1-Chip DLP™ Projector

PT-LRZ35

Specifications

Main unit

Power supply		AC 100 V–240 V, 50 Hz/60 Hz
Power consumption		NORMAL: 420 W (4.2 A), ECO: 255 W, QUIET: 196 W
		During Standby:
		Approx. 37 W (When [Standby Mode] is set to [Normal], and the [USB Power]/[Audio Out]/[Speaker]/ [Computer Out] /[Quick Startup] functions are in use)
		Approx. 2 W (When [Standby Mode] is set to [Normal], network function is used, and the [USB Power]/ [Audio Out]/[Speaker]/[Computer Out]/[Quick Startup] functions are not in use
		Approx. 0.5 W (When [Standby mode] is set to [Eco])
BTU value		Max 1,433 BTU
DLP™ chip	Panel size	17.0 mm (0.67 in) diagonal (16:10 aspect ratio)
	Projection system	DLP™ chip x 1, DLP™ system
	Pixels	2,304,000 (1920 x 1200)
Light source		Light Emitting Diode
Light output*1		3,500 lm (When [Light power] is set to [Normal] and [Picture Mode] is set to [Dynamic])
		2,600 lm (When [Light power] is set to [Eco] and [Picture Mode] is set to [Dynamic])
		2,100 lm (When [Light power] is set to [Quiet] and]Picture Mode] is set to [Dynamic])
Time until light output declines to 50 %*2		20,000 hours or more (NORMAL)
		Conditions: Content is IEC62087: 2008 Broadcast contents, temperature at 30 degrees Celsius, altitude 1,400 m or less, dust environment 0.15 mg/m³.
Resolution		1920 x 1200 pixels
Contrast ratio*1		30,000:1 (When [Light power] is set to [Normal] and [Picture Mode] is set to [Dynamic])
Screen size		1.02 m–7.62 m (40–300 inches) diagonally, 16:10 aspect ratio
Center to corner zone ratio*1		90 %
Lens		Manual zoom (1.3x), manual focus F 1.7–1.86, f 19.03 mm–24.95 mm (throw ratio: 1.28–1.69:1)
Compatible signal	HDMI signal input	● Displayable resolution for movie-based signals: 480i/576i*3 to 1920 x 1080
		● Displayable resolution for still image signals: 640 x 480 to 1920 x 1200 (non-interlaced)
		● Dot clock frequency: 25 MHz to 162 MHz
	RGB signal input	● Horizontal: 15 kHz–100 kHz, Vertical: 24 Hz–120 Hz
		● Dot clock frequency: 162 MHz or less
	YP$_B$P$_R$/YC$_B$C$_R$ signal input	● Displayable resolution: 480i/576i to 1920 x 1080
		● Dot clock frequency: 148.5 MHz or less
	Video signal input	● Horizontal: 15.73 kHz, Vertical: 59.94 Hz
		● Horizontal: 15.63 kHz, Vertical: 50.00 Hz
Keystone correction range		Vertical: ±30 °
Lens shift (from the origin point of the lens mounter)		Vertical: +50 %, +40 %
Installation		Front, Rear, Front Ceiling, Rear Ceiling
Speaker		10 W x 1 (Monaural)
Terminals	HDMI IN 1/ HDMI IN 2	2 (HDMI 19-pin, HDCP 1.4 compatible, Deep Color support, Supralok/LockIt compatible)
		Audio signal Linear PCM (Sampling frequency: 48 kHz/44.1 kHz/32 kHz)
	COMPUTER 1 IN/ COMPUTER 2 IN	2 (High-density D-sub 15-pin female)
		RGB signal 0.7 V [p-p] 75 Ω (When G-SYNC: 1.0 V [p-p] 75 Ω)
		HD/SYNC: TTL high impedance, positive/negative polarity, compatible with VESA Standard
		VD: TTL high impedance, positive/negative polarity, compatible with VESA Standard
		HD/SYNC and VD do not support 3 value SYNC.
		YP$_B$P$_R$ signal Y: 1.0 V [p-p] including synchronization signal, P$_B$P$_R$: 0.7 V [p-p] 75 Ω
	COMPUTER OUT	1 (High-density D-sub 15-pin female)
		RGB signal 0.7 V [p-p] 75 Ω (When G-SYNC: 1.0 V [p-p] 75 Ω)
		HD/SYNC: TTL high impedance
		VD: TTL high impedance
		HD/SYNC and VD do not support 3 value SYNC.
		YP$_B$P$_R$ signal Y: 1.0 V [p-p] including synchronization signal, P$_B$P$_R$: 0.7 V [p-p] 75 Ω
	VIDEO IN	1 (Pin jack 1.0 V [p-p] 75 Ω)
	AUDIO 1 IN/ AUDIO 2 IN	2 (M3 stereo mini jack, 0.5 V [rms], input impedance 22 kΩ and more)
	VARIABLE AUDIO OUT	1 (M3 stereo mini jack, monitor output and stereo compatible, 0 V [rms] to 2.0 V [rms] variable, output impedance 2.2 kΩ and less)
	Micro USB	1 (For service use)
	DC OUT	1 (USB connector [type A], for power supply [DC 5 V, maximum 2 A])
	SERIAL IN	1 (D-sub 9-pin female, RS-232C compliant, for computer control use)
	LAN	1 (for RJ-45 network connection, PJLink™ [Class 1] compatible, 10Base-T/100Base-T)

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Power cord length	1.8 m (5 ft 11 in)		
Cabinet materials	Molded plastic		
Dimensions (W x H x D)*4	375 x 124 x 314 mm (14-3/4 x 4-7/8 x 12-3/8 inches) (including protruding parts)		
Weight*5	Approx. 6.7 kg (14.77 lbs)		
Operating noise*1	35 dB (Normal)/27 dB (Eco)/24 dB (Quiet)		
Operating environment	Operating environment temperature*6	When [Light Power] is set to [Normal]	0 °C (32 °F) to 40 °C (104 °F) Altitude: below 1,400 m (4,593´); [High Altitude]: [Off])
			0 °C (32 °F) to 35 °C (95 °F) Altitude: 1,400 m (4,593´) – 2,100 m (6,890´); [High Altitude]: [High 1])
			0 °C (32 °F) to 35 °C (95 °F) Altitude: 2,100 m (6,890´) – 2,700 m (8,858´); [High Altitude]: [High 2])
		When [Light Power] is set to [Eco] or [Quiet]	0 °C (32 °F) to 40 °C (104 °F) Altitude: below 1,400 m (4,593´); [High Altitude]: [Off])
			0 °C (32 °F) to 35 °C (95 °F) Altitude: 1,400 m (4,593´) – 2,700 m (8,858´); [High Altitude]: [High])
			0 °C (32 °F) to 35 °C (95 °F) Altitude: 2,700 m (8,858´) – 4,200 m (13,780´); [High Altitude]: [High])
	Operating environment humidity	20 % to 80 % (no condensation)	
LED Classification	Risk Group	Risk Group 2 (IEC 62471-5:2015)	

Remote control unit

Power supply	3 V DC (AAA/R03/LR03 battery x 2)
Operation range	Approx. 8 m (26 ft 3 in) (when operated directly in front of signal receptor)
Dimensions (W x H x D)	38 x 125 x 20 mm (1-1/2 x 4-29/32 x 25/32 in)
Weight	Approx. 40 g (1.4 ozs) (not including batteries)

Supplied accessories

Wireless remote control unit (x 1)
Power cord (1.8 m [5 ft 11 in] x 1)
Batteries for remote control (R03/AAA type x 2)
Lens cap string (x 1)
Lens cap (x 1)
Computer VGA cable (1.8 m [5 ft 11 in] x 1)

Optional accessories

Ceiling Mount Bracket	ET-PKL100H (for high ceilings)
Ceiling Mount Bracket	ET-PKL100S (for low ceilings)
Ceiling Mount Bracket	ET-PKV400B (Projector Mount Bracket)
Early Warning Software	ET-SWA100/105 series*

*The suffix of the Model No. differs according to the license type.

Other applications

Multi Monitoring and Control Software (for Windows®)

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: 2012 international standards.
*2 Around this time, light output will have decreased by approximately 50 %, IEC62087: 2008 Broadcast contents, under conditions with 30 °C (86 °F),
    1,400 m (4,593´) above sea level, and 0.15 mg/m³ of particulate matter. Estimated time until light output declines to 50 % varies depending on environment.
*3 Pixel-Repetition signal (dot clock frequency 27.0 MHz) only.
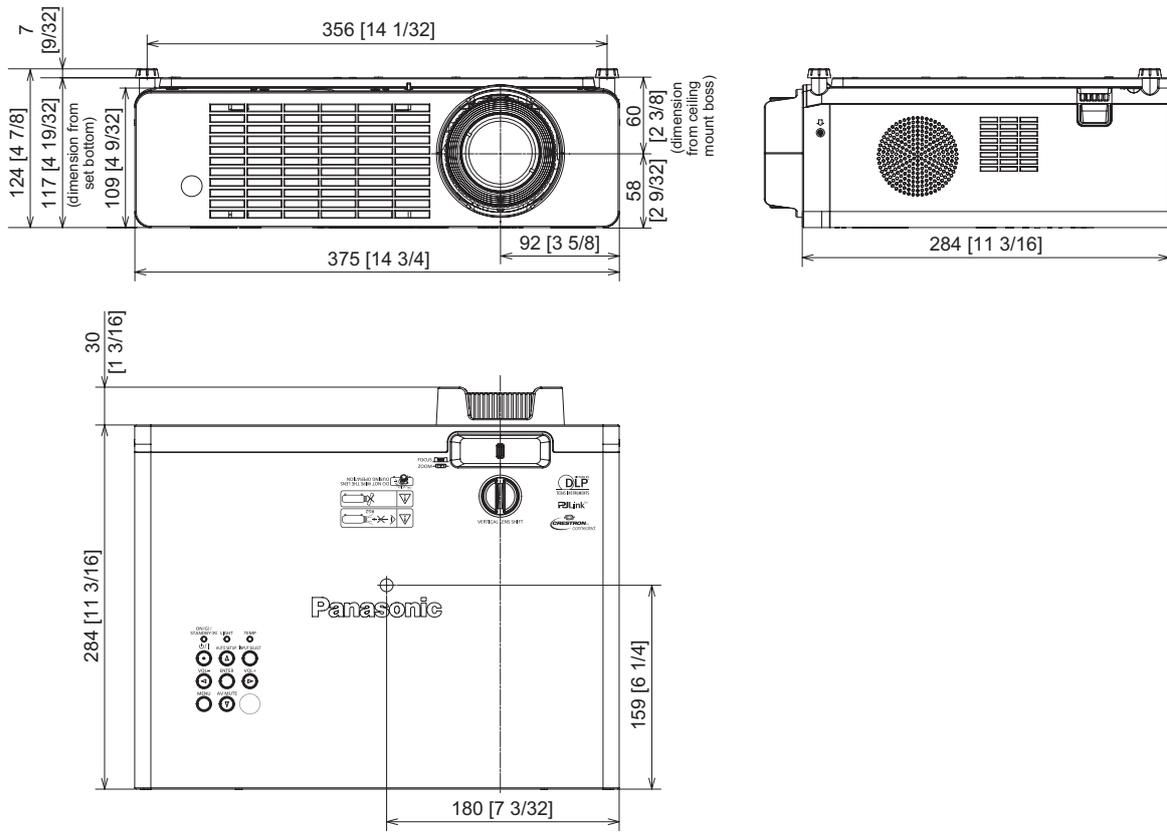*4 When adjustable feet shortened.
*5 Average value. May differ depending on models.
*6 The projector cannot be used at an altitude of 4,200 m (13,780´) or higher above sea level.
    Note that altitude of 4,200 m (13,780´) above sea level is the maximum height that the performance of this projector is guaranteed.
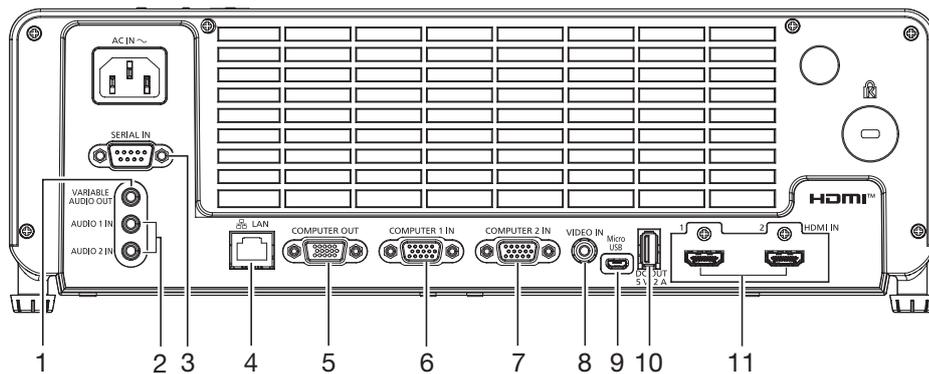
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Dimensions

unit: mm (inch)
NOTE: This illustration is not drawn to scale.

356 [14 1/32]

7 [9/32]

124 [4 7/8]
117 [4 19/32] (dimension from set bottom)
109 [4 9/32]

60 [2 3/8] (dimension from ceiling mount boss)
58 [2 9/32]

375 [14 3/4]
92 [3 5/8]

284 [11 3/16]

30 [1 3/16]

284 [11 3/16]

159 [6 1/4]

180 [7 3/32]

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* Actual dimensions may differ depending on the product.

Terminals

1	VARIABLE AUDIO OUT	7	COMPUTER 2 IN
2	AUDIO 1 IN/AUDIO 2 IN	8	VIDEO IN
3	SERIAL IN	9	Micro USB for service use only
4	LAN	10	DC OUT
5	COMPUTER OUT	11	HDMI IN 1/HDMI IN 2
6	COMPUTER 1 IN		

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Projection distance

Unit: meters

Screen size	16:10 aspect ratio			16:9 aspect ratio			4:3 aspect ratio		
	Projection distance		Distance from lens center to image lower end	Projection distance		Distance from lens center to image lower end	Projection distance		Distance from lens center to image lower end
	Minimum distance	Maximum distance		Minimum distance	Maximum distance		Minimum distance	Maximum distance	
Diagonal (SD)	(LW)	(LT)	(H)	(LW)	(LT)	(H)	(LW)	(LT)	(H)
1.02 (40")	1.09	1.44	-0.0538 – 0	1.12	1.48	-0.0238 – 0.0300	1.24	1.63	-0.0538 – 0
1.27 (50")	1.37	1.81	-0.0673 – 0	1.41	1.86	-0.0299 – 0.0374	1.55	2.05	-0.0673 – 0
1.52 (60")	1.65	2.18	-0.0808 – 0	1.69	2.23	-0.0360 – 0.0448	1.86	2.46	-0.0808 – 0
1.78 (70")	1.93	2.55	-0.0942 – 0	1.99	2.62	-0.0418 – 0.0524	2.19	2.88	-0.0942 – 0
2.03 (80")	2.21	2.91	-0.1077 – 0	2.27	2.99	-0.0479 – 0.0598	2.50	3.30	-0.1077 – 0
2.29 (90")	2.50	3.28	-0.1212 – 0	2.57	3.38	-0.0538 – 0.0674	2.83	3.72	-0.1212 – 0
2.54 (100")	2.78	3.65	-0.1346 – 0	2.86	3.75	-0.0598 – 0.0748	3.15	4.14	-0.1346 – 0
3.05 (120")	3.34	4.39	-0.1615 – 0	3.44	4.52	-0.0717 – 0.0898	3.70	4.97	-0.1615 – 0
3.81 (150")	4.19	5.50	-0.2019 – 0	4.30	5.65	-0.0897 – 0.1122	4.74	6.23	-0.2019 – 0
5.08 (200")	5.60	7.34	-0.2692 – 0	5.75	7.55	-0.1196 – 0.1496	6.33	8.31	-0.2692 – 0
6.35 (250")	7.01	9.19	-0.3366 – 0	7.20	9.45	-0.1496 – 0.1870	7.93	10.41	-0.3366 – 0
7.62 (300")	8.41	11.04	-0.4039 – 0	8.65	11.34	-0.1795 – 0.2244	9.52	12.49	-0.4039 – 0

Unit: feet

Screen size	16:10 aspect ratio			16:9 aspect ratio			4:3 aspect ratio		
	Projection distance		Distance from lens center to image lower end	Projection distance		Distance from lens center to image lower end	Projection distance		Distance from lens center to image lower end
	Minimum distance	Maximum distance		Minimum distance	Maximum distance		Minimum distance	Maximum distance	
Diagonal (SD)	(LW)	(LT)	(H)	(LW)	(LT)	(H)	(LW)	(LT)	(H)
1.02 (40")	3.58	4.72	-0.1765 – 0	3.67	4.86	-0.078 – 0.0984	4.07	5.35	-0.1765 – 0
1.27 (50")	4.49	5.94	-0.2208 – 0	4.63	6.10	-0.098 – 0.1227	5.09	6.73	-0.2208 – 0
1.52 (60")	5.41	7.15	-0.2651 – 0	5.54	7.32	-0.118 – 0.1470	6.10	8.07	-0.2651 – 0
1.78 (70")	6.33	8.37	-0.3091 – 0	6.53	8.60	-0.137 – 0.1719	7.19	9.45	-0.3091 – 0
2.03 (80")	7.25	9.55	-0.3533 – 0	7.45	9.81	-0.157 – 0.1962	8.20	10.83	-0.3533 – 0
2.29 (90")	8.20	10.76	-0.3976 – 0	8.43	11.09	-0.177 – 0.2211	9.28	12.20	-0.3976 – 0
2.54 (100")	9.12	11.98	-0.4416 – 0	9.38	12.30	-0.196 – 0.2454	10.33	13.58	-0.4416 – 0
3.05 (120")	10.96	14.40	-0.5299 – 0	11.29	14.83	-0.235 – 0.2946	12.14	16.31	-0.5299 – 0
3.81 (150")	13.75	18.04	-0.6624 – 0	14.11	18.54	-0.294 – 0.3681	15.55	20.44	-0.6624 – 0
5.08 (200")	18.37	24.08	-0.8832 – 0	18.86	24.77	-0.392 – 0.4908	20.77	27.26	-0.8832 – 0
6.35 (250")	23.00	30.15	-1.1043 – 0	23.62	31.00	-0.491 – 0.6135	26.02	34.15	-1.1043 – 0
7.62 (300")	27.59	36.22	-1.3251 – 0	28.38	37.20	-0.589 – 0.7362	31.23	40.98	-1.3251 – 0

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Calculation of the projection distance

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

Aspect ratio 16:10
minimum   L (m) = (diagonal screen size inches) × 0.02818 − 0.0396
maximum   L (m) = (diagonal screen size inches) × 0.03691 − 0.0384

Aspect ratio 16:9
minimum   L (m) = (diagonal screen size inches) × 0.02896 − 0.0396
maximum   L (m) = (diagonal screen size inches) × 0.03794 − 0.0389

Aspect ratio 4:3
minimum   L (m) = (diagonal screen size inches) × 0.03190 − 0.0521
maximum   L (m) = (diagonal screen size inches) × 0.04179 − 0.0428
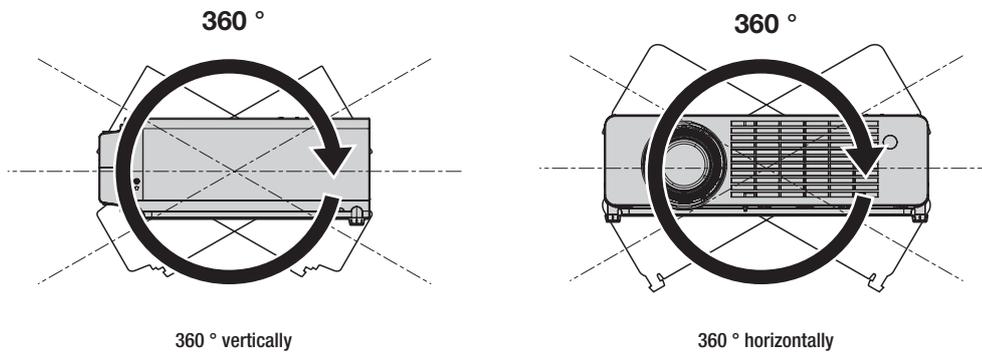
Note

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

• 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.

Installable angle

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

Front and side 360-degree projection

360 °

360 ° vertically

360 °

360 ° horizontally

Notes on projector placement and operation

1. Do not stack the projectors.
2. Do not use the projector supporting it by the top.
3. Do not block the vents (intake and exhaust) of the projector.
4. Avoid heating and cooling air from the air conditioning system directly blow to the vents (intake and exhaust) of the projector.
5. Do not install the projector in a confined space. When placing the projector in a confined space, a ventilation and/or air conditioning system is required. Exhaust heat may accumulate when the ventilation is not enough, triggering the protection circuit of the projector.
6. Panasonic takes no responsibility for any damage to the product caused by an inappropriate choice of location for installing the projector, even if the warranty period of the product has not expired.

over 100 mm
(3-15/16")

over 100 mm
(3-15/16")

over 300 mm
(11-13/16")

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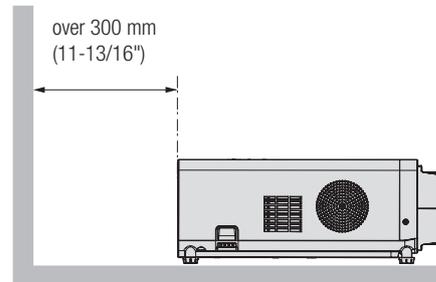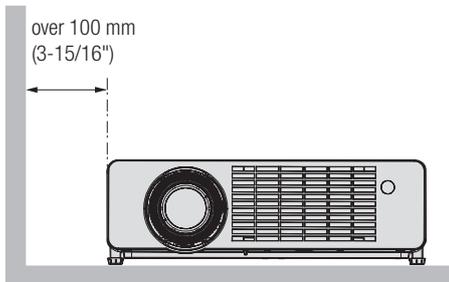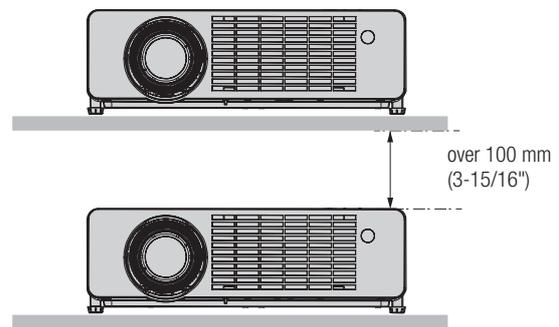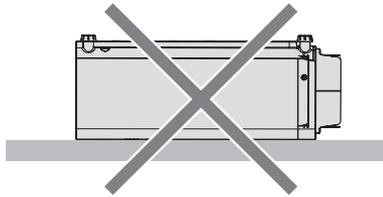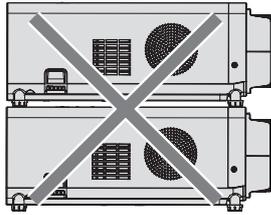
List of compatible signals

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

- Symbols that indicate formats are as follows.
  - V: VIDEO   - R: RGB (analog)   - Y: YP$_B$P$_R$/YC$_B$C$_R$ (analog)   - H: HDMI
- Input corresponding to each item in the plug and play column is as follows.
  - COMPUTER: COMPUTER 1 IN/COMPUTER 2 IN input   - HDMI: HDMI 1 IN/HDMI 2 IN input

Mode	Display resolution (dots)	Scanning frequency Horizontal (kHz)	Scanning frequency Vertical (Hz)	Dot clock frequency (MHz)	Format	Plug and play*1 COMPUTER	Plug and play*1 HDMI
NTSC/NTSC4.43/PAL-M/PAL60	720 x 480i	15.7	59.9	-	V	-	-
PAL/PAL-N/SECAM	720 x 576i	15.6	50.0	-	V	-	-
480/60i	720 x 480i	15.7	59.9	13.5	Y	-	-
576/50i	720 x 576i	15.6	50.0	13.5	Y	-	-
480/60i	720 (1440) x 480i*2	15.7	59.9	27.0	H	-	✓
576/50i	720 (440) x 576i*2	15.6	50.0	27.0	H	-	✓
480/60p	720 x 480	31.5	59.9	27.0	Y/H	-	✓
576/50p	720 x 576	31.3	50.0	27.0	Y/H	-	✓
720/60p	1280 x 720	45.0	60.0*3	74.3	Y/H	-	✓
720/50p	1280 x 720	37.5	50.0	74.3	Y/H	-	✓
1080/60i	1920 x 1080i	33.8	60.0*3	74.3	Y/H	-	✓
1080/50i	1920 x 1080i	28.1	50.0	74.3	Y/H	-	✓
1080/24p	1920 x 1080	27.0	24.0*3	74.3	Y/H	-	✓
1080/24sF	1920 x 1080i	27.0	48.0*3	74.3	Y/H	-	-
1080/25p	1920 x 1080	28.1	25.0	74.3	Y/H	-	-
1080/30p	1920 x 1080	33.8	30.0*3	74.3	Y/H	-	-
1080/60p	1920 x 1080	67.5	60.0*3	148.5	Y/H	-	✓
1080/50p	1920 x 1080	56.3	50.0	148.5	Y/H	-	✓
640 x 480/60	640 x 480	31.5	59.9	25.2	R/H	✓	✓
640 x 480/73	640 x 480	37.9	72.8	31.5	R/H	✓	✓
640 x 480/75	640 x 480	37.5	75.0	31.5	R/H	✓	✓
640 x 480/85	640 x 480	43.3	85.0	36.0	R/H	-	-
640 x 480/120	640 x 480*4	61.1	120.0	44.0	R/H	✓	✓
800 x 600/56	800 x 600	35.2	56.3	36.0	R/H	✓	✓
800 x 600/60	800 x 600	37.9	60.3	40.0	R/H	✓	✓
800 x 600/72	800 x 600	48.1	72.2	50.0	R/H	✓	✓
800 x 600/75	800 x 600	46.9	75.0	49.5	R/H	✓	✓
800 x 600/85	800 x 600	53.7	85.1	56.3	R/H	-	-
800 x 600/120	800 x 600*4	76.3	120.0	73.3	R/H	✓	✓
1024 x 768/60	1024 x 768	48.4	60.0	65.0	R/H	✓	✓
1024 x 768/70	1024 x 768	56.5	70.1	75.0	R/H	✓	✓
1024 x 768/75	1024 x 768	60.0	75.0	78.8	R/H	✓	✓
1024 x 768/85	1024 x 768	68.7	85.0	94.5	R/H	-	-
1152 x 864/75	1152 x 864	67.5	75.0	108.0	R/H	-	-
1280 x 720/60	1280 x 720	45.0	60.0	74.3	R/H	✓	✓
1280 x 720/120	1280 x 720*4	90.0	120.0	148.5	R/H	✓	✓
1280 x 768/60	1280 x 768	47.8	59.9	79.5	R/H	-	-
1280 x 768/75	1280 x 768	60.3	74.9	102.3	R/H	-	-
1280 x 768/85	1280 x 768	68.6	84.8	117.5	R/H	-	-
1280 x 800/60	1280 x 800	49.7	59.8	83.5	R/H	✓	✓
1280 x 800/120	1280 x 800*4	101.6	119.9	146.3	R/H	✓	✓
1280 x 960/60	1280 x 960	60.0	60.0	108.0	R/H	-	-
1280 x 960/75	1280 x 960	75.2	74.9	130.0	R/H	-	-
1280 x 1024/60	1280 x 1024	64.0	60.0	108.0	R/H	-	-
1280 x 1024/75	1280 x 1024	80.0	75.0	135.0	R/H	✓	✓
1280 x 1024/85	1280 x 1024	91.1	85.0	157.5	R/H	-	-
1366 x 768/60	1366 x 768	47.7	59.8	85.5	R/H	✓	✓
1400 x 1050/60	1400 x 1050*4	64.7	59.9	101.0	R/H	-	-
1440 x 900/60	1440 x 900*4	55.5	59.9	88.8	R/H	✓	✓
1600 x 1200/60	1600 x 1200	75.0	60.0	162.0	R/H	✓	✓
1680 x 1050/60	1680 x 1050*4	64.7	59.9	119.0	R/H	-	-
1920 x 1080/60	1920 x 1080	67.5	60.0	148.5	R/H	✓	✓
1920 x 1080/50	1920 x 1080	56.3	50.0	148.5	R/H	✓	✓
1920 x 1200/60	1920 x 1200*4	74.0	60.0	154.0	R/H	✓	✓

*1 Signal with ✓ in the plug and play column is a signal described in the EDID (extended display identification data) of the projector.
   The signal that does not have ✓ in the plug and play column can also be input if it is described in the format column.
   The resolution may not be selected in the computer even if the projector is compatible with the signal that does not have ✓ in the plug and play column.
*2 Pixel-Repetition signal (dot clock frequency 27.0 MHz) only.
*3 The signal with 1/1.001x vertical scanning frequency is also supported.
*4 VESA CVT-RB (Reduced Blanking)-compliant.

Note

● A signal with a different resolution is converted to the number of display dots. The number of display dots is as follows.
   - PT-LRZ35/PT-LRZ35U: 1920 x 1200
● The "i" at the end of the resolution indicates an interlaced signal.
● When interlaced signals are connected, flicker may occur on the projected image.
● The image may not be displayed in full screen according to the computer output setting.

List of 3D compatible signals

The following table specifies the 3D compatible video signals compatible with the projector.

• Abbreviations for input formats and 3D formats in the table have the following meanings.

  - FP: Frame packing format   - SBS: Side by side format   - TB: Top and bottom format

Signal name (SIGNAL FORMAT)	Resolution (Dots)	Scanning frequency		Dot clock frequency (MHz)	HDMI*1		
		Horizontal (kHz)	Vertical (Hz)		FP	SBS*2	TB
720/60p	1280 x 720	45.0	60.0*3	74.3	✓	✓	✓
720/50p	1280 x 720	37.5	50.0	74.3	✓	✓	✓
1080/60i	1920 x 1080i	33.8	60.0*3	74.3	-	✓	-
1080/50i	1920 x 1080i	28.1	50.0	74.3	-	✓	-
1080/24p	1920 x 1080	27.0	24.0*3	74.3	✓	✓	✓
1080/60p	1920 x 1080	67.5	60.0*3	148.5	-	✓	✓
1080/50p	1920 x 1080	56.3	50.0	148.5	-	✓	✓

*1 Signal with ✓ in the HDMI column is a signal described in the EDID (extended display identification data) of the projector.
*2 Supports half.
*3 The signal with 1/1.001x vertical scanning frequency is also supported.