SONY
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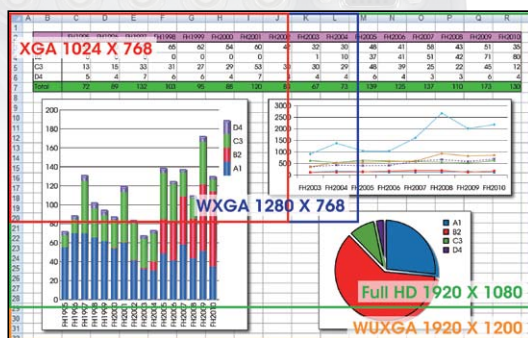# VPL-FH31 &
VPL-FH36

WUXGA Installation
Projectors

BrightEra™
Long Lasting Optics

3LCD

Installation flexibility and trouble-free maintenance with a stylish "blend-in" design

VPL-FH31 & VPL-FH36

Packing the most advanced projector technologies into a "blend-in" design, the VPL-FH31 and VPL-FH36 are excellent choices for universities, corporates, museums and medical (DICOM) applications. Delivering a dramatic colour brightness of 4300 and 5200 lumens respectively and ultra high-quality images with WUXGA resolution, the projectors offer peace of mind operation, amazing installation flexibility and hassle-free maintenance in a stylish design that blends into any decor.

The maintenance cycles of the lamp and cleaning filters are synchronised and exceptionally long, which cuts maintenance time and cost. In addition, both projectors are designed to deliver a low total cost of ownership and include environmentally conscious features, thanks to their long-lasting lamp and low power consumption.

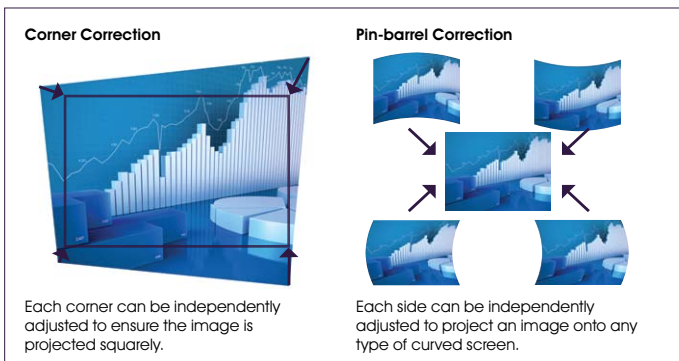**BrightEra™**
Long Lasting Optics

High Picture Quality

High Picture Quality and Bright Images
By combining a new-generation optical system that uses Sony's BrightEra™ Long Lasting Optics technology* and a 3LCD projection system, the VPL-FH31 and VPL-FH36 offer high picture quality in WUXGA (1920 x 1200) resolution and a high brightness of 4300 and 5200 lumens respectively.

* BrightEra with Long Lasting Optics is the brand name for a new generation of optical system, which is a more advanced version of Sony's original BrightEra technology. In addition to the adoption of LCD panels that have pixels with large aperture ratios and inorganic alignment layers, BrightEra with Long Lasting Optics technology also uses an inorganic layer for polarisation plates to greatly enhance reliability.
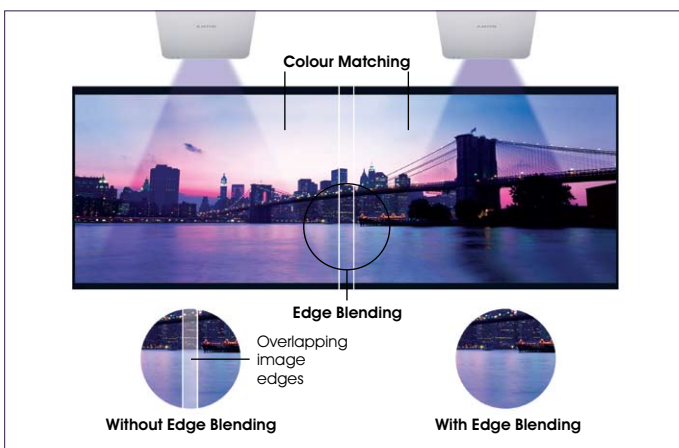
Warping Function

The image warping feature allows an 8 point (4 corners and 4 sides) image adjustment for convex or concave projected surfaces. Making adjustments is easy with the remote control and the on-screen operating menu.

Corner Correction

Pin-barrel Correction

Each corner can be independently adjusted to ensure the image is projected squarely.

Each side can be independently adjusted to project an image onto any type of curved screen.
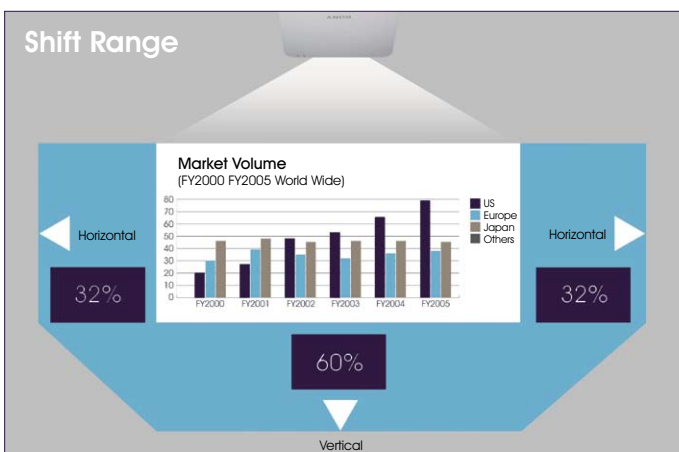
Edge Blend

Multiple projectors have the ability to project an single seamless image onto a screen (wall) creating an exciting visual event or retail or corporate signage application.

Colour Matching

Edge Blending

Overlapping image edges

Without Edge Blending
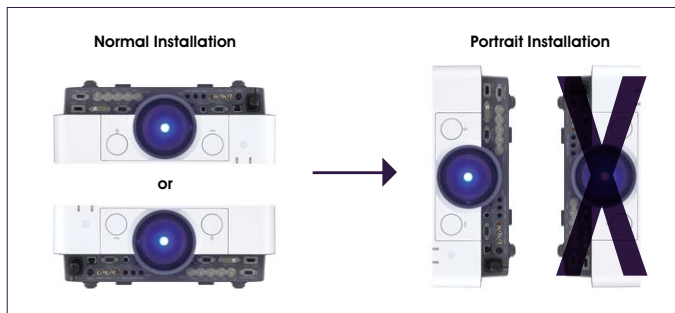
With Edge Blending

Installation Advantages

Lens Shift Functions

The VPL-FH31 and VPL-FH36 are equipped with horizontal and vertical lens shift functions for greater installation flexibility. Using this function, the position of the projected image can be moved vertically by up to 60% and horizontally from -32% through to +32%. Images can be easily adjusted to the desired settings during installation.

Shift Range

Horizontal 32%

Horizontal 32%

60%

Vertical

Portrait Mode

The VPL-FH31 (only) can be installed on its side (fan side down) for any portrait signage application.

Normal Installation
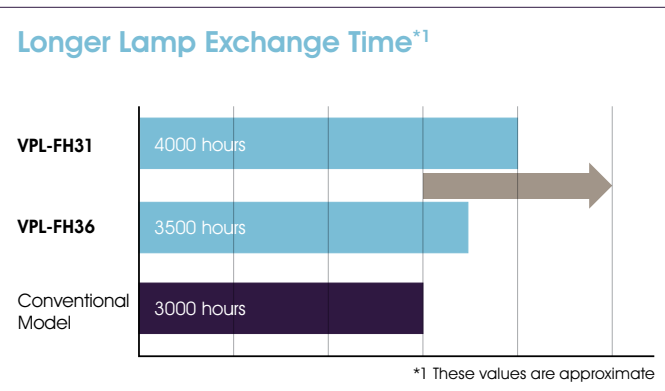
or

Portrait Installation

Excellent Total Cost of Ownership and ECO-friendly Features
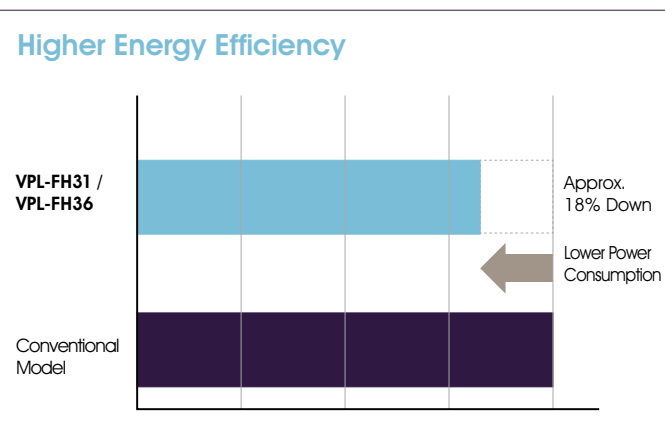
Long-lasting Lamp

By incorporating a newly developed high-performance lamp and advanced lamp-control technology, the projectors offer the recommended lamp replacement time of approximately 4,000 hours* (VPL-FH31) and 3500 hours* (VPL-FH36).

*In Standard mode.

Longer Lamp Exchange Time[1]

VPL-FH31	4000 hours
VPL-FH36	3500 hours
Conventional Model	3000 hours

[1] These values are approximate

Low Power Consumption
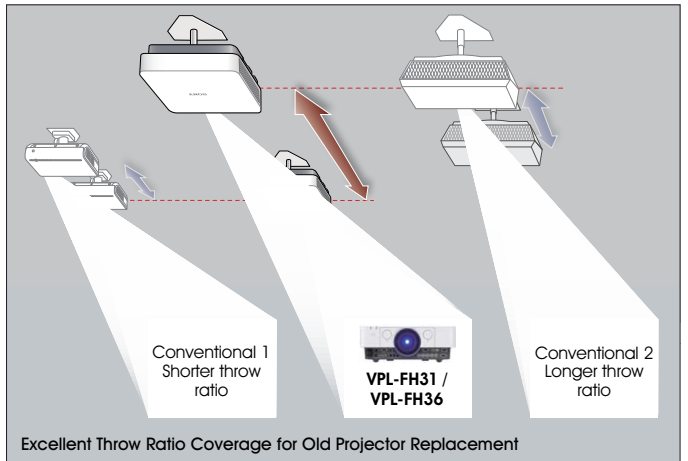
The projectors offer remarkably low power consumption, allowing users to make significant savings on electricity expenses.

Higher Energy Efficiency

VPL-FH31 / VPL-FH36 — Approx. 18% Down

Lower Power Consumption

Conventional Model

Excellent Throw Ratio Coverage for Old Projector Replacement

The 1.6x zoom and 1.39 to 2.23 throw ratio standard lens enables installation flexibility when replacing an existing projector with the VPL-FH31 or VPL-FH36, there's no need to change ceiling mount positions. For applications where more than a standard lens is needed, the projectors are compatible with the optional VPLL-Z1024PK and VPLL-Z1032PK accessory lenses designed for Sony's current VPL-FX40 Series.
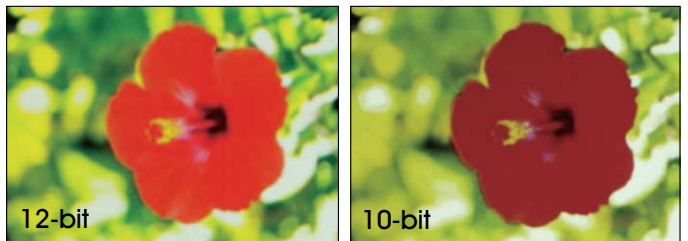
I/P Conversion and Film Mode

The video signal processing technology that Sony has incorporated in the projectors offer I/P conversion and 2-3 pull-down to generate high-quality images with outstanding clarity.

12-bit 3D Gamma Correction

The VPL-FH31 and VPL-FH36 incorporate 12-bit 3D Gamma Correction circuitry to perform highly accurate gamma correction, achieving smoother gradations and richer grey-scale.

Picture-by-Picture

With this feature, users can project two different images at the same time, greatly expanding creative possibilities and enabling exciting new applications.

Conventional 1
Shorter throw ratio

VPL-FH31 /
VPL-FH36

Conventional 2
Longer throw ratio

Excellent Throw Ratio Coverage for Old Projector Replacement

12-bit

10-bit

Picture-by-Picture

simulated image

ECO MODE

Eco Mode optimises combinations of the following functions.

- **Lamp mode**
  "High / Standard"

- Saving the consumption of lamp wattage.

- **Power Saving mode**
  "Lamp Cutoff / Projector Standby"

- When set to "On", the projector goes into power saving mode if there is no operation for 10 minutes without any signal input.

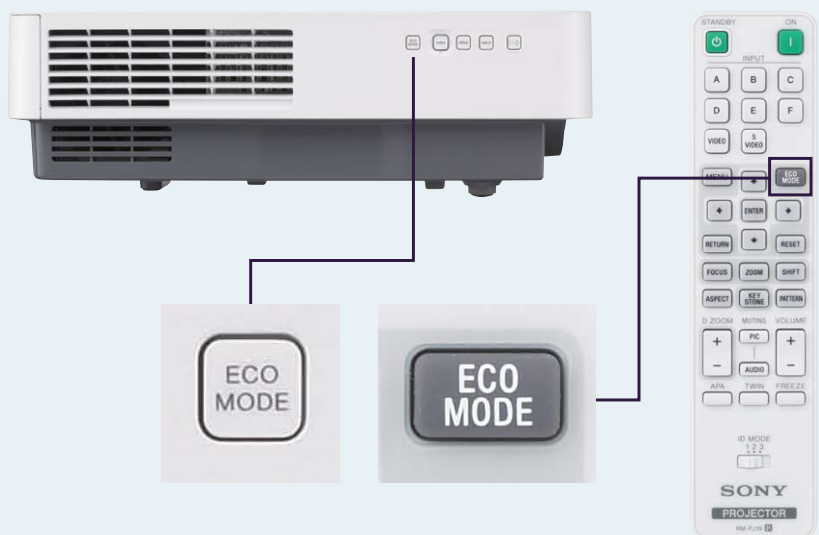Lamp Cutoff; The lamp goes off. The lamp lights again when a signal is input or any key is pressed.

Projector Standby ; "Standard / Low" In "Standard", power consumption is 12W and is reduced to 0.3W in "Low"*.

*Network function cannot be operated

ECO MODE Key

With a single push of the ECO MODE key on either the projector or the supplied Remote Commander™ unit, the user can select an energy-saving setting in the ECO Mode menu.

Centered Lens Design

The centered lens provides symmetry for a balanced installation and makes set up very simple.

Trouble-free Maintenance

Easy Lamp and Filter Maintenance

When the air filter must be cleaned, a timely message is clearly displayed on screen. The lamp and the filter are accessible from the same side, so their replacement can be performed without uninstalling the projector. With typical usage, replacement filters have an approximate 15000-hour cleaning cycle. This is achieved by a Quad Filter System enabling both the lamp and the filters to be replaced at the same time, even in tough environments, saving maintenance time and cost.
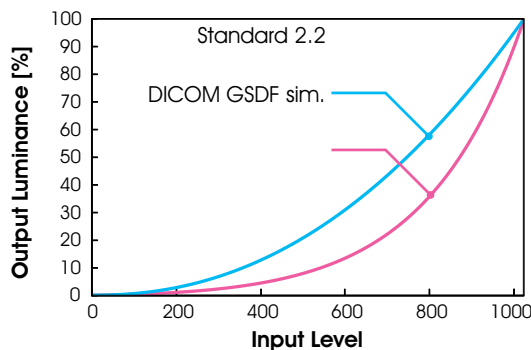
Quad Filter System

DICOM GSDF Simulation*

The VPL-FH31 and VPL-FH36 are equipped with a new gamma mode, called DICOM GSDF Simulation. This is ideal for viewing digital medical imagery for non-diagnostic applications.

* Conforms to GSDF (Grayscale Standard Display Function) medical standards for DICOM (Digital Imaging and Communications in Medicine).
* This function is for training and reference only, and cannot be used for medical diagnosis.

Simulated image

Standard 2.2   DICOM GSDF simulation

Freeze Function
Freezes the projected image

Digital Zoom Function
Enlarges a section of the image

Picture Muting Function via Built-in Mechanical Shutter
Mutes the projection of images on screen via a built-in mechanical shutter. This function can be easily operated with just the touch of a button on the supplied Remote Commander unit

Other Features

Panel Alignment
Allows the user to adjust colour alignment for ultimate picture perfect images

Whole picture alignment - Adjustment range: ±2.0 dot by 0.1 dot

Desired Zone alignment: Selects the desired range (H:16 x V:10 = 160 cross points) Adjustment range: ±2.0 dot by 0.1 dot

Colour Matching
Allows the user to adjust brightness and colour of the whole projected image to match the original image

Quiet Noise Operation
Low frequency sound

Closed Captioning
Official teletext broadcasting, developed by the NCI, USA

Security Pack
Security lock (password and mechanical), security bar, panel key lock and security label

Test Pattern Key
For easy screen adjustment

ID Mode
For individual control of multiple projectors

Audio Monitor Function
Allows audio to be selected based on input selection

Smart APA
Auto pixel alignment

Direct Power On/Off
Direct power control using the circuit breaker on the switch board

High Altitude Mode
For projector operation at high altitude

Network and Control
Controls and monitors projector status Compatible with various control systems
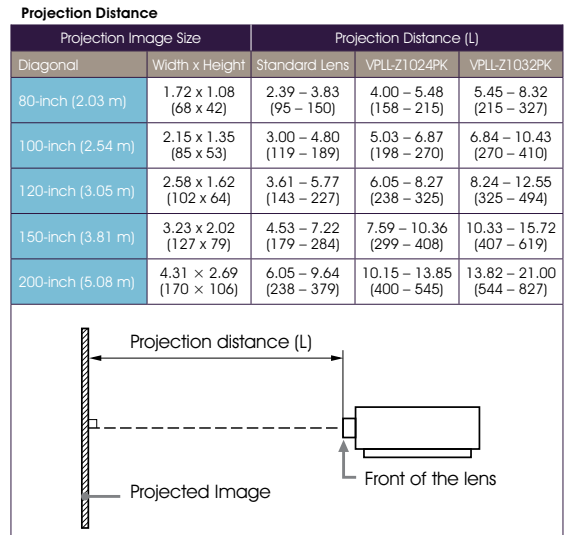
Preset Signal Chart

Computer Signal

Resolution	fH [kHz]/fV [Hz]	Input connector	
		RGB*1	DVI-D*2/HDMI*3
640 x 350	31.5/70	●	—
	37.9/85	●	—
640 x 400	31.5/70	●	—
	37.9/85	●	—
640 x 480	31.5/60	●	●
	35.0/67	●	—
	37.9/73	●	—
	37.5/75	●	—
	43.3/85	●	—
800 x 600	35.2/56	●	—
	37.9/60	●	●
	48.1/72	●	—
	46.9/75	●	—
	53.7/85	●	—
832 x 624	49.7/75	●	—
1024 x 768	48.4/60	●	●
	56.5/70	●	—
	60.0/75	●	—
	68.7/85	●	—
1152 × 864	64.0/70	●	—
	67.5/75	●	—
	77.5/85	●	—
1152 x 900	61.8/66	●	—
1280 x 960	60.0/60	●	●
	75.0/75	●	—
1280 x 1024	64.0/60	●	●
	80.0/75	●	—
	91.1/85	●	—
1400 x 1050	65.3/60	●	●
1600 x 1200	75.0/60	●	●
1280 x 768	47.8/60	●	●
1280 x 720	45.0/60	●	●*6
1920 x 1080	67.5/60	—	●*6
1360 x 768	47.7/60	●	●
1440 x 900	55.9/60	●	●
1680 x 1050	65.3/60	●	●
1280 x 800	49.7/60	●	●
1920 x 1200	74.0/60	●*5	●*5
1600 x 900	60.0/60	●*5	●*5

Digital TV Signal

Signal	fV [Hz]	Input Connector	
		RGB/YPBPR*4	DVI-D*2/HDMI*3
480i	60	●	●
576i	50	●	●
480p	60	●	●
576p	50	●	●
1080i	60	●	●
1080i	50	●	●
720p	60	●	●*6
720p	50	●	●
1080p	60	—	●*6
1080p	50	—	●
1080p	24	—	●

Analogue TV Signal

Signal	fV [Hz]	Input Connector
		VIDEO/S VIDEO
480i	60	●
576i	50	●

Optional Lenses

Projection Lens	VPLL-Z1024PK	VPLL-Z1032PK
Throw ratio	2.34 to 3.19	3.18 to 4.84
Zoom / Focus	Manual / Manual	Manual / Manual
Lens shift	Vertical: Upward 60% to Downward 0%	Vertical: Upward 60% to Downward 0%
	Horizontal: Right 32% to Left 32%	Horizontal: Right 32% to Left 32%
Aperture	f/2.00 to 2.30	f/2.00 to 2.40
Screen size*	40" to 600"	40" to 600"
Dimensions	W 97 x H 87 x D 180 mm (W 3 13/16 x H 3 7/16 x D 7 3/32 in)	W 97 x H 87 x D 177 mm (W 3 13/16 x H 3 7/16 x D 6 31/32 in)
Mass	1.1 kg / 2 lb 7 oz	1.1 kg / 2 lb 7 oz
Required projection lens adapter	PK-F30LA1	PK-F30LA1

* Viewable area, measured diagonally.

Installation Diagram

Projection Distance

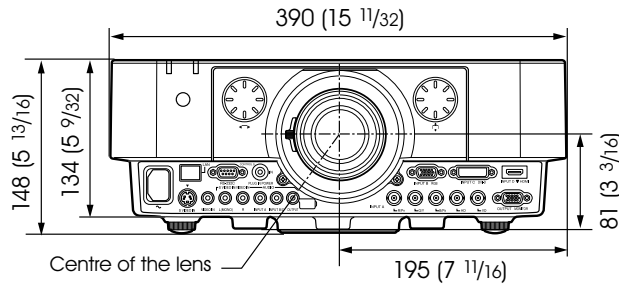| Projection Image Size		Projection Distance (L)		
Diagonal	Width x Height	Standard Lens	VPLL-Z1024PK	VPLL-Z1032PK
80-inch (2.03 m)	1.72 x 1.08 (68 x 42)	2.39 – 3.83 (95 – 150)	4.00 – 5.48 (158 – 215)	5.45 – 8.32 (215 – 327)
100-inch (2.54 m)	2.15 x 1.35 (85 x 53)	3.00 – 4.80 (119 – 189)	5.03 – 6.87 (198 – 270)	6.84 – 10.43 (270 – 410)
120-inch (3.05 m)	2.58 x 1.62 (102 x 64)	3.61 – 5.77 (143 – 227)	6.05 – 8.27 (238 – 325)	8.24 – 12.55 (325 – 494)
150-inch (3.81 m)	3.23 x 2.02 (127 x 79)	4.53 – 7.22 (179 – 284)	7.59 – 10.36 (299 – 408)	10.33 – 15.72 (407 – 619)
200-inch (5.08 m)	4.31 × 2.69 (170 × 106)	6.05 – 9.64 (238 – 379)	10.15 – 13.85 (400 – 545)	13.82 – 21.00 (544 – 827)

Projection distance (L)
Projected Image
Front of the lens

*1: INPUT A, INPUT B
*2: INPUT C
*3: INPUT D
*4: INPUT A
*5: Available for VESA Reduced Blanking signals only.
*6: INPUT C is determined as a computer signal; INPUT D is determined as a digital TV signal.

• When a signal other than the signals listed in the table is input, the picture may not be displayed properly.
• An input signal meant for a screen resolution different to that of the panel will not be displayed in its original resolution. Text and lines may be uneven.
• Some actual values may differ slightly from the design values given in the table.
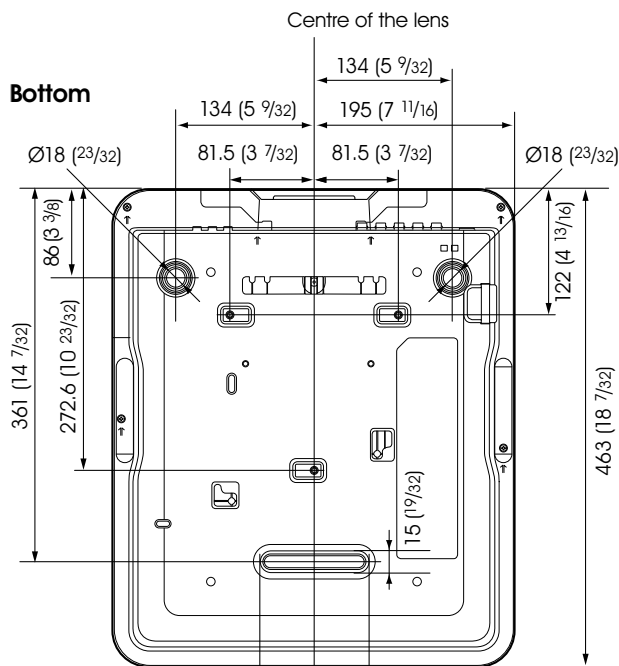
Optional Accessories

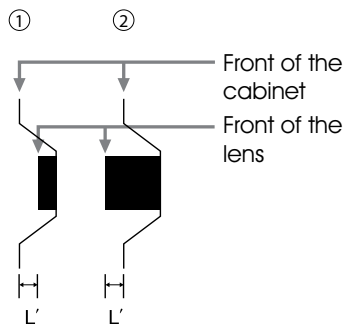| Replacement Projector Lamp (VPL-FH31) **LMP-F272**	Replacement Projector Lamp (VPL-FH36) **LMP-F331**	Projector Suspension Support **PAM-300**	Projector Lens Adapter **PK-F30LA1**

Front

390 (15 $^{11}/_{32}$)

148 (5 $^{13}/_{16}$)

134 (5 $^{9}/_{32}$)

81 (3 $^{3}/_{16}$)

Centre of the lens

195 (7 $^{11}/_{16}$)

Centre of the lens

Bottom

134 (5 $^{9}/_{32}$)

134 (5 $^{9}/_{32}$)

195 (7 $^{11}/_{16}$)

Ø18 ($^{23}/_{32}$)

81.5 (3 $^{7}/_{32}$)

81.5 (3 $^{7}/_{32}$)

Ø18 ($^{23}/_{32}$)

86 (3 $^{3}/_{8}$)

122 (4 $^{13}/_{16}$)

361 (14 $^{7}/_{32}$)

272.6 (10 $^{23}/_{32}$)

463 (18 $^{7}/_{32}$)

15 ($^{19}/_{32}$)

The distance L' is between the front of the lens (centre) and the front of the cabinet

① ②

Front of the cabinet

Front of the lens

Lens	L'	Type
Standard lens	12.2 (15/32)	①
VPLL-Z1024PK	1.6 (1/16)	②
VPLL-Z1032PK	0.3 (1/32)	①

L' L'

Unit: mm (inches)

Projector Lens supplied with PK-F30LA1 Projector Lens Adapter Throw Ratio 2.34 to 3.19
VPLL-Z1024PK

Projector Lens supplied with PK-F30LA1 Projector Lens Adapter Throw Ratio 3.18-4.84
VPLL-Z1032PK

Projector Lens Adapter
PK-F30LA1

Projector Lens Adapter
PK-F30LA1

All Sony Professional's business projectors sold into the EU, Norway and Switzerland come supplied with a 3 year PrimeSupport pack. This offers unique services and benefits over and above standard warranty:-

3 year cover plus 1 year (or 1000 hours) lamp cover

3 year projector and 1 year lamp warranty/1000 hour PrimeSupport cover from the product purchase date.

Freephone telephone helpdesk support (00800 7898 7898) in 5 languages. Collection, repair and return anywhere in EU, Norway and Switzerland.

In addition, optional PrimeSupport Plus packs can be purchased which can further enhance the 3 year support to give extra peace of mind:-

- A 2 year extension of the standard 3 year PrimeSupport to give long-term assurance of expert support, technical assistance and repairs for 5 years from purchase date.

- Provision of a loan unit for 3 or 5 years cover to ensure minimal impact to the customer's business in case of product failure.

- Cover for a lamp failure throughout the 3 year PrimeSupport term for customers who don't want to have any unexpected running costs.

Prime**Support**

Prime**Support Plus**

www.pro.sony.eu/projectors

		VPL-FH31	VPL-FH36
Display system		3 LCD system	
Display device	Size of effective display area	0.76" (19.3 mm) x 3, BrightEra, Aspect ratio: 16:10	
	Number of pixels	6,912,000 (1920 x 1200 x 3) pixels	
Projection lens	Zoom	Manual (Approx. 1.6 x)	
	Focus	Manual	
	Lens shift	Manual, Vertical: Upward 60% to Downward 0% Horizontal: Right 32% to Left 32%	
Light source		High-pressure mercury lamp, 275 W type	High-pressure mercury lamp, 330 W type
Recommended lamp replacement time*1		3000 H (Lamp mode: High) 4000 H (Lamp mode: Standard)	2500 H (Lamp mode: High) 3500 H (Lamp mode: Standard)
Filter cleaning cycle		Max. 15000 H*1 Same time as the lamp replacement is recommended	
Screen size		40" to 600" (1.02 m to 15.24 m)*2	
Light output		4300 lm (Lamp mode: High) 3400 lm (Lamp mode: Standard)	5200 lm (Lamp mode: High) 3900 lm (Lamp mode: Standard)
Colour light output		4300 lm (Lamp mode: High) 3400 lm (Lamp mode: Standard)	5200 lm (Lamp mode: High) 3900 lm (Lamp mode: Standard)
Contrast ratio (full white / full black)*2		2000:1	
Displayable scanning frequency	Horizontal	15kHz to 92 kHz	
	Vertical	48Hz to 92 Hz	
Display resolution	Computer signal input	Maximum display resolution: 1920 x 1200 dots*3 Panel display resolution: 1920 x 1200 dots	
	Video signal input	NTSC, PAL, SECAM, 480/60i, 576/50i, 480/60p, 576/50p, 720/60p, 720/50p, 1080/60i, 1080/50i, 1080/60p, 1080/50p, 1080/24p	
Colour system		NTSC3.58, PAL, SECAM, NTSC4.43, PAL-M, PAL-N, PAL60	
Keystone correction		Vertical & Horizontal: Max +/- 30%	
OSD language		23-languages (English, Dutch, French, Italian, German, Spanish, Portuguese, Turkish, Polish, Russian, Swedish, Norwegian, Japanese, Simplified Chinese, Traditional Chinese, Korean, Thai, Vietnamese, Arabic, Persian, Indonesian, Finnish and Hungarian)	
Computer and video signal input/output	INPUT A	RGB / Y PB PR input connector: 5BNC (female) Audio input connector: Stereo mini jack	
	INPUT B	RGB input connector: Mini D-sub 15-pin (female) Audio input connector: Stereo mini jack (shared with INPUT C)	
	INPUT C	DVI-D input connector: DVI-D 24-pin (Single link), supported HDCP Audio input connector: Stereo mini jack (shared with INPUT B)	
	INPUT D	HDMI input connector: Digital RGB/Y PB PR Digital Audio: PCN (32 kHz, 44.1 kHz, 48 kHz, 88.2 kHz, 96 kHz)	
	S VIDEO IN	S video input connector: Mini DIN 4-pin Audio input connector: Pin jack (x2) (shared with VIDEO IN)	
	VIDEO IN	Video input connector: Pin jack Audio input connector: Pin jack (x2) (shared with S VIDEO IN)	
	OUTPUT	Monitor output connector*4: Mini D-sub 15-pin (female) Audio output connector*5: Stereo mini jack (variable out)	
Control signal input/output		RS-232C connector: D-sub 9-pin (female) LAN connector: RJ45, 10BASE-T/100BASE-TX Control S input connector: Stereo mini jack, Plug in power DC 5 V	
Acoustic noise		30 dB (Lamp mode: Standard)	35 dB (Lamp mode: Standard)
Operating temperature (Operating humidity)		0°C to 40°C / 32°F to 104°F (35% to 85%; no condensation)	
Storage temperature (Storage humidity)		-20°C to +60°C / -4°F to +140°F (10% to 90%)	
Power requirements		AC 100 V to 240 V, 4 A to 1.6 A, 50/60 Hz	
Power consumption	AC 100 V to 120 V	400 W	460 W
	AC 220 V to 240 V	380 W	440 W
Standby mode power consumption	AC 100 V to 120 V	9.2 W (Standby mode: Standard) / 0.15 W (Standby mode: Low)	
	AC 220 V to 240 V	10.4 W (Standby mode: Standard) / 0.3 W (Standby mode: Low)	
Heat dissipation	AC 100 V to 120 V	1365 BTU	1570 BTU
	AC 220 V to 240 V	1297 BTU	1501 BTU
Outside dimensions		W 390 x H 148 x D 477 mm (W 15 11/32 x H 5 13/16 x D 18 25/32 in) W 390 x H 134 x D 463 mm (W 15 11/32 x H 5 9/32 x D 18 7/32 in) (without protrusions)	
Mass		8.2kg / 18lb 1 oz	8.3kg / 18lb 5 OZ
Supplied accessories		RM-PJ19 Remote Commander (1), Size AA (R6) batteries (2), AC Power Cord (1), Cable ties (2), Quick Reference Manual (1), Security Label (1), Operating Instructions (1)	

*1 The figures are expected maintenance time and not guaranteed. They will depend on the environment or how the projector is used.
*2 This value is average.
*3 Available for the VESA Reduced Blanking signal.
*4 From INPUT A and INPUT B.
*5 Works as an audio switcher function. Output from a selected channel; not available in standby.

For full features visit www.pro.sony.eu/projectors

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