LCOS Projector WUX450/WX520

1. Main Features

1-1 Features newly developed image engine, with renewed image processing algorithm

Various image-related performances are substantially enhanced to realize a better picture quality, making it possible to install a new function that requires complicated algorithm.

Performance enhancement: Keystone, Progressive, and internal functions for picture enhancement, etc.

Additional functions: Split screen (*1), Edge blending (*2), Motion blur reduction (*3) and others.

*1: A function that displays 2 video signals in 2 sub-screens on the projection.
*2: A function that makes seams among multiple projector pictures less noticeable to produce a single smoother picture.
*3: A function for enhancing moving image quality.

1-2 New generation AISYS optical system

Light-emitting points on the lamp was made smaller, and the optical design was renewed to optimize light use efficiency.

With the new optics, brightness and contrast were improved by minimizing the drop in light efficiency during polarization conversion process and light leak on black.

The new optics is also smaller in size, which is one of the driving factors toward compactification of overall product.

1-3 High resolution, high brightness, high contrast

High-resolution LCOS panel with new generation AISYS optical system can realize smoother, brighter, and higher-contrast pictures.

WUX450: WUXGA, 4500 lumens, 2000:1 / WX520: WXGA+, 5200 lumens, 2000:1

1-4 1.8x zoom F2.8 projection lens with lens shift mechanism

Equipped with high-power 1.8x zoom projection lens, the model has higher flexibility in installment distance.

Also, the model is Canon's first integrated projection lens product equipped with lens shift function, which offers higher flexibility in screen location as well.

Furthermore, F number for this model's projection lens is fixed at 2.8 in the entire zoom range by specification. The user can gain consistent picture brightness even after changing the zoom location. This is the differentiation point against competitions' products.

1-5 Industry No.1 Eco function

Realization of world-class low power consumption (environmental top runner product)
・(Erp.lot3) Electric power for 1 lumen － WUX450: 0.081 W/lm, WX520:0.068 W/lm
・(Erp.lot6) Standby power consumption － 0.2 W
・(Erp.lot26) Standby power consumption when using network － 0.6W

1-6 Improved cooling function

Internal cooling fan locations and ventilation paths are optimized by simulation technology.

We replaced some optical parts with more durable ones, and all in all, managed to extend the product's life.

1-7 Network Multi Projection (NMPJ)

The product has capability to receive picture data from computers via the network for projection.

Since this function allows for a single pair connection (1 projector and 1 computer) as well as multiple pair connections (multiple projectors and multiple computers), it can be utilized in various use situations.

1-8 Other new features

・"Corner adjustment" adjust the locations of 4 corners for projection
・"Micro-digital image shift" utilizes surplus pixels on the panel
・"Registration" adjusts the relative locations of RGB panel
・Displays pictures from input of USB terminal.
・Firmware upgrade by upgrade program (obtained from website)

Canon

2. Specifications

2-1. Basic specifications

Model		WUX450	WX520
Type	Product type	Projector	
	Imaging device, number	Reflective LCD panel (LCOS) ×3	
LCOS panel	Number of pixels	1920×1200 (WUXGA)	1440×900 (WXGA+)
	Size type, Aspect ratio	0.71type, 16:10	0.70type, 16:10
	Driving system	Active Matrix	
Projection lens	Lens configuration	11 groups 13elements	
	F number, Focal length	F2.8, 21.7 - 39.0 mm / 0.85in – 1.54in	
	Zoom magnification	1.8 times	
	Projection distance	1.2 – 16.2 m / 3.9 – 53.1 ft	1.2 – 16.6 m / 3.9 – 54.5 ft
	Distance for 100 type	3.0 – 5.4 m / 9.8 – 17.7 ft	3.1 – 5.5 m / 10.2 - 18.0 ft
	Throw ratio (*1)	1.39 – 2.51	1.43 – 2.57
	Amount of Lens shift	V: 0% - 60%, H: ±10%	V: 0% - 62%, H: ±10%
	Operation	Zoom: manual, Focus: manual, Lens shift: manual	
Light source	Type	250-NSHA	
	Power	260/200 W	
Images	Optical system	Dichroic mirror and PBS color separation-combination system	
	Brightness	4500/3460 lm	5200/4000 lm
	Marginal lumination ratio	90%	
	Contrast ratio	2000:1	
	Image size (16:10)	40 – 300 type	
	Electronic zoom (for length)	12x maximum	
	Keystone correction	V ±20°, H ±20°	
Image signals	Analog PC input (*2)	WUXGA/UXGA/WSXGA+/SXGA+/WXGA+/FWXGA/WXGA/ SXGA/XGA/SVGA/VGA	
	Digital PC input (*2)	WUXGA/UXGA/WSXGA+/SXGA+/WXGA+/FWXGA/WXGA/ SXGA/XGA/SVGA/VGA	
	Digital video input	1080p/1080i/720p/576p/480p	
	Component video input	1080p/1080i/720p/576p/576i/480p/480i	
	Network communication	NMPJ screen transfer (CANON original protocol)	
	USB data transfer	JPEG still image	
Terminals	DVI-I	Analog PC/Digital PC input	
	HDMI	Digital PC/Digital video input（supporting Deep color）	
	Mini Dsub15	Analog PC / Component video input	
	Mini jack x3	Audio input x2, Audio output x1	
	Mini jack x1	Wired remote control connection	
	Dsub9	RS-232C connection	
	USB Type A	USB connection	
	RJ-45	Network connection (1000BASE-T / 100BASE-TX / 10BASE-T)	
Mechanisms	Adjustable feet	Bottom front：2 places (Maximum elevation 6°)	
	Built-in speaker	5 W , Monaural	
	Dimensions [mm]	W: 337, H: 118, D: 362（not including protrusion） W: 337, H: 134, D: 370 (including protrusion)	
	Dimensions [inch]	W: 13.3, H: 4.6, D: 14.3（not including protrusion） W: 13.3, H: 5.3, D: 14.6 (including protrusion)	
	Mass	5.9 kg / 13.0 lb	
	Noise level	38/32 dB	
Others	Power supply	AC100 - 240 V ： 50/60 Hz	
	Power consumption	365/295 W	355/285 W
	Stand-by power consumption (*3)	0.6/0.2 W	
	Operation environment	0℃ ～ 40℃ , 20%RH ～ 85%RH	
	Storage environment	-10℃ ～ 60℃	

*1: Calculated value for 100" image
*2: WUXGA：Only WUX450
*3: Network function is On (Low power)/Off

Canon

2-2. Image Size and Projection distance

WUX450/WX520 is suited to project pictures in size of 40 to 300 inches.
Projection distance to the corresponding picture size is as follows.
Note that zoom and focus operations on this product is manual.

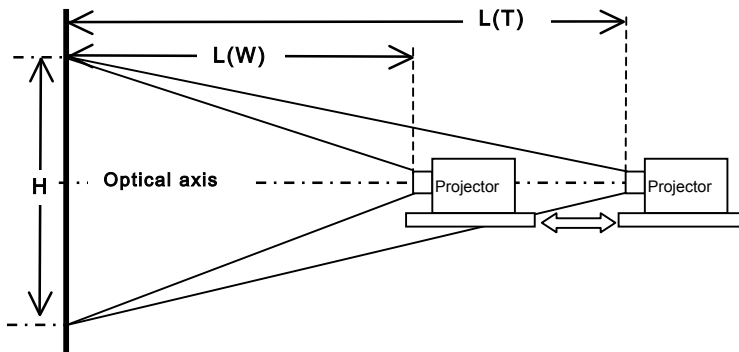| Projection ratio	
WUX450	1.39 – 2.51 : 1
WX520	1.43 – 2.57 : 1

Image of height H is projected in the range from the shortest distance L (W) to the longest distance L (T).

(W) means the wide end and (T) means the tele end.
This product allows the lens shift ratio to be varied.

The left figure shows an example of 1:1 and image is divided with the optical axis at the center.

WUX450

Image size (16:10)			Distance	
Diag. [inch]	Width [m/inch]	Height [m/inch]	L (W) [m/feet]	L (T) [m/feet]
40	0.86/33.86	0.54/21.26	1.2/3.94	2.2/7.22
50	1.08/42.52	0.67/26.38	1.5/4.92	2.7/8.86
60	1.29/50.79	0.81/31.89	1.8/5.91	3.2/10.5
70	1.51/59.45	0.94/37.01	2.1/6.89	3.8/12.47
80	1.72/67,72	1.08/42.52	2.4/7.87	4.3/14.11
90	1.94/76,38	1.21/47.64	2.7/8.86	4.9/16.08
100	2.15/84,65	1.35/53.15	3.0/9.84	5.4/17.72
110	2.37/93.31	1.48/58.27	3.3/10.83	5.9/19.36
120	2.58/101,57	1.62/63.78	3.6/11.81	6.5/21.33
130	2.80/110,24	1.75/68.9	3.9/12.8	7.0/22.97
140	3.02/118.90	1.88/74.02	4.2/13.78	7.6/24.93
150	3.23/127.17	2.02/79.53	4.514.76	8.1/26.57
160	3.45/135.83	2.15/84.65	4.8/15.75	8.6/28.22
170	3.66/144.09	2.29/90.16	5.1/16.73	9.2/30.18
180	3.88/152.76	2.42/95.28	5.4/17.72	9.7/31.82
190	4.09/161.02	2.56/100.79	5.7/18.7	10.3/33.79
200	4.31/169.69	2.69/105.91	6.0/19.69	10.8/35.43
210	4.52/177.95	2.83/111.42	6.3/20.67	11.3/37.07
220	4.74/186.61	2.96/116.54	6.6/21.65	11.9/39.04
230	4.95/194.88	3.10/122.05	6.9/22.64	12.4/40.68
240	5.17/203.54	3.23/12.717	7.2/23.62	13.0/42.65
250	5.38/211.81	3.37/132.68	7.5/24.61	13.5/44.29
260	5.60/220.47	3.50/137.8	7.8/25.69	14.0/45.93
270	5.82/229.13	3.63/142.91	8.1/26.57	14.6/47.9
280	6.03/237.4	3.77/148.43	8.4/27.56	15.1/49.54
290	6.25/246.06	3.90/153.54	8.7/28.54	15.7/51.51
300	6.46/254.33	4.04/159.06	9.0/29.53	16.2/53.15

WX520

| Image size (16:10)			Distance	
Diag. [inch]	Width [m/inch]	Height [m/inch]	L (W) [m/feet]	L (T) [m/feet]
40	0.86/33.86	0.54/21.26	1.2/3.94	2.2/7.22
50	1.08/42.52	0.67/26.38	1.5/4.92	2.8/9.19
60	1.29/50.79	0.81/31.89	1.8/5.91	3.3/10.83
70	1.51/59.45	0.94/37.01	2.2/7.22	3.9/12.8
80	1.72/67.72	1.08/42.52	2.5/8.2	4.4/14.44
90	1.94/76.38	1.21/47.64	2.8/9.19	5.0/16.4
100	2.15/84.65	1.35/53.15	3.1/10.17	5.5/18.04
110	2.37/93.31	1.48/58.27	3.4/11.15	6.1/20.01
120	2.58/101.57	1.62/63.78	3.7/12.14	6.7/21.98
130	2.80/110.24	1.75/68.9	4.0/13.12	7.2/23.62
140	3.02/118.9	1.88/74.02	4.3/14.11	7.8/25.59
150	3.23/127.17	2.02/79.53	4.6/15.09	8.3/27.23
160	3.45/135.83	2.15/84.65	4.9/16.08	8.9/29.2
170	3.66/144.09	2.29/90.16	5.2/17.06	9.4/30.84
180	3.88/152.76	2.42/95.28	5.5/18.04	10.0/32.81
190	4.09/161.02	2.56/100.79	5.9/19.36	10.5/34.45
200	4.31/169.69	2.69/105.91	6.2/20.34	11.1/36.42
210	4.52/177.95	2.83/111.42	6.5/21.33	11.6/38.06
220	4.74/186.61	2.96/116.54	6.8/22.31	12.2/40.03
230	4.95/194.88	3.10/122.05	7.1/23.29	12.8/41.99
240	5.17/203.54	3.23/127.17	7.4/24.28	13.3/43.64
250	5.38/211.81	3.37/132.68	7.7/25.26	13.9/45.6
260	5.60/220.47	3.50/137.8	8.0/26.25	14.4/47.24
270	5.82/229.13	3.63/142.91	8.3/27.23	15.0/49.21
280	6.03/237.4	3.77/148.43	8.6/28.22	15.5/50.85
290	6.25/246.06	3.90/153.54	8.9/29.2	16.1/52.82
300	6.46/254.33	4.04/159.06	9.2/30.18	16.6/54.45

* The distances listed on the table have been rounded off and are therefore approximate values.

**Canon**

2-3. Lens shift function and image position

This product has an electric lens shift function that can move the image position vertically and horizontally.
The followings are the lens shift specifications of the WUX450/WX520.

Model	WUX450 (WUXGA, 0.71 diag.)	WX520 (WXGA+, 0.70 diag.)
Lens shift ratio	(V) 0:0〜11:-1 (H) 4:6〜6:4	(V) 0:0〜11.2:-1.2 (H) 4:6〜6:4
Amount of Lens shift	(V) 0% 〜 60% (H) -10% 〜 10%	(V) 0% 〜 62% (H) -10% 〜 10%

The following is the movable range of projection from this product.
The cross center is the lenses' optical axes.

+60% / 62%

-10%　　　+10%
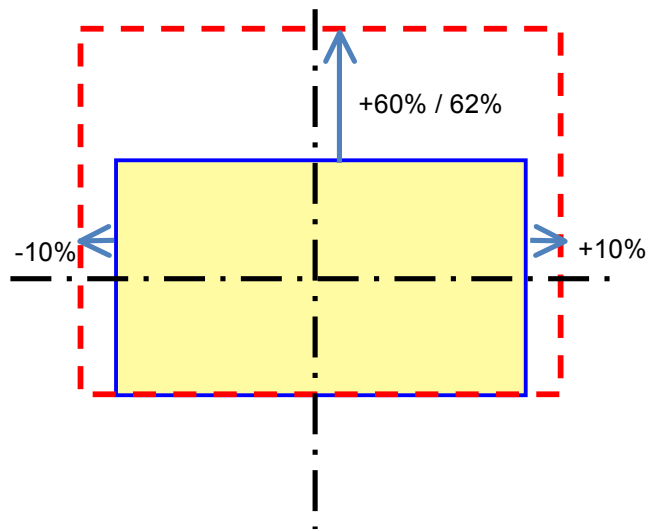
2-4. Adjustable feet
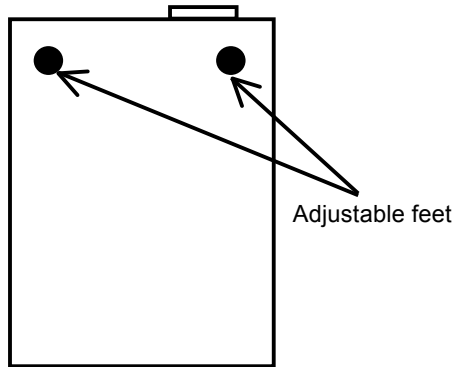
The main unit has two adjustment feet on the projection lens side of the bottom.
Adjust these lengths to lift up the lens side of the projector so that the projection angle can be adjusted.
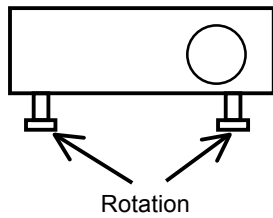
Adjustable feet

The length is adjusted by rotation the feet.

Rotation
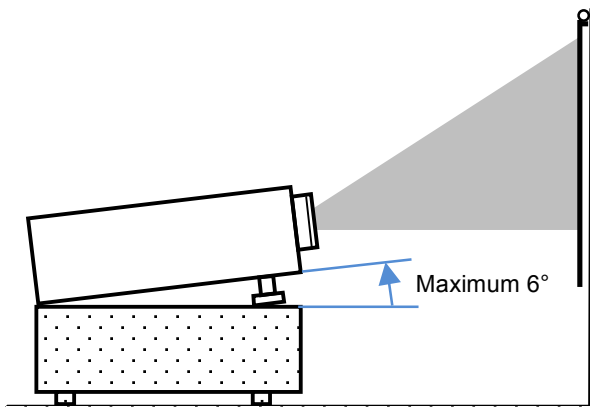
This product allows an elevation up to 6 degrees between the projection optical axis and the installation table.

Maximum 6°

* The figure is for explanation only and different from the actual product shape.

Canon

3. Accessories

Main Supplied Accessories	Remote Control RS-RC06	Power supply: DC 3.0V (with two AAA battery) Communication range: approx. 8 m within ±25 degrees of the receiver
	Computer cable	mini Dsub15-mini Dsub15 This is used for connection with computer. This transmits analog PC signals.
	Power code	Connects the unit to a power source.
Optional Parts	Ceiling Attachment RS-CL12	This is used for ceiling mount. (*1)
	Option Foot RS-FT01	Attached to 4 points on the top side when the product is installed upside down. They can be used even when the product is not upside down, by attaching to 2 points on the bottom to adjust the inclination.
	Remote Control RS-RC06	Same as the supplied remote.
	Remote Control RS-RC05	Power supply: DC 3.0V (with two AA battery) Communication range: approx. 8 m within ±25 degrees of the receiver Allows for wireline connection (*2)
Replacement Parts	Lamp Assembly RS—LP08	250-NSHA Recommended lamp replacement time 3000H/5000H(High power use/low power use)
	Replacement air filter RS-FL02	This filter is installed at the air intake to prevent dust from entering.

*1: Do not attach a difference model's attachment. The size and the weight of a product are different from other modes.
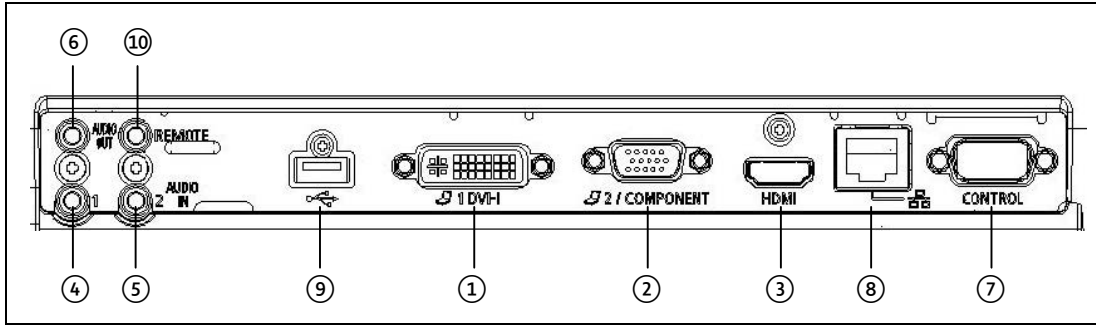Consult a building professional before attempting to mount the projector to a ceiling.
*2: Uses a commercially available audio cable (3.5Φ stereo mini-plug) for cable connection.

Canon

4. Product Appearance

## ●Outline Drawings

370mm / 14.6 in

337mm / 13.3 in

134mm / 5.3 in

Canon
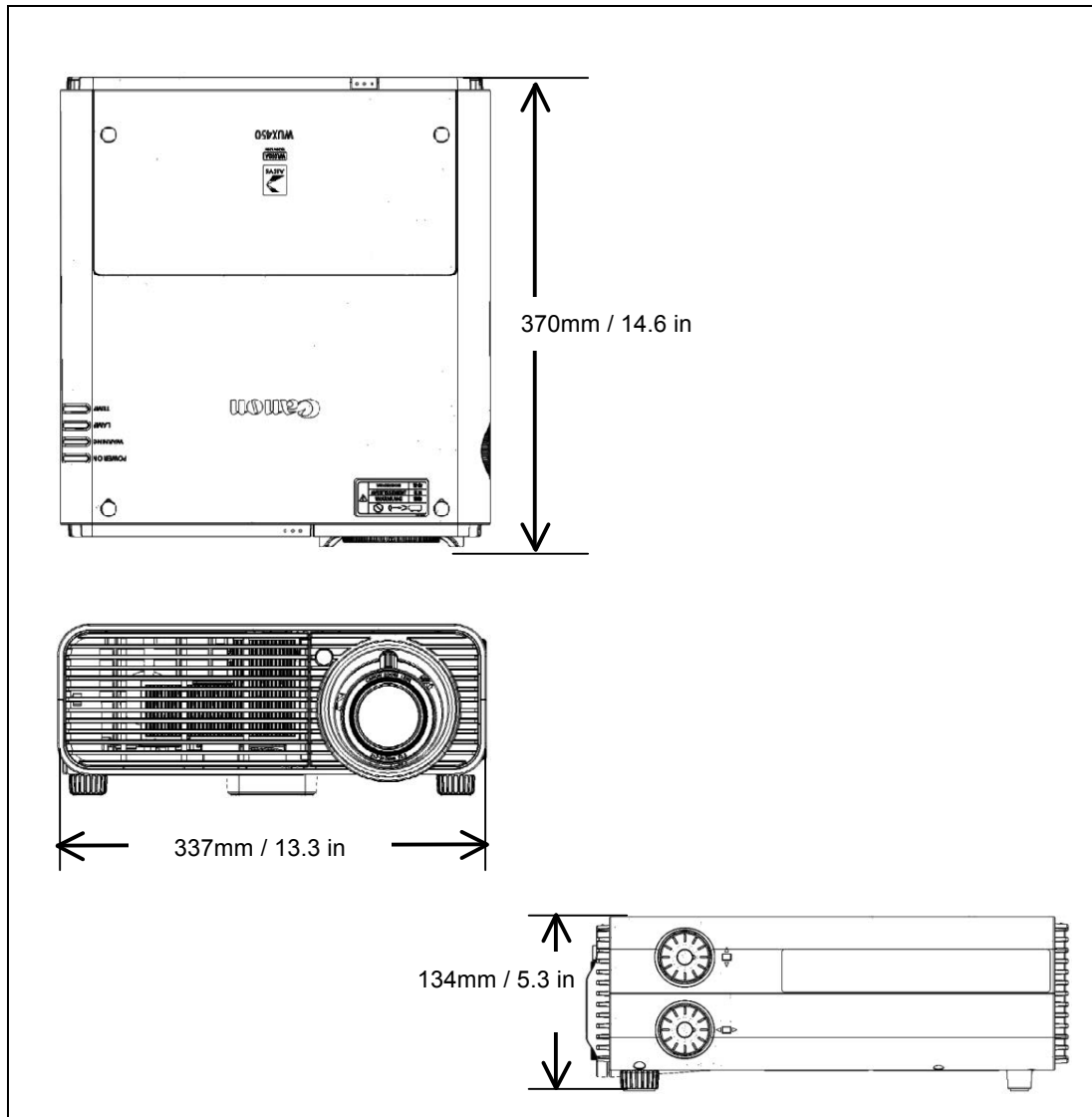
● Terminals

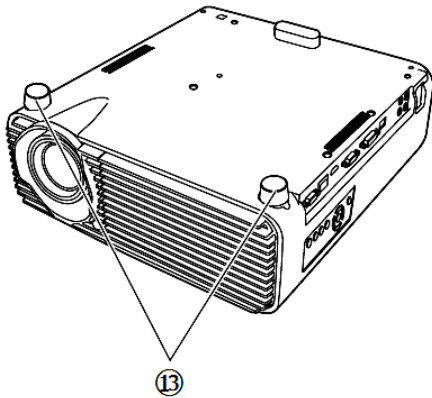|		Terminal	Signal
Image input	①	DVI-I	Analog PC / Digital PC
	②	Mini Dsub15	Analog PC / Component video
	③	HDMI	HDMI (with audio, supporting Deep color)
Audio input	④	Mini jack	Stereo audio
	⑤	Mini jack	Stereo audio
Audio output	⑥	Mini jack	Stereo audio
Control	⑦	Dsub9	RS-232C connection
	⑧	RJ-45	1000BASE-T/100BASE-TX / 10BASE-T
	⑨	USB type A	USB connection
	⑩	Mini jack	Wired remote control connection

Canon

● **Part Names**
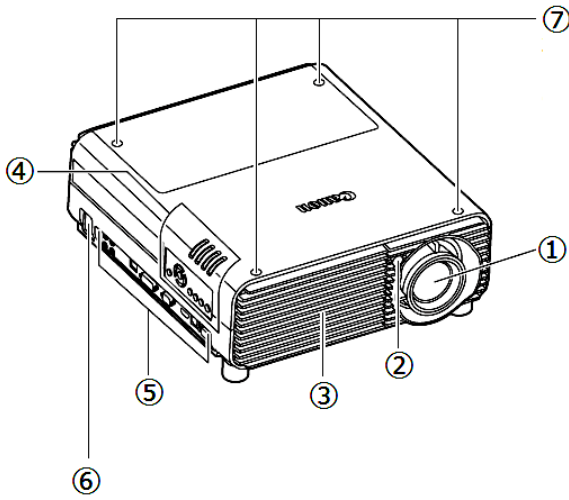
1   Projection lens

2   Infrared remote receiver

3   Air intake vent (Air filter)

4   Side control

5   Terminals and connectors

6   Power cord connector

7   Hole caps
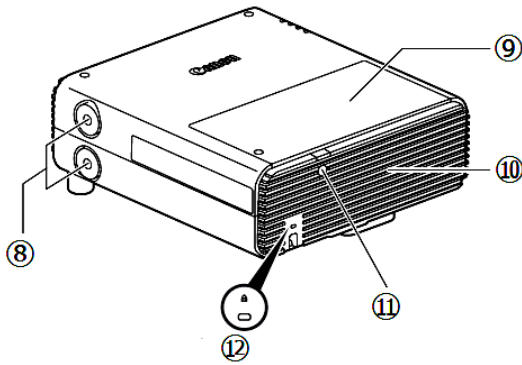
8   Lens shift side control

9   Lamp cover

10   Exhaust vent

11   Infrared remote receiver

12   Anti-theft lock hole

13   Adjustable feet

Canon