Panasonic

S P E C   F I L E

Product Number : PT-**DS20K2**

Product Name :   3-Chip DLP™ Projector

Panasonic

3-Chip DLP™ Projector

PT-**DS20K2**

Specifications

Main unit

Power supply		200–240 V AC, 12 A, 50/60 Hz (3-wire single-phase)
Power consumption		2,060 W (2,100 VA) (0.3 W with STANDBY MODE set to ECO.[*1] 9 W with STANDBY MODE set to NORMAL.), max. 7,031 BTU (without light output: 6,758 BTU)
DLP™ chip	Panel size	24.1 mm (0.95 inches) diagonal (4:3 aspect ratio)
	Display method	DLP™ chip × 3 (R, G, B), DLP™ projection system
	Pixels	1,470,000 (1,400 × 1,050) × 3, total of 4,410,000 pixels
Lens		Optional powered zoom/focus lenses
Lamp		432 W UHM lamps (× 4) (four lamp system)
Screen size		1.78–25.4 m (70–1,000 inches) (1.78–15.24 m (70–600 inches) with the ET-D75LE8), 4:3 aspect ratio
Brightness[*2]		20,000 lumens (four lamp)
Center-to-corner uniformity[*2]		90%
Contrast[*2]		10,000:1 (full on/full off, in dynamic iris 3 mode)
Resolution		1,400 × 1,050 pixels (Input signals that exceed this resolution will be converted to 1,400 × 1,050 pixels.)

Scanning frequency	SDI	Dual-link HD-SDI signal (RGB 4:4:4 12-bit/10-bit):
		SMPTE ST 372 compliant: 1080/50i, 1080/60i, 1080/25p, 1080/24p, 1080/24sF, 1080/30p, 2048 x 1080/24p, 2048/1080/24sF
		Dual-link HD-SDI signal (X´Y´Z´ 4:4:4 12-bit):
		SMPTE ST 372 compliant: 2048 × 1080/24p, 2048 × 1080/24sF,
		3G-SDI signal (RGB 4:4:4 12-bit/10-bit):
		SMPTE ST 424 compliant: 1080/50i, 1080/60i, 1080/25p, 1080/24p, 1080/24sF, 1080/30p,
		3G-SDI signal (YP$_B$P$_R$ 4:2:2 10-bit):
		SMPTE ST 424 compliant: 1080/50p, 1080/60p,
		HD-SDI signal (YP$_B$P$_R$ 4:2:2 10-bit):
		SMPTE ST 292 compliant: 720/50p, 720/60p, 1035/60i, 1080/50i, 1080/60i, 1080/25p, 1080/24p, 1080/24sF, 1080/30p,
		SD-SDI signal (YC$_B$C$_R$ 4:2:2 10-bit):
		SMPTE ST 259 compliant: 480i, 576i
	HDMI/DVI-D/ DIGITAL LINK	Horizontal: 15–100 kHz, vertical: 24–120 Hz, dot clock: 25–162 MHz
	RGB	Horizontal: 15–100 kHz, vertical: 24–120 Hz, dot clock: 162 MHz or less
	YP$_B$P$_R$ (YC$_B$C$_R$)	480i (525i): f$_H$ 15.73 kHz; f$_V$ 59.94 Hz,
		576i (625i): f$_H$ 15.63 kHz; f$_V$ 50 Hz,
		480p (525p): f$_H$ 31.47 kHz; f$_V$ 59.94 Hz,
		576p (625p): f$_H$ 31.25 kHz; f$_V$ 50 Hz,
		720 (750)/60p: f$_H$ 45.00 kHz; f$_V$ 60 Hz,
		720 (750)/50p: f$_H$ 37.50 kHz; f$_V$ 50 Hz,
		1035/60i: f$_H$ 33.75 kHz; f$_V$ 60 Hz,
		1080 (1125)/60i: f$_H$ 33.75 kHz; f$_V$ 60 Hz,
		1080 (1125)/50i: f$_H$ 28.13 kHz; f$_V$ 50 Hz,
		1080/25p: f$_H$ 28.13 kHz; f$_V$ 25 Hz,
		1080/24p: f$_H$ 27.00 kHz; f$_V$ 24 Hz,
		1080/24sF: f$_H$ 27.00 kHz; f$_V$ 48 Hz,
		1080/30p: f$_H$ 33.75 kHz; f$_V$ 30 Hz,
		1080/60p: f$_H$ 67.50 kHz; f$_V$ 60 Hz,
		1080/50p: f$_H$ 56.25 kHz; f$_V$ 50 Hz
	Video/S-Video	f$_H$: 15.73 kHz, f$_V$: 59.94 Hz [NTSC/NTSC4.43/PAL-M/PAL60] f$_H$: 15.63 kHz, f$_V$: 50 Hz [PAL/PAL-N/SECAM]

Optical axis shift	Vertical	±50% (±40% with the ET-D75LE6, +71% with the ET-D75LE90)
		from center of screen, powered
		NOTE: Optical axis shift function cannot be operated when used with the ET-D75LE50.
	Horizontal	±30% (±20% with the ET-D75LE6) from center of screen, powered
		NOTE: Optical axis shift function cannot be operated when used with the ET-D75LE50/90.
Keystone correction range		Vertical ± 40°, horizontal ± 15°
		(vertical ±22° and horizontal ±15° with the ET-D75LE50,
		vertical ±28° and horizontal ±15° with the ET-D75LE6,
		vertical +5°　and horizontal ±15° with the ET-D75LE90)
Keystone correction range when using the optional upgrade kit ET-UK20*3		Vertical ±45°, horizontal ±40°
		(vertical ±40° and horizontal ±40° with the ET-D75LE1/2/10/20,
		vertical ±28° and horizontal ±15° with the ET-D75LE6,
		vertical ±22° and horizontal ±15° with the ET-D75LE5/50)
Curved correction range		Vertical ±20°, horizontal ±15°
		(vertical ±8° and horizontal ±8° with the ET-D75LE5/50,
		vertical ±10° and horizontal ±10° with the ET-D75LE6)
Installation		Ceiling/floor, front/rear
Terminals	SDI IN 1	BNC × 1,
		Dual-link 3G-SDI signal: SMPTE ST 425 compliant (Link 1)
		Dual-link HD-SDI signal: SMPTE ST 372 compliant (Link-A)
		3G-SDI signal: SMPTE ST 424 compliant
		HD-SDI signal: SMPTE ST 292 compliant
		SD-SDI signal: SMPTE ST 259 compliant
	SDI IN 2	BNC × 1,
		Dual-link 3G-SDI signal: SMPTE ST 425 compliant (Link 2)
		Dual-link HD-SDI signal: SMPTE ST 372 compliant (Link-B)
		3G-SDI signal: SMPTE ST 424 compliant
		HD-SDI signal: SMPTE ST 292 compliant
		SD-SDI signal: SMPTE ST 259 compliant
	HDMI IN	HDMI 19-pin × 1, Deep Color, compatible with HDCP
	DVI-D IN	DVI-D 24-pin × 1, DVI 1.0 compliant, HDCP compatible,
		for single link only
	DIGITAL LINK/LAN	RJ-45 Network connection / digital link connection (video/network/serial control) compliant with PJLink (class1) ,100base-tx, Art-Net compatible Deep Color, compatible with HDCP
	RGB 1 IN	BNC × 5
	R, G, B	R: 0.7 Vp-p, 75 ohms,
		G: 0.7 Vp-p (G: 1.0 Vp-p for sync on G), 75 ohms,
		B: 0.7 Vp-p, 75 ohms
		HD, VD/SYNC: TTL, high impedance, positive/negative automatic
		NOTE: SYNC/HD and VD terminals do not accept tri-level sync signals.
	Y, P_B, P_R (Y, C_B, C_R)	Y: 1.0 Vp-p (including sync signal), P_B/P_R (C_B/C_R): 0.7 Vp-p, 75 ohms
	S-Video signal	Y: 1.0 Vp-p, C: 0.286 Vp-p, 75 ohms
	RGB 2 IN	D-sub HD 15-pin (female) × 1
	R, G, B	R: 0.7 Vp-p, 75 ohms,
		G: 0.7 Vp-p (G: 1.0 Vp-p for sync on G), 75 ohms,
		B: 0.7 Vp-p, 75 ohms
		HD, VD/SYNC: TTL, high impedance, positive/negative automatic
		NOTE: SYNC/HD and VD terminals do not accept tri-level sync signals.
	Y, P_B, P_R (Y, C_B, C_R)	Y: 1.0 Vp-p (including sync signal), P_B/P_R (C_B/C_R): 0.7 Vp-p, 75 ohms
	3D SYNC 1 IN/OUT	BNC × 1, 1.0 Vp-p, 75 ohms
		Input: TTL, high impedance. Output: TTL, max. 10 mA
	3D SYNC 2 OUT	BNC × 1, 1.0 Vp-p, 75 ohms, TTL, max. 10 mA
	SERIAL IN	D-sub 9-pin (female) × 1 for external control (RS-232C compliant)
	SERIAL OUT	D-sub 9-pin (male) × 1 for link control
	REMOTE 1 IN	M3 jack × 1 for wired remote control
	REMOTE 1 OUT	M3 jack × 1 for link control
	REMOTE 2 IN	D-sub 9-pin (female) × 1 for external control (parallel)

3-Chip DLP™ Projector

PT-**DS20K2**

Power cord length	3.0 m (9 ft 10 in)
Cabinet materials	Molded plastic
Dimensions (W × H × D):	620 × 291[*4] × 800[*5] mm
	(24-7/16 × 11-15/32[*4] × 31-1/2[*5] inches) (without lens)
Weight[*6]	Approx. 41 kg (90.4 lbs) (without lens)
Operation noise[*2]	46 dB (quad lamp operation)
Operating temperature	0°–45°C (32°–113°F)[*7]
Operating humidity	10%–80% (no condensation)

Remote control unit

Power supply	3 V DC (AA/R6 type battery × 2)
Operation range[*8]	Approx. 30 m (98 ft 5 in) when operated from directly in front of the signal receptor
Dimensions (W × H × D)	47.5 × 181.5 × 27.5 mm (1-7/8 × 7-5/32 × 1-3/32 inches)
Weight	Approx. 150 g (5.3 oz) (including batteries)

Supplied accessories

Power cord with security lock (× 1)
Wireless/wired remote control unit (× 1)
Batteries for remote control (AA/R6 type × 2)
Software CD-ROM (Logo Transfer Software, Multi Projector Monitoring & Control Software) (× 1)

**Optional accessories**

Zoom lens (1.0–1.2:1)	ET-D75LE6
Zoom lens (1.4–1.8:1)	ET-D75LE10
Zoom lens (1.8–2.6:1)	ET-D75LE20
Zoom lens (2.6–5.1:1)	ET-D75LE30
Zoom lens (5.0–8.0:1)	ET-D75LE40
Zoom lens (7.9–15.0:1)	ET-D75LE8
Fixed-focus lens (0.8:1)	ET-D75LE50
Fixed-focus lens (0.39:1)	ET-D75LE90
Lens motor cover	ET-D75MC1
Ceiling mount bracket	ET-PKD520H (for high ceilings)
	ET-PKD520S (for low ceilings)
Projector mount bracket	ET-PKD520B
Frame	ET-PFD510
Smoke cut filter	ET-SFR510
Upgrade kit	ET-UK20
Auto sreen adjustment upgrade kit	ET-CUK10 (except in the United States)
Replacement lamp unit	ET-LAD520 (one bulb)
	ET-LAD520F (a set of four bulbs)
Replacement lamp unit for portrait mode	ET-LAD520P (one bulb)
	ET-LAD520PF (a set of four bulbs)
Replacement filter unit	ET-EMF510

**Weights and dimensions shown are approximate. Specifications and appearance are 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, and the serial output termi-
nal cannot be used. Also, only certain commands can be received for external control using the serial terminal.
*2 Measurement, measuring conditions, and method of notation all comply with ISO 21118 international standards.
*3 Up to a total of ±55° during simultaneous horizontal and vertical correction.
*4 With legs at shortest position.
*5 Excluding the optional lens.
*6 Average value (excluding the optional lens). May differ depending on models.
*7 The operating temperature range is 0 °C to 40 °C (32 °F to 104 °F) when the FAN CONTROL is set to HIGH ALTITUDE MODE (for altitudes from 1,400 m
to 2,700 m (4,593 ft to 8,858 ft) above sea level). When the projector is used with the ET-SFR510 Smoke Cut Filter, the operating temperature
range is 0 °C to 35 °C (32 °F to 95 °F), and the projector cannot be used in places at high altitude. The operating temperature range is 0 °C to
40 °C (32 °F to 104 °F) when the ET-LAD520P/LAD520PF lamp is mounted and the projector is used in portrait configuration. The operating tem-
perature range is 0 °C to 35 °C (32 °F to 95 °F) when the FAN CONTROL is set to HIGH ALTITUDE MODE (for altitudes from 1,400 m to 2,700 m (4,593 ft
to 8,858 ft) above sea level). When the projector is used with the ET-SFR510 Smoke Cut Filter, the operating temperature range is 0 °C to 30 °C
(32 °F to 86 °F).
*8 Operation range differs depending on environments.

Panasonic

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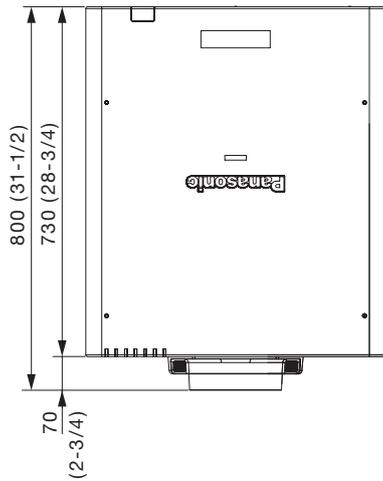
unit : mm (inch)
NOTE: This illustration is not drawn to scale.

800 (31-1/2)
730 (28-3/4)
70 (2-3/4)

244 (9-19/32)
244 (9-19/32)
620 (24-13/32)

291 (11-15/32)
177 (6-31/32)
36 (1-13/32)
47 (1-27/32)
608 (23-15/16)
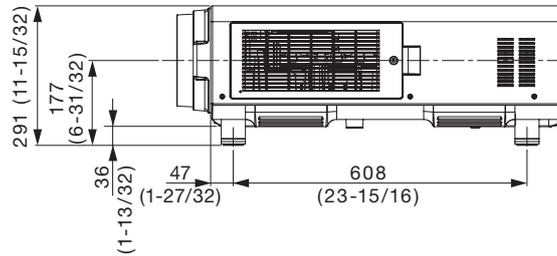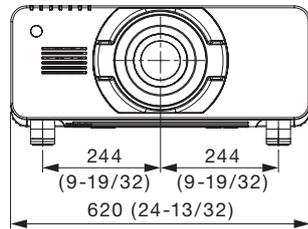
Terminals
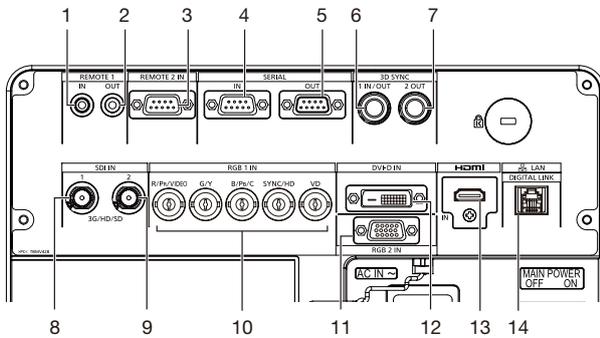
1 Remote 1 input
2 Remote 1 output
3 Remote 2 input
4 Serial input
5 Serial output
6 3D sync 1 input/output
7 3D sync 2 output
8 SDI 1 input
9 SDI 2 input
10 RGB 1 Input
11 RGB 2 input
12 DVI-D input
13 HDMI input
14 LAN/DIGITAL LINK connector

Standard setting-up position

ø60.5
(2-3/8)

419–539
(16-1/2–
21-7/32) *2

560–680
(22-1/16–
26-25/32) *2

Upper edge of projected image

H

L

Projected image

*1 298
(11-23/32)

432
(18)

L

H

Lower edge of projected image

L

Projected image

157
(6-3/16)

314
(12-3/8)

157
(6-3/16)

87.5
(3-7/16)

87.5
(3-7/16)

175
(6-7/8)
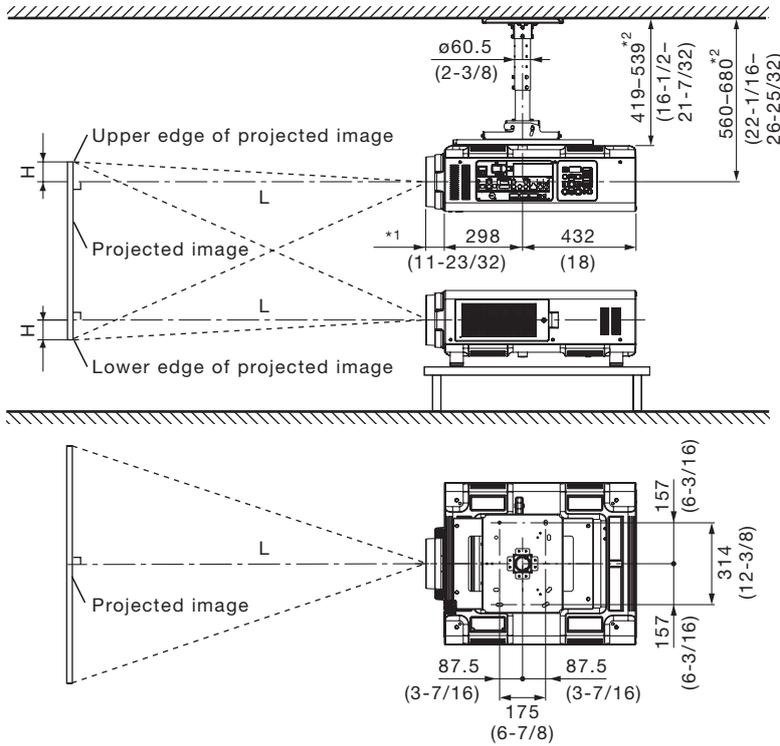
*1 When the lens protrudes to the maximum.

212 mm (8-11/32) with the ET-D75LE6
125 mm (4-29/32) with the ET-D75LE10
121 mm (4-3/4) with the ET-D75LE20
121 mm (4-3/4) with the ET-D75LE30
124 mm (4-7/8) with the ET-D75LE40
254 mm (10) with the ET-D75LE8
203 mm (8) with the ET-D75LE50

*2 Adjustable in 40 mm (1-9/16) steps.

unit : mm (inch)

NOTE:

Illustrations show the projector installed using optional ceiling mount bracket ET-PKD520H/ET-PKD520B and an optional lens.This illustration is not drawn to scale.

C a u t i o n :
- 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 the projector between the mounting bracket and the ceiling.

3-Chip DLP™ Projector

PT-**DS20K2**

Projection distance for 4:3 aspect ratio screen
(ET-D75LE6/D75LE10/D75LE20/D75LE30/D75LE40/D75LE8/D75LE50)

Unit: meters

Screen size (diagonal) [m] / [in]	Distance to screen (L)												Height from the edge of screen to center of lens (H)		
	Zoom											Fixed-focus	Zoom lenses		Fixed-focus lens
	ET-D75LE6 Zoom lens		ET-D75LE10 Zoom lens		ET-D75LE20 Zoom lens		ET-D75LE30 Zoom lens		ET-D75LE40 Zoom lens		ET-D75LE8 Zoom lens		ET-D75LE50 Fixed-focus lens	Except ET-D75LE6	ET-D75LE6	
	min.	max.	min.	max.	min.	max.	min.	max.	min.	max.	min.	max.				
1.78 / 70	1.39	1.66	1.95	2.52	2.52	3.66	3.64	7.10	7.02	11.29	11.09	21.14	1.03	0.00 − 1.07	0.11 − 0.96	0.53
2.03 / 80	1.60	1.91	2.24	2.89	2.89	4.20	4.17	8.13	8.05	12.92	12.73	24.22	1.19	0.00 − 1.22	0.12 − 1.10	0.61
2.29 / 90	1.81	2.16	2.53	3.27	3.26	4.74	4.71	9.17	9.07	14.56	14.37	27.29	1.35	0.00 − 1.37	0.14 − 1.23	0.69
2.54 / 100	2.01	2.41	2.82	3.64	3.63	5.28	5.24	10.21	10.10	16.19	16.01	30.36	1.50	0.00 − 1.52	0.15 − 1.37	0.76
3.05 / 120	2.43	2.90	3.40	4.39	4.37	6.36	6.32	12.29	12.15	19.46	19.29	36.50	1.82	0.00 − 1.83	0.18 − 1.65	0.91
3.81 / 150	3.05	3.65	4.27	5.52	5.49	7.98	7.92	15.41	15.23	24.37	24.21	45.72	2.29	0.00 − 2.29	0.23 − 2.06	1.14
5.08 / 200	4.08	4.89	5.72	7.39	7.34	10.67	10.60	20.60	20.36	32.54	32.40	61.08	3.08	0.00 − 3.05	0.31 − 2.74	1.52
6.35 / 250	5.12	6.13	7.17	9.27	9.20	13.37	13.28	25.80	25.48	40.72	40.60	76.44	3.87	0.00 − 3.81	0.38 − 3.43	1.91
7.62 / 300	6.15	7.37	8.62	11.14	11.06	16.07	15.96	30.99	30.61	48.89	48.80	91.79	4.65	0.00 − 4.57	0.46 − 4.12	2.29
10.16 / 400	8.22	9.85	11.52	14.90	14.77	21.46	21.31	41.38	40.87	65.25	65.19	122.51	6.23	0.00 − 6.10	0.61 − 5.49	3.05
12.70 / 500	10.29	12.33	14.42	18.65	18.48	26.86	26.67	51.77	51.12	81.60	81.59	153.23	7.80	0.00 − 7.62	0.76 − 6.86	3.81
15.24 / 600	12.36	14.81	17.33	22.40	22.20	32.25	32.03	62.15	61.38	97.95	97.98	183.95	9.38	0.00 − 9.14	0.91 − 8.23	4.57
17.78 / 700	14.43	17.29	20.23	26.15	25.91	37.65	37.38	72.54	71.64	114.30	114.38	−	10.96	0.00 − 10.67	1.07 − 9.60	5.33
20.32 / 800	16.50	19.77	23.13	29.90	29.62	43.04	42.74	82.93	81.89	130.65	130.77	−	12.53	0.00 − 12.19	1.22 − 10.97	6.10
22.86 / 900	18.57	22.25	26.03	33.65	33.33	48.44	48.10	93.32	92.15	147.00	147.17	−	14.11	0.00 − 13.72	1.37 − 12.34	6.86
25.40 / 1000	20.64	24.73	28.93	37.40	37.05	53.83	53.45	103.71	102.41	163.36	163.56	−	15.68	0.00 − 15.24	1.52 − 13.72	7.62

Unit: feet

Screen size (diagonal) [m] / [in]	Distance to screen (L)												Height from the edge of screen to center of lens (H)		
	Zoom											Fixed-focus	Zoom lenses		Fixed-focus lens
	ET-D75LE6 Zoom lens		ET-D75LE10 Zoom lens		ET-D75LE20 Zoom lens		ET-D75LE30 Zoom lens		ET-D75LE40 Zoom lens		ET-D75LE8 Zoom lens		ET-D75LE50 Fixed-focus lens	Except ET-D75LE6	ET-D75LE6	
	min.	max.	min.	max.	min.	max.	min.	max.	min.	max.	min.	max.				
1.78 / 70	4.6	5.5	6.4	8.3	8.3	12.0	11.9	23.3	23.0	37.0	36.4	69.4	3.4	0.0 − 3.5	0.4 − 3.1	1.7
2.03 / 80	5.2	6.3	7.3	9.5	9.5	13.8	13.7	26.7	26.4	42.4	41.8	79.4	3.9	0.0 − 4.0	0.4 − 3.6	2.0
2.29 / 90	5.9	7.1	8.3	10.7	10.7	15.5	15.4	30.1	29.8	47.8	47.1	89.5	4.4	0.0 − 4.5	0.4 − 4.0	2.3
2.54 / 100	6.6	7.9	9.2	11.9	11.9	17.3	17.2	33.5	33.1	53.1	52.5	99.6	4.9	0.0 − 5.0	0.5 − 4.5	2.5
3.05 / 120	8.0	9.5	11.1	14.4	14.3	20.9	20.7	40.3	39.9	63.8	63.3	119.8	6.0	0.0 − 6.0	0.6 − 5.4	3.0
3.81 / 150	10.0	12.0	14.0	18.1	18.0	26.2	26.0	50.5	50.0	79.9	79.4	150.0	7.5	0.0 − 7.5	0.8 − 6.7	3.8
5.08 / 200	13.4	16.0	18.8	24.3	24.1	35.0	34.8	67.6	66.8	106.8	106.3	200.4	10.1	0.0 − 10.0	1.0 − 9.0	5.0
6.35 / 250	16.8	20.1	23.5	30.4	30.2	43.9	43.6	84.6	83.6	133.6	133.2	250.8	12.7	0.0 − 12.5	1.3 − 11.3	6.3
7.62 / 300	20.2	24.2	28.3	36.6	36.3	52.7	52.4	101.7	100.4	160.4	160.1	301.2	15.3	0.0 − 15.0	1.5 − 13.5	7.5
10.16 / 400	27.0	32.3	37.8	48.9	48.5	70.4	69.9	135.8	134.1	214.1	213.9	401.9	20.4	0.0 − 20.0	2.0 − 18.0	10.0
12.70 / 500	33.8	40.4	47.3	61.2	60.6	88.1	87.5	169.8	167.7	267.7	267.7	502.7	25.6	0.0 − 25.0	2.5 − 22.5	12.5
15.24 / 600	40.6	48.6	56.8	73.5	72.8	105.8	105.1	203.9	201.4	321.4	321.5	603.5	30.8	0.0 − 30.0	3.0 − 27.0	15.0
17.78 / 700	47.4	56.7	66.4	85.8	85.0	123.5	122.6	238.0	235.0	375.0	375.3	−	35.9	0.0 − 35.0	3.5 − 31.5	17.5
20.32 / 800	54.1	64.8	75.9	98.1	97.2	141.2	140.2	272.1	268.7	428.7	429.0	−	41.1	0.0 − 40.0	4.0 − 36.0	20.0
22.86 / 900	60.9	73.0	85.4	110.4	109.4	158.9	157.8	306.2	302.3	482.3	482.8	−	46.3	0.0 − 45.0	4.5 − 40.5	22.5
25.40 / 1000	67.7	81.1	94.9	122.7	121.5	176.6	175.4	340.2	336.0	535.9	536.6	−	51.4	0.0 − 50.0	5.0 − 45.0	25.0

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

NOTE: When the ET-D75LE50 is mounted, the optical lens shift function cannot be used.

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

Zoom lenses

|		
ET-D75LE6	minimum	L (m) = (diagonal screen size in inches) × 0.0207 − 0.0566
	maximum	L (m) = (diagonal screen size in inches) × 0.0248 − 0.0736
ET-D75LE10	minimum	L (m) = (diagonal screen size in inches) × 0.0290 − 0.0857
	maximum	L (m) = (diagonal screen size in inches) × 0.0375 − 0.1085
ET-D75LE20	minimum	L (m) = (diagonal screen size in inches) × 0.0371 − 0.0832
	maximum	L (m) = (diagonal screen size in inches) × 0.0540 − 0.1162
ET-D75LE30	minimum	L (m) = (diagonal screen size in inches) × 0.0536 − 0.1131
	maximum	L (m) = (diagonal screen size in inches) × 0.1039 − 0.1765
ET-D75LE40	minimum	L (m) = (diagonal screen size in inches) × 0.1026 − 0.1577
	maximum	L (m) = (diagonal screen size in inches) × 0.1635 − 0.1615
ET-D75LE8	minimum	L (m) = (diagonal screen size in inches) × 0.1640 − 0.3862
	maximum	L (m) = (diagonal screen size in inches) × 0.3072 − 0.3598

Fixed-focus lens

ET-D75LE50		L (m) = (diagonal screen size in inches) × 0.0158 − 0.0713

• **Distances calculated with the above equations will include slight deviations.**

Shift range

Optical axis shift function allows to shift the position of a projected image as shown below.

• **When the lens except the ET-D75LE6 is mounted**

Standard postition of projected image

• **When the ET-D75LE6 is mounted**

Standard postition of projected image
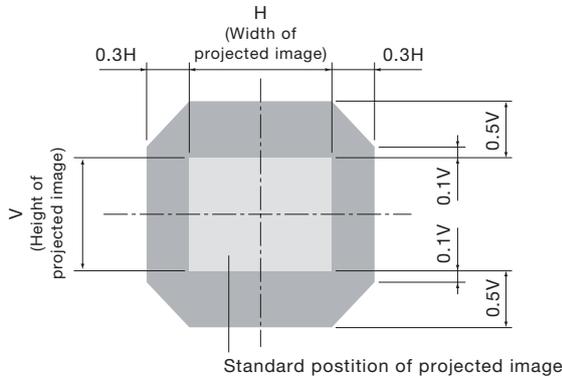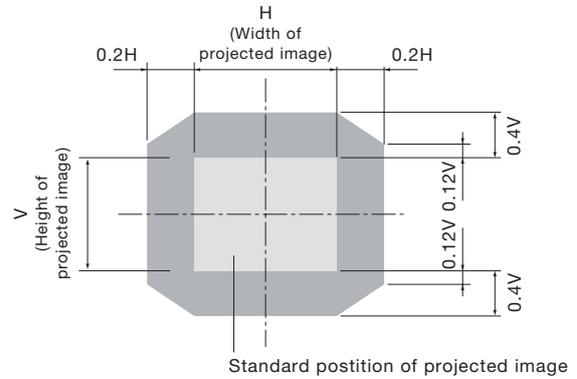
• **Because the ET-D75LE50 is a fixed short-throw lens, the lens shift function cannot be used with it.**

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 360°.
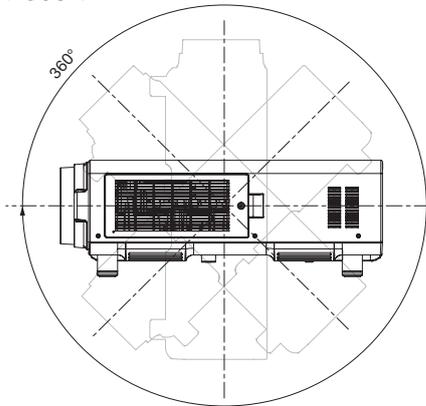
• **Horizontal direction**
The projector may be installed at a horizontal angle of ±15°.
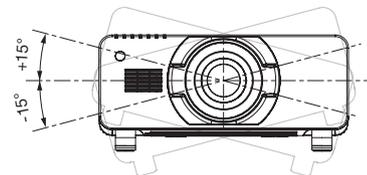
• **Vertical direction in portrait mode with the ET-LAD520P/LAD520PF mounted**
The projector may be installed at a vertical angle of ±15°.
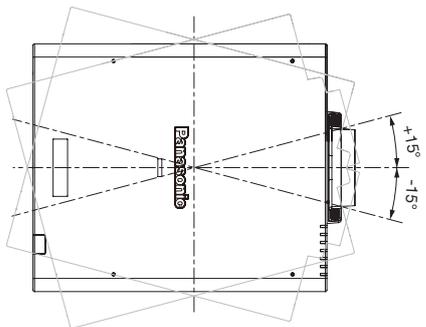
• **Horizontal direction in portrait mode with the ET-LAD520P/LAD520PF mounted**
The projector may be installed at a horizontal angle of ±15°.
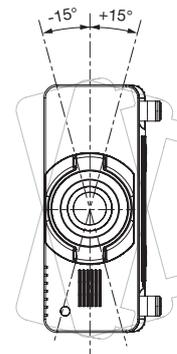
NOTE: The projector cannot be vertically installed all by itself. Also, the terminal side must face downward when vertically installed.

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 100 kHz, vertical scanning frequencies of 24 Hz to 120 Hz, and a dot clock of 162 MHz maximum can be input.

NOTE: The native resolution of this projector is 1,400 × 1,050 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 H (kHz)	V (kHz)	Dot clock frequency (MHz)	Format
NTSC/NTSC4.43/PAL-M/PAL60	720 × 480i	15.7	59.9	–	VIDEO/S-VIDEO
PAL/PAL-N/SECAM	720 × 576i	15.6	50.0	–	
480i (525i)	720 × 480i	15.7	59.9	13.5	SDI/RGB/YC$_B$C$_R$
576i (625i)	720 × 576i	15.6	50.0	13.5	
480i (525i)	720(1440) × 480i[2]	15.7	59.9	27.0	HDMI/DVI-D/
576i (625i)	720(1440) × 576i[2]	15.6	50.0	27.0	
480p (525p)	720 × 483	31.5	59.9	27.0	HDMI/DVI-D/
576p (625p)	720 × 576	31.3	50.0		RGB/YC$_B$C$_R$
720/60p	1280 × 720	45.0	60.0	74.3	SDI/HDMI/DVI-D/
720/50p		37.5	50.0		RGB/YP$_B$P$_R$
1080/60i	1920 × 1080i	33.8	60.0		
1080/50i		28.1	50.0		
1080/24p	1920 × 1080	27.0	24.0		
1080/24sF	1920 × 1080i	27.0	48.0		
1080/25p	1920 × 1080	28.1	25.0		
1080/30p		33.8	30.0		
1080/60p		67.5	60.0	148.5	SDI[3]/HDMI/DVI-D/
1080/50p		56.3	50.0		RGB/YP$_B$P$_R$
2K/24p	2048 × 1080	27.0	24.0	74.3	SDI[4]
2K/24sF					
2K/24sF		54.0	48.0	148.5	SDI*
2K/24sF		56.3	50.0		
2K/24sF		67.5	60.0		
VGA400	640 × 400	31.5	70.1	25.2	HDMI/DVI-D/RGB
		37.9	85.1	31.5	
VGA480	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	39.6	50.0	51.9	
		48.4	60.0	65.0	
		56.5	70.1	75.0	
		60.0	75.0	78.8	
		65.5	81.6	86.0	
		68.7	85.0	94.5	
		81.4	100.0	113.3	
		98.8	120.0	139.1	
MXGA	1152 × 864	53.7	60.0	81.6	
		64.0	71.2	94.2	
		67.5	74.9	108.0	
		76.7	85.0	121.5	
MAC21	1152 × 870	68.7	75.1	100.0	

*1 The "i" appearing after the resolution indicates an interlaced signal.
*2 Pixel-Repetition signal (dot clock frequency 27.0 MHz) only
*3 SDI 1 only.
*4 For dual-link connection only.

Display mode	Display resolution (dots)	Scanning frequency H (kHz)	V (kHz)	Dot clock frequency (MHz)	Format
1280 × 720	1280 × 720	37.1	49.8	60.5	HDMI/DVI-D/RGB
		44.8	59.9	74.5	
		76.3	100.0	131.8	
		92.6	120.0	161.6	
1280 × 768	1280 × 768	39.6	49.9	65.3	
		47.8	59.9	79.5	
	1280 × 768*	47.4	60.0	68.3	
	1280 × 768	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	
	1280 × 800*	49.3	59.9	71.0	
	1280 × 800	62.8	74.9	106.5	
		71.6	84.9	122.5	
MSXGA	1280 × 960	60.0	60.0	108.0	
SXGA	1280 × 1024	52.4	50.0	88.0	
		64.0	60.0	108.0	
		72.3	66.3	125.0	
		78.2	72.0	135.1	
		80.0	75.0	135.0	
		91.1	85.0	157.5	
1366×768	1366 × 768	47.7	59.8	85.5	
		39.6	49.9	69.0	
SXGA+	1400 × 1050	54.1	50.0	99.9	
		64.0	60.0	108.0	
		65.2	60.0	122.6	
		65.3	60.0	121.8	
		78.8	72.0	149.3	
		82.2	75.0	155.9	
WXGA+	1440 × 900	55.9	59.9	106.5	
		46.3	49.9	86.8	
1600×900	1600 × 900	46.4	49.9	96.5	
		55.9	59.9	119.0	
UXGA60	1600 × 1200	61.8	49.9	131.5	
		75.0	60.0	162.0	
WSXGA+	1680 × 1050	65.3	60.0	146.3	
		54.1	50.0	119.5	
1920×1080	1920 × 1080	55.6	49.9	141.5	
	1920 × 1080*	66.6	59.9	138.5	
	1920 × 1080	67.2	60.0	173.0	RGB
WUXGA	1920 × 1200	61.8	49.9	158.3	HDMI/DVI-D/RGB
	1920 × 1200*	74.0	60.0	154.0	
	1920 × 1200	74.6	59.9	193.3	RGB

*   **Compliant with VESA CVT-RB (Coordinated Video Timing-Reduced Blanking).**

3-Chip DLP™ Projector

PT-**DS20K2**

List of compatible 3D signals

The 3D signals that can be input to this projector are shown in the table below.

Display mode	Display resolution (dots)[1]	Scanning frequency H (kHz)	V (kHz)	Dot clock frequency (MHz)	HDMI Frame packing	HDMI Side by side[2]	HDMI Top and bottom	DVI-D Side by side[2]	DVI-D Top and bottom	Line by line	Frame sequential
720/60p	1280 × 720	45.0	60.0	74.3	Yes	Yes	Yes	Yes	Yes	Yes	–
720/50p		37.5	50.0	74.3							
1080/60i	1920 × 1080i	33.8	60.0	74.3			–			–	
1080/50i		28.1	50.0	74.3							
1080/24p	1920 × 1080	27.0	24.0	74.3			Yes				
1080/24sF	1920 × 1080i	27.0	48.0	74.3	–	–	–				
1080/25p	1920 × 1080	28.1	25.0	74.3							
1080/30p		33.8	30.0	74.3							
1080/60p		67.5	60.0	148.5		Yes	Yes				
1080/50p		56.3	50.0	148.5							
VGA480	640 × 480	31.5	59.9	25.2	–	–			–		
SVGA	800 × 600	37.9	60.3	40.0							
XGA	1024 × 768	39.6	50.0	51.9							
		48.4	60.0	65.0							
		81.4	100.0	113.3				–			Yes
		98.8	120.0	139.1							
MXGA	1152 × 864	53.7	60.0	81.6				Yes			–
1280 × 720	1280 × 720	37.1	49.8	60.5							
		44.8	59.9	74.5							
		76.3	100.0	131.8				–			Yes
		92.6	120.0	161.6							
1280 × 768	1280 × 768	39.6	49.9	65.3				Yes			–
		47.8	59.9	79.5							
	1280 × 768 [3]	47.4	60.0	68.3							
1280 × 800	1280 × 800	41.3	50.0	68.0							
		49.7	59.8	83.5							
	1280 × 800 [3]	49.3	59.9	71.0							
MSXGA	1280 × 960	60.0	60.0	108.0							
SXGA	1280 × 1024	52.4	50.0	88.0							
		64.0	60.0	108.0							
1366 × 768	1366 × 768	47.7	59.8	85.5							
		39.6	49.9	69.0							
SXGA+	1400 × 1050	54.1	50.0	99.9							
		64.0	60.0	108.0							
		65.2	60.0	122.6							
		65.3	60.0	121.8							
WXGA+	1440 × 900	55.9	59.9	106.5							
		46.3	49.9	86.8							
1600 × 900	1600 × 900	46.4	49.9	96.5							
		55.9	60.0	119.0							
UXGA60	1600 × 1200	75.0	60.0	162.0							
		61.8	49.9	131.5							
WSXGA+	1680 × 1050	65.3	60.0	146.3							
		54.1	50.0	119.5							
1920 × 1080	1920 × 1080	55.6	49.9	141.5							
	1920 × 1080 [3]	66.6	59.9	138.5							
WUXGA	1920 × 1200	61.8	49.9	158.3							
	1920 × 1200 [3]	74.0	60.0	154.0						Yes	

[1] The "i" appearing after the resolution indicates an interlaced signal.
[2] Compatible with half-resolution signals.
[3] Compliant with VESA CVT-RB (Coordinated Video Timing-Reduced Blanking).

Panasonic

PT-**DS20K2**

Display mode	Display resolution (dots)[1]	H (kHz)	V (kHz)	Dot clock freq. (MHz)	RGB1/RGB2 Side by side[2]	RGB1/RGB2 Top and bottom	RGB1/RGB2 Line by line	RGB1/RGB2 Frame sequential	SDI1/SDI2 Side by side[2]	SDI1/SDI2 Top and bottom	SDI1/SDI2 Line by line	HDMI & DVI-D Simultaneous	RGB1 & RGB2 Simultaneous	SDI1 & SDI2 Simultaneous	3G-SDI Level B Simultaneous
720/60p	1280 × 720	45.0	60.0	74.3	Yes	Yes	Yes	–	Yes	Yes	Yes	Yes	Yes	Yes	Yes[3]
720/50p		37.5	50.0	74.3											
1080/60i	1920 × 1080i	33.8	60.0	74.3			–				–				
1080/50i		28.1	50.0	74.3											
1080/24p	1920 × 1080	27.0	24.0	74.3											
1080/24sF	1920 × 1080i	27.0	48.0	74.3											
1080/25p	1920 × 1080	28.1	25.0	74.3											
1080/30p		33.8	30.0	74.3											
1080/60p		67.5	60.0	148.5					Yes[3]	Yes[3]				–	–
1080/50p		56.3	50.0	148.5											
VGA480	640 × 480	31.5	59.9	25.2		–			–	–		–	–		
SVGA	800 × 600	37.9	60.3	40.0											
XGA	1024 × 768	39.6	50.0	51.9											
		48.4	60.0	65.0											
		81.4	100.0	113.3	–			Yes							
		98.8	120.0	139.1											
MXGA	1152 × 864	53.7	60.0	81.6	Yes			–							
1280 × 720	1280 × 720	37.1	49.8	60.5											
		44.8	59.9	74.5											
		76.3	100.0	131.8	–			Yes							
		92.6	120.0	161.6											
1280 × 768	1280 × 768	39.6	49.9	65.3	Yes			–							
		47.8	59.9	79.5											
	1280 × 768 [4]	47.4	60.0	68.3											
1280 × 800	1280 × 800	41.3	50.0	68.0											
		49.7	59.8	83.5											
	1280 × 800 [4]	49.3	59.9	71.0											
MSXGA	1280 × 960	60.0	60.0	108.0											
SXGA	1280 × 1024	52.4	50.0	88.0											
		64.0	60.0	108.0											
1366 × 768	1366 × 768	47.7	59.8	85.5											
		39.6	49.9	69.0											
SXGA+	1400 × 1050	54.1	50.0	99.9								Yes	Yes		
		64.0	60.0	108.0											
		65.2	60.0	122.6											
		65.3	60.0	121.8											
WXGA+	1440 × 900	55.9	59.9	106.5								–	–		
		46.3	49.9	86.8											
1600 × 900	1600 × 900	46.4	49.9	96.5											
		55.9	60.0	119.0											
UXGA60	1600 × 1200	75.0	60.0	162.0											
		61.8	49.9	131.5											
WSXGA+	1680 × 1050	65.3	60.0	146.3											
		54.1	50.0	119.5											
1920 × 1080	1920 × 1080	55.6	49.9	141.5											
	1920 × 1080 [4]	66.6	59.9	138.5											
WUXGA	1920 × 1200	61.8	49.9	158.3								Yes	Yes		
	1920 × 1200 [4]	74.0	60.0	154.0		Yes									

[1] The "i" appearing after the resolution indicates an interlaced signal.
[2] Compatible with half-resolution signals.
[3] SDI 1 only.
[4] Compliant with VESA CVT-RB (Coordinated Video Timing-Reduced Blanking).