plastic |
| Dimensions (W × H × D) | 335 × 96*4 × 252 mm (13-3/16 × 3-25/32**4 × 9-29/32 inches) |
| Weight*5 | Approx. 2.9 kg (6.4 lbs) |
| Operation noise*3 | 37 dB (Lamp power: Normal), 33 dB (Lamp power: Eco1) 28 dB (Lamp power: Eco2) |
| Operating temperature | 5°C–40°C (41°F–104°F) [at less than 1,400 m (4,593 ft.)];[High land]:[off] 5°C–35°C (41°F–95°F) [at 1,400 m to 2,700 m (4,593 ft. to 8,858 ft.)];[High land]:[on 1] 5°C–30°C (41°F–86°F) [at 2,700 m to 3,000 m (8,858 ft. to 9,843 ft.)];[High land]:[on 2] |
| Operating humidity | 20%–80% (no condensation) |
| Remote control unit | |
| Power supply | 3 V DC (R03/LR03/AAA type battery × 2) |
| Operation range*6 | Approx. 5 m (16 ft 5 in) when operated from directly in front of the signal receptor |
| Dimensions (W × H × D) | 44 × 105 × 20.5 mm (1-23/32 × 4-1/8 × 13/16 inches) |
| Weight | Approx. 63 g (2.22 oz) (including batteries) |
| Supplied accessories | |
| | Power cord (× 1) (× 2 for A model only) |
| | Wireless remote control unit (× 1) |
| | Batteries for remote control (R03/LR03/AAA type × 2) |
| | Computer signal cable[VGA cable] 1.5 m [4 ft 11 in] (× 1) |
| | Software CD-ROM (Instruction Manual, Multi Projector Monitoring and Control Software) (× 1) |
| Optional accessories | |
| Ceiling Mount Bracket | ET-PKL100H (for high ceilings) |
| Ceiling Mount Bracket | ET-PKL100S (for low ceilings) |
| Projector Mount Bracket | ET-PKL420B |
| D-SUB - S Video conversion cable | ET-ADSV |
| Replacement Lamp Unit | ET-LAL500 |
| Replacement Filter Unit | ET-RFL300 |
| Wireless Module | ET-WML100 |

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

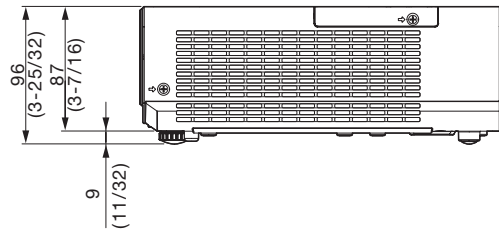
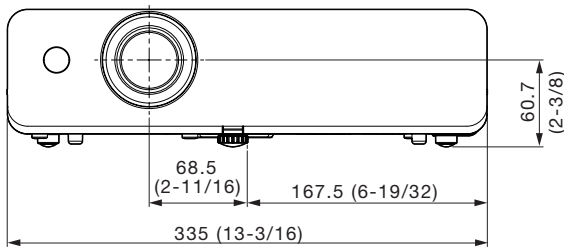
- *1 When the Standby mode is set to Eco, network functions such as power on over the LAN network will not operate. Also, only certain commands can be received for external control using the serial terminal.
- *2 Usage environment affects the duration of filter.
- *3 Measurement, measuring conditions, and method of notation all comply with ISO 21118 international standards.
- *4 With legs at shortest position.
- *5 Average value. May differ depending on models.
- *6 Operation range differs depending on environments.

Dimensions

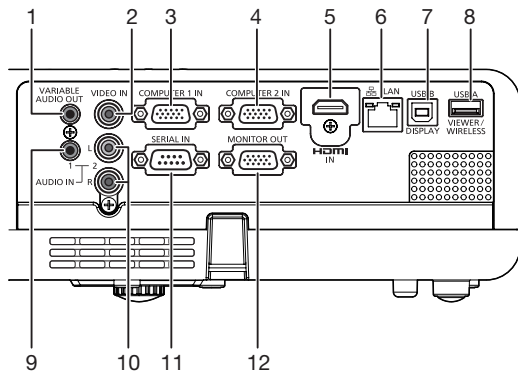


unit : mm (inch)

NOTE: This illustration is not drawn to scale.

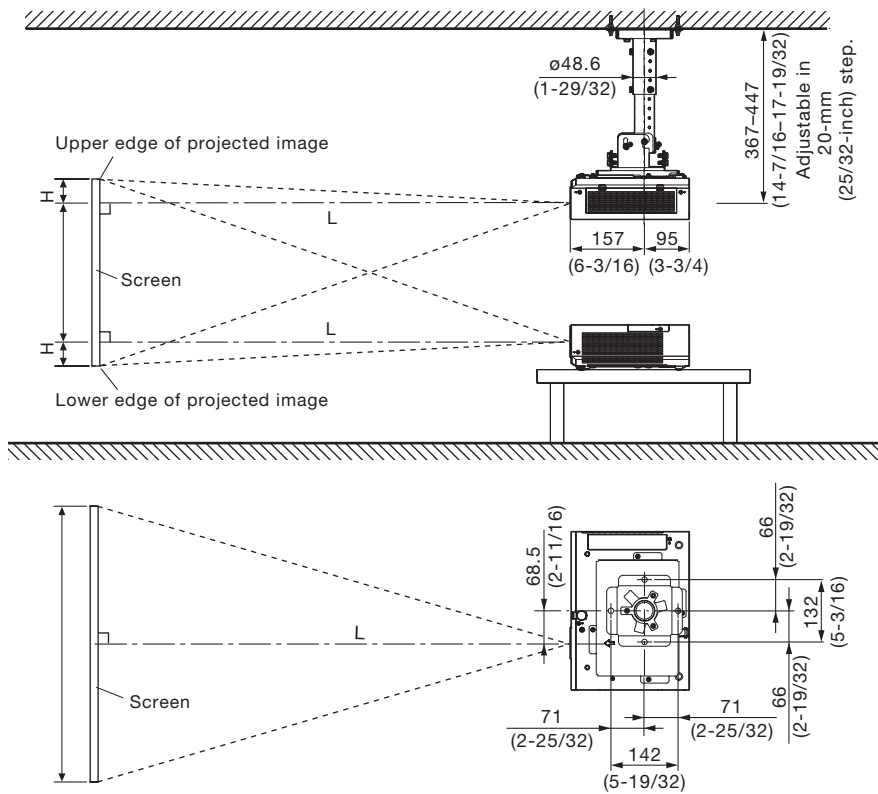


Terminals



- 1 Audio output
- 2 Video input
- 3 Computer 1 input
- 4 Computer 2 input
- 5 HDMI input
- 6 LAN connector
- 7 USB B connector
- 8 USB A connector
- 9 Audio input 1
- 10 Audio input 2
- 11 Serial input
- 12 Monitor output

Standard setting-up position



NOTE:
 Illustrations show the projector installed using optional Ceiling Mount Bracket ET-PKL100H and Projector Mount Bracket ET-PKL420B.
 This illustration is not drawn to scale.

unit : mm (inch)

Caution:

- All construction work should be done by a qualified technician.
- When mounting to the ceiling, use the special mounting bracket. To prevent the projector from swaying or dropping, attach the wire that is included with Projector Mount Bracket between the Projector Mount Bracket and the ceiling.

Projection distance for 4:3 aspect ratio screen

unit: meters (feet)

| Projection size [diagonal] | Projection distance [L] | | Height from the edge of screen to center of lens [H] |
|-------------------------------|-------------------------|-----------------|---|
| | Min [wide] | Max [telephoto] | |
| 0.76 m / 30" | 0.9 (2.9) | 1.1 (3.5) | 0.065 (0.214) |
| 1.02 m / 40" | 1.2 (3.9) | 1.4 (4.7) | 0.087 (0.286) |
| 1.27 m / 50" | 1.5 (4.9) | 1.8 (5.9) | 0.109 (0.357) |
| 1.52 m / 60" | 1.8 (5.9) | 2.2 (7.1) | 0.131 (0.429) |
| 1.78 m / 70" | 2.1 (6.9) | 2.5 (8.3) | 0.152 (0.500) |
| 2.03 m / 80" | 2.4 (7.9) | 2.9 (9.5) | 0.174 (0.571) |
| 2.29 m / 90" | 2.7 (8.9) | 3.3 (10.7) | 0.196 (0.643) |
| 2.54 m / 100" | 3.0 (9.9) | 3.6 (11.9) | 0.218 (0.714) |
| 3.05 m / 120" | 3.6 (11.9) | 4.3 (14.3) | 0.261 (0.857) |
| 3.81 m / 150" | 4.5 (14.9) | 5.4 (17.8) | 0.327 (1.071) |
| 5.08 m / 200" | 6.0 (19.8) | 7.3 (23.8) | 0.435 (1.429) |
| 6.35 m / 250" | 7.6 (24.8) | 9.1 (29.8) | 0.544 (1.786) |
| 7.62 m / 300" | 9.1 (29.8) | 10.9 (35.8) | 0.653 (2.143) |

NOTE:

- The value for L (distance to screen) varies slightly depending on the zoom lens characteristics.
- At the shortest projection distance, the zoom lens characteristics may cause slight image distortion.

Projection distance for 16:9 aspect ratio screen

unit: meters (feet)

| Projection size [diagonal] | Projection distance [L] | | Height from the edge of screen to center of lens [H] |
|-------------------------------|-------------------------|-----------------|---|
| | Min [wide] | Max [telephoto] | |
| 0.76 m / 30" | 1.0 (3.2) | 1.2 (3.8) | 0.008 (0.026) |
| 1.02 m / 40" | 1.3 (4.3) | 1.6 (5.1) | 0.011 (0.035) |
| 1.27 m / 50" | 1.6 (5.3) | 2.0 (6.4) | 0.014 (0.045) |
| 1.52 m / 60" | 2.0 (6.4) | 2.4 (7.7) | 0.017 (0.055) |
| 1.78 m / 70" | 2.3 (7.5) | 2.8 (9.0) | 0.019 (0.062) |
| 2.03 m / 80" | 2.6 (8.6) | 3.1 (10.3) | 0.022 (0.071) |
| 2.29 m / 90" | 3.0 (9.7) | 3.5 (11.6) | 0.025 (0.080) |
| 2.54 m / 100" | 3.3 (10.8) | 3.9 (12.9) | 0.028 (0.090) |
| 3.05 m / 120" | 3.9 (12.9) | 4.7 (15.5) | 0.033 (0.107) |
| 3.81 m / 150" | 4.9 (16.2) | 5.9 (19.4) | 0.041 (0.135) |
| 5.08 m / 200" | 6.6 (21.6) | 7.9 (25.9) | 0.054 (0.177) |
| 6.35 m / 250" | 8.2 (27.0) | 9.9 (32.5) | 0.068 (0.222) |
| 7.62 m / 300" | 9.9 (32.4) | 11.9 (39.0) | 0.082 (0.267) |

NOTE:

- The value for L (distance to screen) varies slightly depending on the zoom lens characteristics.
- At the shortest projection distance, the zoom lens characteristics may cause slight image distortion.

Projection distance for 16:10 aspect ratio screen

unit: meters (feet)

| Projection size [diagonal] | Projection distance [L] | | Height from the edge of screen to center of lens [H] |
|-------------------------------|-------------------------|-----------------|---|
| | Min [wide] | Max [telephoto] | |
| 0.76 m / 30" | 0.9 (3.1) | 1.1 (3.7) | 0.027 (0.088) |
| 1.02 m / 40" | 1.3 (4.1) | 1.5 (5.0) | 0.036 (0.119) |
| 1.27 m / 50" | 1.6 (5.2) | 1.9 (6.3) | 0.046 (0.149) |
| 1.52 m / 60" | 1.9 (6.3) | 2.3 (7.5) | 0.055 (0.180) |
| 1.78 m / 70" | 2.2 (7.3) | 2.7 (8.8) | 0.063 (0.207) |
| 2.03 m / 80" | 2.5 (8.4) | 3.1 (10.1) | 0.072 (0.238) |
| 2.29 m / 90" | 2.9 (9.4) | 3.4 (11.3) | 0.082 (0.268) |
| 2.54 m / 100" | 3.2 (10.5) | 3.8 (12.6) | 0.091 (0.299) |
| 3.05 m / 120" | 3.8 (12.6) | 4.6 (15.1) | 0.109 (0.357) |
| 3.81 m / 150" | 4.8 (15.7) | 5.8 (18.9) | 0.137 (0.448) |
| 5.08 m / 200" | 6.4 (21.0) | 7.7 (25.2) | 0.181 (0.594) |
| 6.35 m / 250" | 8.0 (26.3) | 9.6 (31.6) | 0.227 (0.743) |
| 7.62 m / 300" | 9.6 (31.6) | 11.6 (37.9) | 0.272 (0.892) |

NOTE:

- The value for L (distance to screen) varies slightly depending on the zoom lens characteristics.
- At the shortest projection distance, the zoom lens characteristics may cause slight image distortion.

Calculation of the projection distance

For a screen size different from the above, use the equation below to calculate the projection distance.

Aspect ratio 4:3

minimum $L (m) = (\text{diagonal screen size in inches}) \times 0.0303 - 0.0233$

maximum $L (m) = (\text{diagonal screen size in inches}) \times 0.0364 - 0.0237$

Aspect ratio 16:9

minimum $L (m) = (\text{diagonal screen size in inches}) \times 0.0330 - 0.0233$

maximum $L (m) = (\text{diagonal screen size in inches}) \times 0.0397 - 0.0237$

Aspect ratio 16:10

minimum $L (m) = (\text{diagonal screen size in inches}) \times 0.0322 - 0.0233$

maximum $L (m) = (\text{diagonal screen size in inches}) \times 0.0386 - 0.0237$

NOTE:

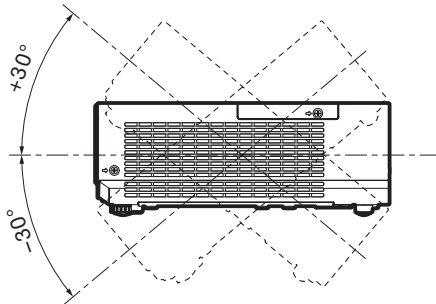
Distances calculated with the above equations will include a slight error.

Installable angle

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

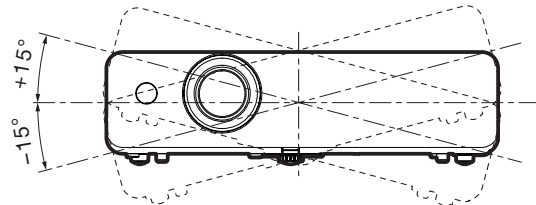
• **Vertical direction**

The projector may be installed at a vertical angle of 30°.



• **Horizontal direction**

The projector may be installed at a horizontal angle of 15°.



List of compatible signals

The signals that can be input to this projector are shown in the table below. Horizontal scanning frequencies of 15 kHz to 91 kHz, vertical scanning frequencies of 24 Hz to 85 Hz, and a dot clock of 162 MHz maximum can be input.

NOTE: The native resolution of this projector is 1,024 × 768 pixels. If the display resolution of the input signal is different from the native resolution, image compression or expansion will be used to convert the input signal to a level within the native resolution.

| Display mode | Display resolution (dots)*1 | Scanning frequency | | Dot clock frequency (MHz) | Format |
|---------------------------|-----------------------------|--------------------|--------|---------------------------|---------------------------|
| | | H (kHz) | V (Hz) | | |
| NTSC/NTSC4.43/PAL60/PAL-M | 720 × 480i | 15.7 | 59.9 | – | S-VIDEO/VIDEO |
| PAL/PAL-N/SECAM | 720 × 576i | 15.6 | 50.0 | – | |
| 480i(525i) | 720 × 480i | 15.7 | 59.9 | 13.5 | YCbCr/RGB |
| 576i(625i) | 720 × 576i | 15.6 | 50.0 | 13.5 | |
| 480i(525i) | 720(1440) × 480i*2 | 15.7 | 59.9 | 27.0 | HDMI |
| 576i(625i) | 720(1440) × 576i*2 | 15.6 | 50.0 | 27.0 | |
| 480p(525p) | 720 × 483 | 31.5 | 59.9 | 27.0 | HDMI/ YPbPr(YCbCr)/RGB |
| 576p(625p) | 720 × 576 | 31.3 | 50.0 | 27.0 | |
| 720(750)/60p | 1280 × 720 | 45.0 | 60.0 | 74.3 | |
| 720(750)/50p | | 37.5 | 50.0 | 74.3 | |
| 1080(1125)/60i | 1920 × 1080i | 33.8 | 60.0 | 74.3 | |
| 1080(1125)/50i | | 28.1 | 50.0 | 74.3 | |
| 1080(1125)/24p | 1920 × 1080 | 27.0 | 24.0 | 74.3 | |
| 1080(1125)/24sF | 1920 × 1080i | 27.0 | 48.0 | 74.3 | |
| 1080(1125)/25p | 1920 × 1080 | 28.1 | 25.0 | 74.3 | |
| 1080(1125)/30p | | 33.8 | 30.0 | 74.3 | |
| 1080(1125)/60p | | 67.5 | 60.0 | 148.5 | HDMI/RGB |
| 1080(1125)/50p | | 56.3 | 50.0 | 148.5 | |
| VGA | 640 × 480 | 31.5 | 59.9 | 25.2 | |
| | | 35.0 | 66.7 | 30.2 | |
| | | 37.9 | 72.8 | 31.5 | |
| | | 37.5 | 75.0 | 31.5 | |
| | | 43.3 | 85.0 | 36.0 | |
| SVGA | 800 × 600 | 35.2 | 56.3 | 36.0 | |
| | | 37.9 | 60.3 | 40.0 | |
| | | 48.1 | 72.2 | 50.0 | |
| | | 46.9 | 75.0 | 49.5 | |
| | | 53.7 | 85.1 | 56.3 | |
| MAC16 | 832 × 624 | 49.7 | 74.6 | 57.3 | |
| XGA | 1024 × 768 | 48.4 | 60.0 | 65.0 | |
| | | 56.5 | 70.1 | 75.0 | |
| | | 60.0 | 75.0 | 78.8 | |
| | | 68.7 | 85.0 | 94.5 | |
| 1152 × 864 | 1152 × 864 | 67.5 | 75.0 | 108.0 | |
| MAC21 | 1152 × 870 | 68.7 | 75.1 | 100.0 | |
| 1280 × 720 | 1280 × 720 | 37.1 | 49.8 | 60.5 | |
| | | 44.8 | 59.9 | 74.5 | |

*1 The "i" appearing after the resolution indicates an interlaced signal.
 *2 Only compatible with dot clock frequency of 27 MHz (pixel repetition signal)

| Display mode | Display resolution (dots)*1 | Scanning frequency | | Dot clock frequency (MHz) | Format | | |
|--------------|-----------------------------|--------------------|---------------|---------------------------|----------|------|-------|
| | | H (kHz) | V (Hz) | | | | |
| 1280 × 768 | 1280 × 768 | 47.8 | 59.9 | 79.5 | HDMI/RGB | | |
| | | 60.3 | 74.9 | 102.3 | | | |
| | | 68.6 | 84.8 | 117.5 | | | |
| 1280 × 800 | 1280 × 800 | 41.3 | 50.0 | 68.0 | | | |
| | | 49.7 | 59.8 | 83.5 | | | |
| | | 62.8 | 74.9 | 106.5 | | | |
| 1280 × 960 | 1280 × 960 | 60.0 | 60.0 | 108.0 | | | |
| | | 64.0 | 60.0 | 108.0 | | | |
| | | 80.0 | 75.0 | 135.0 | | | |
| SXGA | 1280 × 1024 | 91.1 | 85.0 | 157.5 | | | |
| | | 39.6 | 49.9 | 69.0 | | | |
| | | 47.7 | 59.8 | 85.5 | | | |
| 1366 × 768 | 1366 × 768 | 65.3 | 60.0 | 121.8 | | | |
| | | 82.3 | 74.9 | 156.0 | | | |
| | | 55.9 | 59.9 | 106.5 | | | |
| 1440 × 900 | 1440 × 900 | 55.9 | 60.0 | 119.0 | | | |
| | | 1600 × 900 | 60.0 | 108.0 | | | |
| | | 1600 × 900*2 | 60.0 | 108.0 | | | |
| 1600 × 900 | 1600 × 900 | 75.0 | 60.0 | 162.0 | | | |
| | | UXGA | 1600 × 1200 | 75.0 | | 60.0 | 162.0 |
| | | 1680 × 1050 | 1680 × 1050 | 65.3 | | 60.0 | 146.3 |
| 1680 × 1050 | 1680 × 1050 | 66.6 | 59.9 | 138.5 | | | |
| | | 1920 × 1080 | 1920 × 1080*2 | 66.6 | | 59.9 | 138.5 |
| | | 1920 × 1080 | 1920 × 1080*2 | 66.6 | | 59.9 | 138.5 |
| 1920 × 1080 | 1920 × 1080 | 74.0 | 60.0 | 154.0 | | | |
| | | WUXGA | 1920 × 1200*2 | 74.0 | | 60.0 | 154.0 |
| | | 1920 × 1200 | 1920 × 1200*2 | 74.0 | | 60.0 | 154.0 |

*1 The "i" appearing after the resolution indicates an interlaced signal.

*2 VESA CVT-RB (Reduced Blanking)-compliant.

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