VPL-VW870ES

Home Cinema entertainment at its very finest

At a glance

- 4K resolution: 4096 x 2160
- High brightness 2,200 ANSI lumens
- Up to 20,000 hours virtually maintenance-free laser technology
- Dual Contrast engine for outstanding black levels and contrast
- Futureproofed with support for latest picture standards
- ARC-F all glass lens for exceptional clarity

SXRD

4K HDR

4K

TRILUMINOS DISPLAY

DFI Dark Frame Insertion
Motionflow

3D Created by Sony

Key features

Shaped by our professional cinema expertise

There's decades of Sony experience in developing technology for the big screen packed into all our home cinema projectors:

4K native resolution

Enjoy uncompromised 4K images, with no artificial pixel enhancement.

True 4K HDR

High Dynamic Range takes you closer still to reality with higher contrast, richer colours and a wider range of brightness levels from deep, dark blacks to bright, sparkling highlights.

Reality Creation

Enjoy your existing Full HD Blu-ray™ collection, upscaled for an exceptional 4K experience – even in 3D.

Dual Contrast Engine

Dynamic laser control and Advanced Iris technology.

Discover all the emotion of cinematic entertainment in True 4K HDR

Experience the cinema-quality entertainment you've always dreamed of. The beautifully styled VPL-VW870ES represents a new landmark in home cinema technology, achieving extraordinary levels of picture performance.

The long-lasting laser light source delivers a powerful 2,200 lumen output for exceptional images, even in larger home cinema rooms and well-lit living spaces. Laser light levels are precisely controlled in real time, assuring truly spectacular dynamic contrast range with the latest 4K HDR content, ensuring the most accurate reproduction of the director's vision.

Enjoy all your content in superior detail

The VPL-VW870ES features an ARC-F (All Range Crisp Focus) glass lens, ensuring the highest quality image reproduction that reaches every corner of the screen. Achieve complete clarity and focus with new Digital Focus Optimiser technology, so you'll never miss any detail.

Featuring the latest 4K processor for home cinema projectors, Reality Creation technology analyses every object of the image while upscaling Full HD content for an incredible 4K experience, so you'll always get the best from your content library, with extraordinary clarity, colour and contrast.

ARC-F lens - All Range Crisp Focus Lens

Large diameter front Lens

18 piece all glass lens
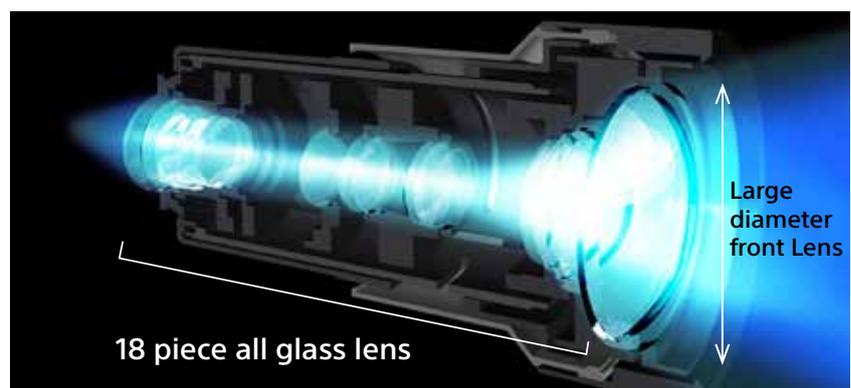
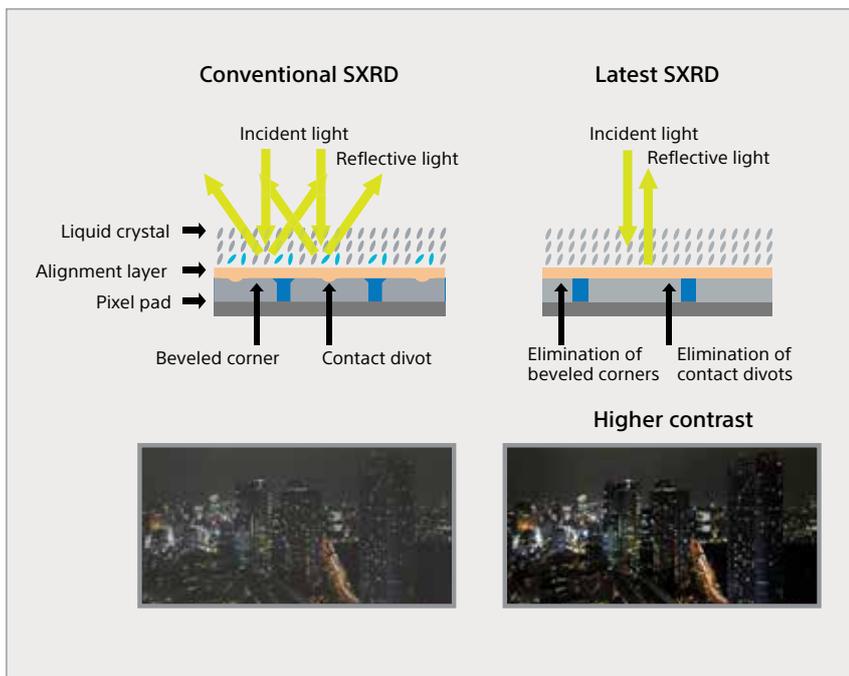# 4K native resolution: over four times more detail than Full HD

Don't compromise with true 4K (4096 x 2160 pixel) resolution, the standard used in the digital cinema industry. You'll find the same SXRD panel technology used in our professional projectors, producing 4K native pictures with no artificial pixel enhancement.

Full HD
1920 x 1080 (2.1 million pixels)

4K
4096 x 2160 (8.8 million pixels)
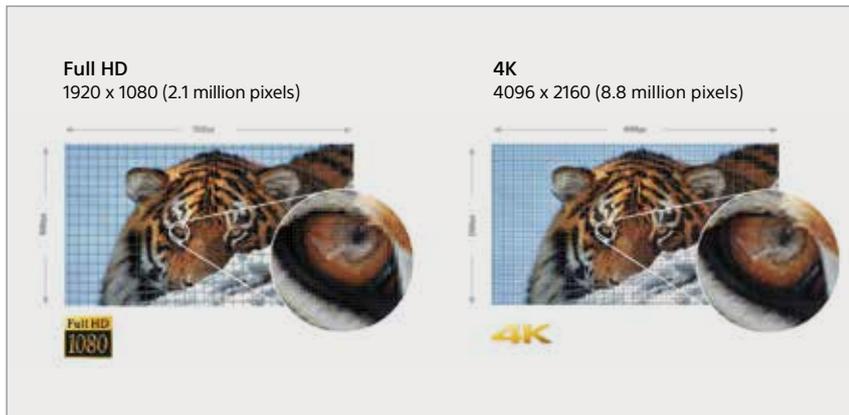
Simulated images

Advanced 4K SRXD Panels

The VPL-VW870ES automatically adjusts contrast for optimum picture quality by analysing dark and light areas in every scene. Advanced SXRD panel technology features a highly reflective liquid crystal layer and an alignment layer without bevelled corners or contact divots, enabling an ultra-fast response rate of just 2.5 milliseconds. Space is minimised between adjacent pixels for dot-free pictures with deep contrast.

Conventional SXRD

Incident light
Reflective light

Liquid crystal
Alignment layer
Pixel pad

Beveled corner   Contact divot

Latest SXRD

Incident light
Reflective light

Elimination of beveled corners   Elimination of contact divots

Higher contrast

Simulated images

Easy to install and use

Remarkably compact and elegantly styled, the VPL-VW870ES is beautifully easy to operate with a choice of picture modes for outstanding results with any content. With generous connections and interfaces, it also offers great flexibility for smooth integration in any AV entertainment set-up.

4K Motionflow

4K Motionflow cleverly adds extra frames to reduce blur and maintain brightness in thrilling, fast-moving scenes such as 4K sporting events. Cinema purists can choose True Cinema mode to retain the original 24 fps.

Without Motionflow

With Motionflow

Compatible with High Dynamic Range (HDR10, HLG)

Enjoy movies and streaming services in 4K HDR with a far wider range of brightness and content, thanks to HDMI 18 Gbps compatibility, from sparkling highlights to rich, deep blacks. Whatever you're watching, you'll enjoy a more lifelike entertainment experience with extremely high contrast, exquisite colour and fine detail.

Extremely high dynamic contrast

Through the use of precisely controlled laser light levels in real time and Advanced Iris technology, an exceptionally high dynamic range contrast ratio of ∞:1 can be achieved. Fine shadow detail is revealed in dark scenes, without compromising reproduction of bright scenes for truly captivating images.

Rear fan exhaust

Air intakes at the front of the projector are matched by a rear air exhaust for the low-noise fan, ensuring optimum picture quality.

Support for latest picture standards

The VPL-VW870ES can project 4K content at up to 60 frames per second, the latest 4K industry standard that's much higher than the earlier 24p. The result is smoother, more realistic images, especially with fast-paced action. And with support for HDCP 2.2, you're future-proofed to make the most of today's premium 4K releases – and tomorrow's.

Low latency mode

A great feature for gamers. Experience 4K 60P games and our fastest ever response time between the controller and screen for ultimate gaming action, with low input lag of 27msec, even when you're playing the latest 4K titles.
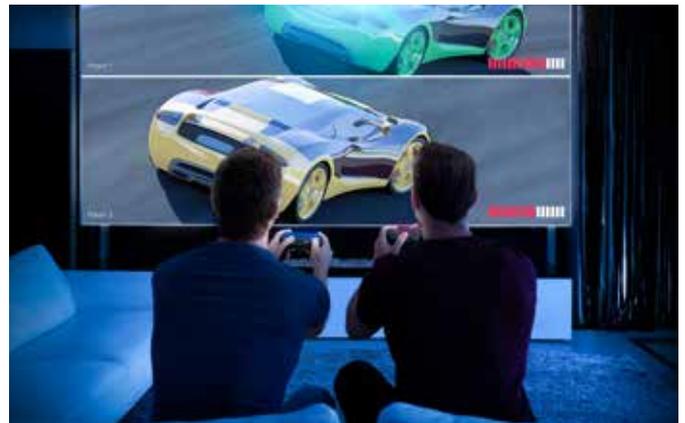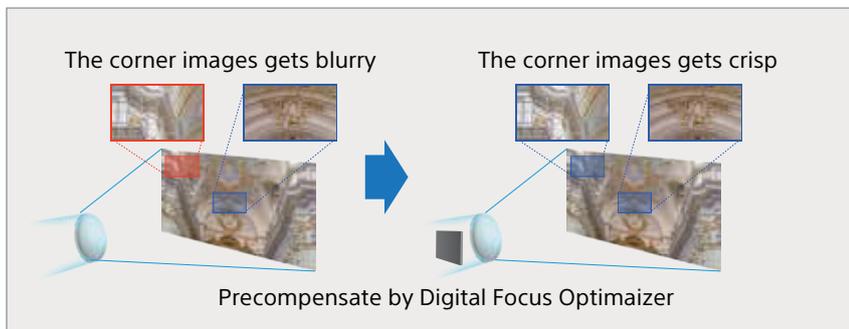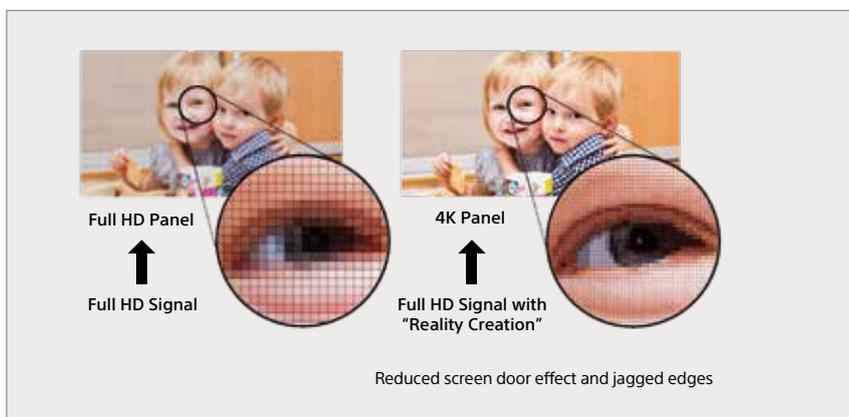
Reality Creation: upscales your movies to 4K

As well as native 4K material, you can see your current Full HD Blu-ray™ or DVD movie collection upscaled for a 4K experience. Featuring the latest 4K processor for home cinema projectors, Reality Creation technology analyses and radically enhances Full HD content, even upscaling 3D movies for 4K.

RF 3D Glasses

Introducing Digital Focus Optimiser

In collaboration with 4K Reality Creation, the projector will digitally compensate for any focus or abnormalities in the lens profile to create exceptional detail across the whole image.

Full HD Panel

4K Panel

Full HD Signal

Full HD Signal with "Reality Creation"

Reduced screen door effect and jagged edges

The corner images gets blurry

The corner images gets crisp

Precompensate by Digital Focus Optimaizer

Simulated images

Industry standard RF 3D compatible

A built-in RF transmitter synchronises with any RF 3D glasses for wider coverage, greater stability, and there's no need for an external transmitter.

Compatible with 4K Ultra HD Blu-ray™ discs

Take full advantage of UHD Blu-ray Discs featuring the highest quality content in 4K resolution and High Dynamic Range.

Wider zoom and interchangeable shift lens

A 2.06 motorised zoom lens and wide lens shift range of up to 80% vertical and 31% horizontal gives greater installation flexibility – even when the ceiling is very high. The VPL-VW870ES comes with the VPLL-Z7013 as standard, with the optional VPLL-Z7008 wide angle lens also available for further flexible installation conditions.

Suitable for home automation

The VPL-VW870ES is compatible with many home automation systems, including Crestron Connected and Control4 SDDP. It offers an RS232 interface, RJ45 control and IR-IN terminal.

Manual Colour Correction

Precisely adjust gamma plus hue, saturation and brightness for each colour to create exactly the picture you want.

TRILUMINOS DISPLAY

TRILUMINOS™ Display

Sony's advanced TRILUMINOS™ Display technology reproduces a much broader colour range, reproducing more tones and textures than standard projectors. You'll see the difference with greater colour purity, depth and realism in every scene.

Auto Calibration

After extended operating periods, colour can be automatically calibrated to match the original factory settings. There's no need for special calibration equipment: you'll enjoy consistent colours with every performance.

HDCP 2.2 compatible

The VPL-VW870ES is ready for premium 4K content, including TV, internet streamed productions and satellite broadcasts.

Sit closer

With 4K resolution, you can sit closer to the screen without compromising depth and realism. The best viewing position for 4K is at a distance of approximately 1.5 times the height of the projector screen (PH), compared to 3 times the height of the screen for Full HD.
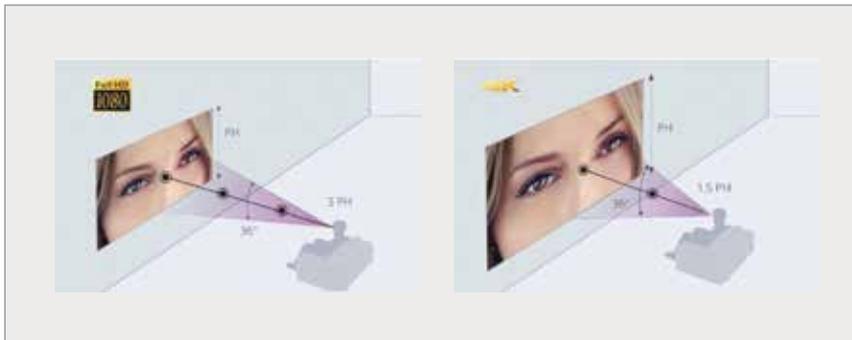
Simulated images

Electronic panel alignment

Ensures the red and blue elements in each pixel are precisely positioned against green. Adjustments can be made by as little as 0.1 pixels for optimum clarity. (NB we recommend adjustments are made when the projector is warm).
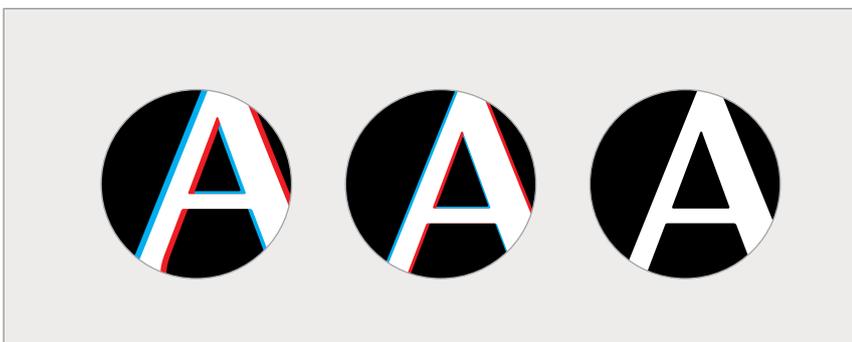
Simulated images

USB updates

To get the best from your projector, the VPL-VW870ES has USB ports to automatically receive the latest firmware updates, directly to the projector.

Long lasting laser light source

The projector's efficient, long-lasting laser light source offers up to 20,000 hours* virtually maintenance-free operation, with minimal drop-off in image brightness over the laser's long operating life.

*Actual hours may depend on usage and operating conditions.

Quick turn On/Off

The laser projector can be turned on and off quickly.

Brightness

Conventional Lamp Model

Turn ON

Time

Brightness

VPL-VW870ES

Turn ON

Time
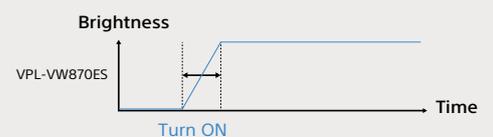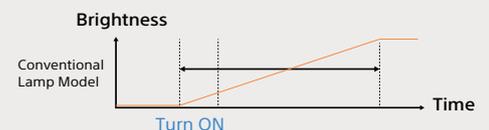
Optional Accessories

X105-RF-X1
3D Glasses

VPLL-Z7013
Normal focus zoom lens

VPLL-Z7008
Short focus zoom lens

|	VPLL-Z7013 (Bundled)	VPLL-Z7008 (Optional)
Dimensions (L')	14.5 mm	Tele 43.4 mm / Wide 69.5 mm
Throw ratio	1.27:1 to 2.73:1	1.80:1 to 1.02:1
Lens shift	Vertical: +/- 80%	Vertical: +/- 50%
	Horizontal: +/- 31%	Horizontal: +/- 18%

Projection distance

1.78
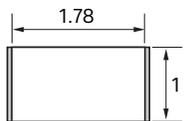
□ : Video display area
▨ : Projection area

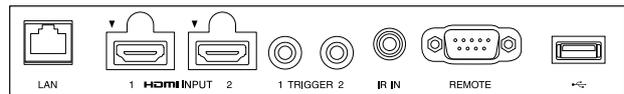| 1.78:1 (16:9)		
Projection image size		Projection distance L
Diagonal	Width × Height	
80" (2.03 m)	1.77 × 1.00 (70 × 39)	2.44 – 5.01 (96 – 197)
100" (2.54 m)	2.21 × 1.25 (87 × 49)	3.05 – 6.28 (121 – 247)
120" (3.05 m)	2.66 × 1.49 (105 × 59)	3.67 – 7.55 (145 – 297)
150" (3.81 m)	3.32 × 1.87 (131 × 74)	4.60 – 9.44 (181 – 371)
200" (5.08 m)	4.43 ×2.49 (174 × 98)	6.15 – 12.61 (242 – 496)

2.35
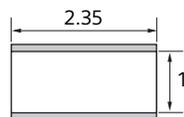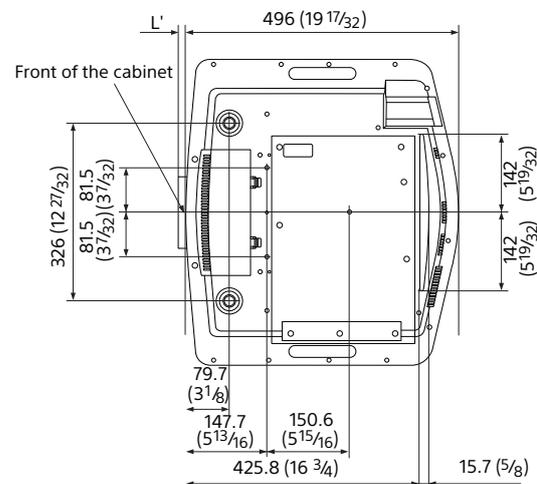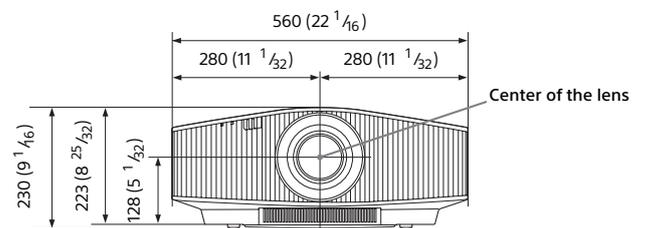
□ : Video display area
▨ : Projection area

2.35:1		
Projection image size		Projection distance L
Diagonal	Width × Height	
80" (2.03 m)	1.87 × 0.80 (74 × 31)	2.41 – 4.96 (95 – 195）
100" (2.54 m)	2.34 × 0.99 (92 × 39)	3.02 – 6.22 (119 – 244)
120" (3.05 m)	2.80 × 1.19 (110 × 47)	3.64 – 7.47 (143 – 294)
150" (3.81 m)	3.51 × 1.49 (138 × 59)	4.55 – 9.35 (180 – 368)
200" (5.08 m)	4.67 × 1.99 (184 × 78)	6.08 – 12.48 (240 – 491)

Connector Panel

LAN   1 HDMI INPUT 2   1 TRIGGER 2   IR IN   REMOTE   ←→

Dimensions

Units: mm (inches)

560 (22 $^{1}/_{16}$)
280 (11 $^{1}/_{32}$)   280 (11 $^{1}/_{32}$)
Center of the lens
230 (9 $^{1}/_{16}$)
223 (8 $^{25}/_{32}$)
128 (5 $^{1}/_{32}$)

L'
496 (19 $^{17}/_{32}$)
Front of the cabinet
326 (12 $^{27}/_{32}$)
81.5 ($^{37}/_{32}$)
81.5 ($^{37}/_{32}$)
142 (5 $^{19}/_{32}$)
142 (5 $^{19}/_{32}$)
79.7 (3 $^{1}/_{8}$)
147.7 (5 $^{13}/_{16}$)
150.6 (5 $^{15}/_{16}$)
425.8 (16 $^{3}/_{4}$)
15.7 (5/8)

Specifications

Display System		4K SXRD panel, projection system
Display device	Size of effective display area	0.74" x 3
	Number of pixels	26,542,080 (4096 x 2160 x 3) pixels
Projection lens	Focus	Powered
	Zoom	Powered (Approx. x 2.1)
	Throw ratio	VPLL-Z7013 (Inc lens) - 1.27:1 to 2.73:1 VPLL-Z7008 (Optional lens) - 0.80:1 to 1.02:1
	Lens shift	Powered Vertical: +/- 80% Horizontal: +/- 31% VPLL-Z7008 (Optional lens) - Vertical: +/- 50% Horizontal: +/- 18%
Light source		Laser diode
Screen size		60" to 300" (1,524 mm to 7,620 mm)
Light output		2200 lm
Color light output		2200 lm
Dynamic contrast		∞:1 with Dual Contrast Engine
Displayable scanning frequency	Horizontal	19 kHz to 72 kHz
	Vertical	48 Hz to 92 Hz
Display resolution*1	Computer signal input	Maximum display resolution: 1920 x 1080 dots (HDMI Input only)
	Video signal input	480/60p, 576/50p, 720/60p, 720/50p, 1080/60i, 1080/50i, 1080/60p, 1080/50p, 1080/24p, 3840 x 2160/24p, 3840 x 2160/25p, 3840 x 2160/30p, 3840 x 2160/50p, 3840 x 2160/60p, 4096 x 2160/24p, 4096 x 2160/25p, 4096 x 2160/30p, 4096 x 2160/50p, 4096 x 2160/60p
OSD language		18-languages (English, Dutch, French, Italian, German, Spanish, Portuguese, Turkish, Polish, Russian, Swedish, Norwegian, Japanese, Simplified Chinese, Traditional Chinese, Korean, Thai, Arabic)
INPUT OUTPUT (Computer / Video / Control)	HDMI1 / HDMI2*2	Digital (RGB/Y Pb/Cb Pr/Cr)
	Trigger1 / Trigger2	Minijack, DC 12 V Max. 100 mA
	Remote	RS-232C, D-sub 9-pin (male)
	LAN	RJ45, 10Base-T/100BASE-TX
	IR IN	Mini Jack
	USB	DC 5V, Max. 500 mA
Acoustic noise		24 dB*3
Operating temperature / Operating humidity		5°C to 35°C (41°F to 95°F) / 35% to 85% (no condensation)
Storage temperature / Storage humidity		-20°C to +60°C (-4°F to +140°F) / 10% to 90% (no condensation)
Power requirements		AC 100V-240V, 4.9 A to 2.2 A, 50/60Hz
Power consumption		490 W
	Standby	0.4 W (when "Remote Start" is set to "Off")
	Networked Standby	1.0 W (LAN) (when "Remote Start" is set to "On") When a LAN terminal is not connected, it becomes a low power consumption mode (0.5 W).
Dimensions (W x H x D) (without protrusions)		560 x 230 x 510.5 mm
Mass		Approx. 22 kg / 44 lb
Supplied accessories		RM-PJ24 Remote Commander (1), Size AA (R6) Manganese Batteries (2), Lens Cap (1), AC Power Cord (1), Operating Instructions (CD-R) (1), Quick Reference Manual (1), Safety Regulations (1)

*1 Displayed image may be converted for some input signals.
*2 Both HDMI inputs are compatible with HDCP2.2
*3 This value is approximate. Depends on the projector setting condition and usage environment.
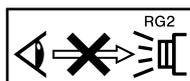
LASER NOTICES
For the U.S.A.
IEC 60825-1:2007 CLASS 3R LASER PRODUCT

LASER RADIATION
AVOID DIRECT EYE EXPOSURE
CLASS 3R LASER PRODUCT
WAVE LENGTH: 450-460nm
MAX OUTPUT < 180mW
IEC60825-1:2007
IEC 60825-1:2014
LASER 1

For other countries
IEC 60825-1:2014 CLASS 1 LASER PRODUCT

RG2

As with any bright light source, do not stare into the beam, RG2 IEC 62471-5:2015.

PrimeSupport
Pro

PrimeSupport
Elite

Distributed by

For full product specifications and features please visit
pro.sony

SONY