

Throw Distance Calculator

Switch between Simple Mode and Advanced Mode.

Simple Mode

Advanced Mode

Throw Distance Calculator
Version 2.53

English Japanese

Simple Advance Help Print

Model type: All

Model number: PT-RG50K
51,000 lm(Center) / 50,000 lm / Native: 4K

Lenses: ET-D3QW300

Aspect ratio: 17.9(Native 4K)

Projected image size

	meter	inch	feet
Diagonal			
Height			
Width			

Projection distance (L)

	meter	inch	feet
Minimum			
Maximum			

Calculate Reset

Select the calculation result

Calculation result

The calculation result will appear here.

L: projection distance
VS1 = 0.40 × height of projected image
HS1 = 0.14 × width of projected image

NOTE:

- The calculated values may vary depending on usage and ambient conditions.
- Calculator accuracy: ±5% (for all values except projector output and screen luminance).
- The scale of projector is not accurate.
- The calculation result is from the lens center of projector.
- Lens layout varies dependent on projector.

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Lenses: ET-D3QW300

Aspect ratio: 17.9(Native 4K)

Unit: m (selected) ft inch

Room dimensions in m: depth 10.000, width 10.000, height 4.000

Installation place: Desktop

Lock horizontal position: Lock vertical position:
Lock screen size: Lock projection distance:

Simulation type: Flat

Screen size: Diagonal 100.00 inch, Width 2.245 m, Height 1.188 m

Distance to screen: 2.420 m

Screen gain: 1.00

Ambient light: 200 lux

Reset

Size of screen: Diagonal 100 inch ~ 100 inch, Width 2.245 m ~ 2.245 m, Height 1.188 m ~ 1.188 m

Distance to screen(Min~Max): 2.42 m ~ 3.77 m

Screen illuminance(Center): 19117 lux

Screen luminance(Center): 6085 cd/m²

Screen contrast(Center): 96:1

Side View: 2.42 m, 7.58 m, 2 m(H), 2 m(H), 2.42 m(Min), 10 m(D), 3.77 m(Max)

Position: 0

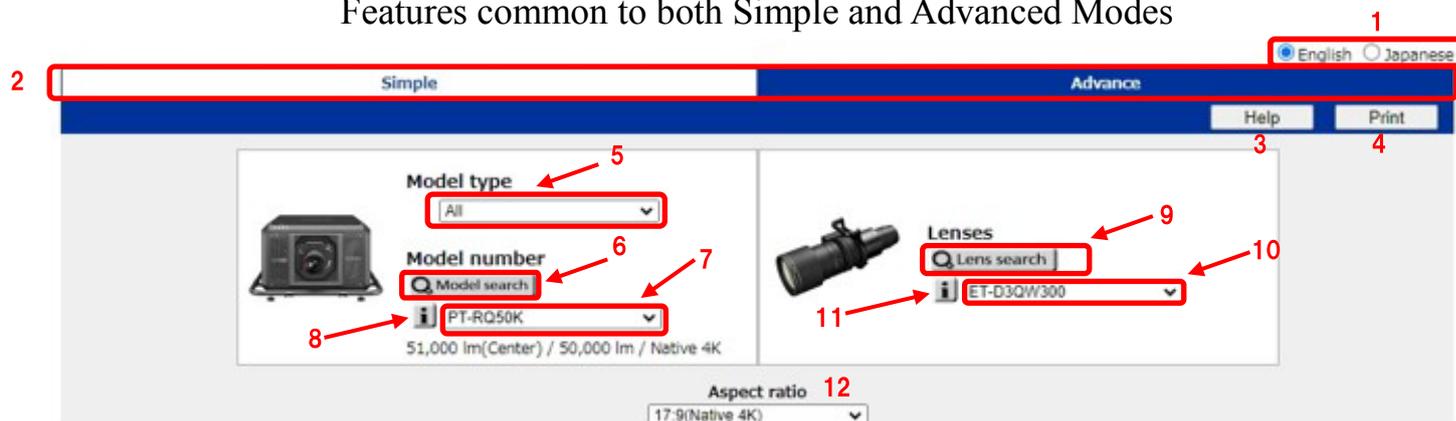
Front View: 1.406 m, 3.878 m, 2.245 m, 3.878 m, 4 m(H), 1.188 m, 1.406 m, 5 m, 10 m(W), 5 m

3D View: 3D View (selected), Top View

NOTE:

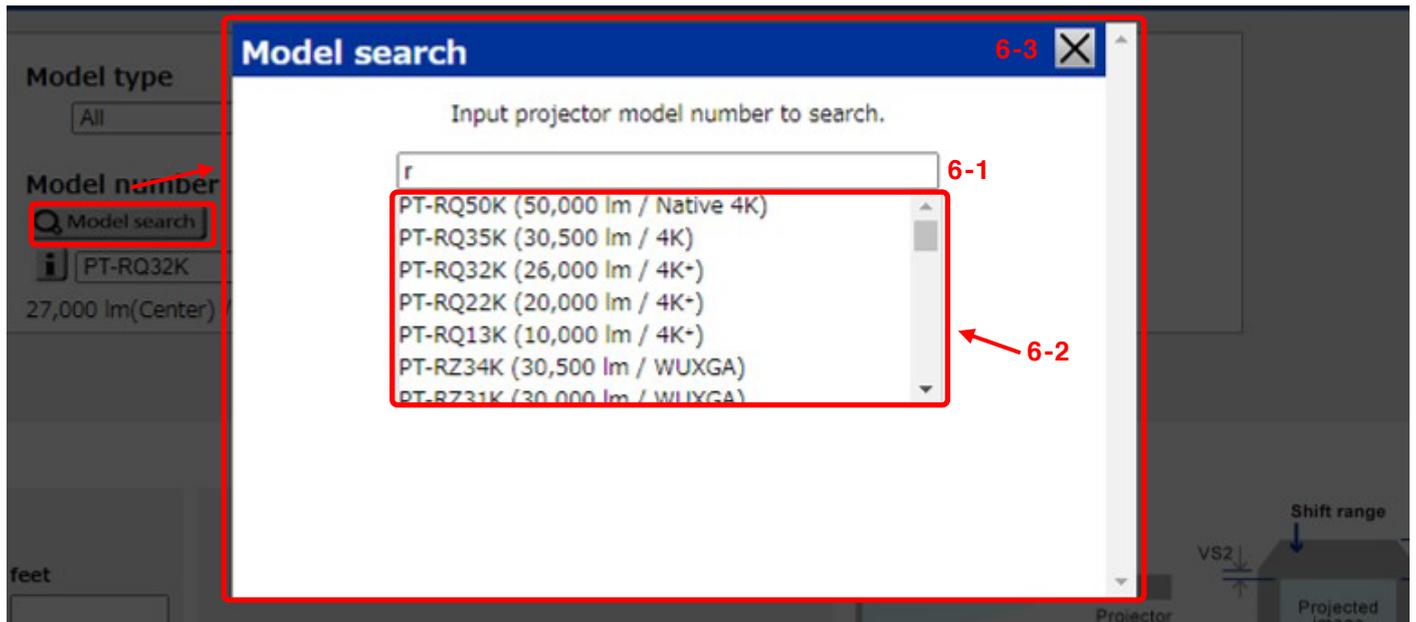
- The calculated values may vary depending on usage and ambient conditions.
- Calculator accuracy: ±5% (for all values except projector output and screen luminance).
- The scale of projector is not accurate.
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- Lens layout varies dependent on projector.

Features common to both Simple and Advanced Modes



1	Language	Switch between Japanese and English.
2	Mode	Switch between Simple Mode and Advanced Mode.
3	Help button	Display this help file.
4	Print button	Call up browser's printing function.
5	Model type	Select projector category.
6	Model search	Press this button to display model search window. Projector model number can be searched by inputting letters.
7	Model name	Select projector model number for selected category. Display image and information on selected projector.
8	Model information	Press button to display information on selected projector.
9	Lens search	Press this button to display lens search screen. Compatible optional lens can be searched using projection distance and screen size.
10	Lenses	For projectors compatible with optional lenses, optional lens model number can be selected. Display image of selected optional lens.
11	Lens information	Press this button to display information on the selected lens model number.
12	Aspect	Set aspect to display.

Model Search (both modes)



6-1	Projector model number input field	You can input letters. Search the projector model number by input letters.
6-2	Projector model number search results	Displays the search results of the projector model number. When you select the projector from the search results, it will work as follows. <ul style="list-style-type: none"> • Close the model search window automatically. • Selected projector will be automatically reflected in the projector model number.
6-3	Button to close model search window	Press the button to close model search window.

Projector Information (both modes)

Projector Information 8-8 X

8-7 [To see products Line-up](#)

Model number
PT-RQ32K 8-1

3-Chip DLP Projectors

Resolution 4,096,000 (2560 x 1600) x 3, total of 12,288,000 pixels 8-2
49,152,000 (12,288,000 x 4) pixels When Quad Pixel Drive set to ON

Brightness 27,000 lm(Center) / 26,000 lm (High Mode) 8-3

Contrast ratio 20,000:1 (Full On/Full off, in Dynamic Contrast 3 mode) 8-4

Dimensions 700 x 418 x 1,250 mm (27-9/16 x 16-15/32 x 49-7/32 in) 8-5
(W×H×D)

When the lens protrudes to the maximum.

8-6

- 182 mm (7-5/32) with the ET-D3LEW60
- 182 mm (7-5/32) with the ET-D75LE6
- 180 mm (7-3/32) with the ET-D3LEW10
- 95 mm (3-3/4) with the ET-D75LE10
- 91 mm (3-19/32) with the ET-D3LES20
- 91 mm (3-19/32) with the ET-D75LE20

8-1	Projector model number
8-2	Resolution
8-3	Brightness
8-4	Contrast ratio
8-5	Dimensions
8-6	At maximum lens extension
8-7	Button links to Panasonic projector website
8-8	Button to close projector information window

Lens Search (both modes)

Lens search Models: PT-RQ32K
9-7 ✕

1. Please enter a value and click a search button.
2. Please choose a lens from a search list.

m ft inch

9-1

Distance to screen m
9-2

Screen size inch
9-3

9-4

Search list

ET-D3LEW10

ET-D75LE10

9-5

Throw ratio indicator

- ET-D75LE95
- ET-D3LEW50
- ET-D75LE50
- ET-D3LEW60
- ET-D75LE6
- ET-D3LEW10
- ET-D75LE10
- ET-D3LES20
- ET-D75LE20
- ET-D3LET30
- ET-D75LE30
- ET-D75LE40
- ET-D3LET40
- ET-D3LET80
- ET-D75LE8

|

9-6

9-1	Unit	<p>Convert units of length (meters, feet and inches).</p> <p>The initial unit is the unit selected in the Advanced mode.</p> <p>Selected unit will be automatically reflected in the Advanced mode unit.</p>
9-2	Projection distance input field	You can input the projection distance.
9-3	Screen size input field	You can input the screen size. The diagonal unit is fixed in inches.
9-4	Lens search button	Press the button to search lens from input values of projection distance and screen size.
9-5	Search results list or select lens	<p>Displays the search results of lens.</p> <p>When you select the lens from the search results, it will work as follows.</p> <ul style="list-style-type: none"> ▪Close the lens search window automatically. ▪Selected lens will be automatically reflected in the lens model number. ▪The Values in the screen size input field will be automatically reflected in both Simple mode and Advanced mode.

9-6	Throw ratio indicator	Displays throw ratio indicator when the projector compatible with optional lenses is selected. Outline the throw ratio of each optional lens. When you press the lens search button, displays the throw ratio calculated from throw distance and screen size as a red line.
9-7	Button to close lens search window	Press the button to close lens search window.

Lens Information (both modes)



11-1	Lens model number
11-2	Lens type
11-3	Throw ratio
11-4	f value
11-5	F value
11-6	Button to close lens information window

Advanced Mode

The screenshot shows the 'Advanced Mode' settings for a projector simulation. The interface is organized into several sections:

- Unit:** Radio buttons for 'm' (selected), 'ft', and 'inch'. Labeled 12.
- Room dimensions in m:** Input fields for 'depth' (10.000), 'width' (10.000), and 'height' (4.000). Labeled 13.
- Installation place:** A dropdown menu currently set to 'Desktop'. Labeled 14.
- Lock options:** Four checkboxes: 'Lock horizontal position', 'Lock vertical position', 'Lock screen size', and 'Lock projection distance'. Labeled 15.
- Simulation type:** A dropdown menu currently set to 'Flat'. Labeled 16.
- Screen size:** A section with three columns: 'Diagonal' (114 inch), 'Width' (2.456 m), and 'Height' (1.535 m). Labeled 17.
- Distance to screen:** An input field set to 2.420 m. Labeled 18.
- Screen gain:** An input field set to 1.00. Labeled 19.
- Ambient light:** An input field set to 200 lux. Labeled 20.
- Reset:** A button at the bottom right. Labeled 21.

12	Unit	Convert units of length (meters, feet and inches).
13	Room dimensions	Set the depth, width and height of the room.
14	Installation place	Set floor placement or ceiling placement. Portrait can be selected depending on selected projector model number.
15	Lock	Fix projector position, screen size, and fixed projection distance.
16	Simulation type	Depending on the projector you have selected, you can select top / bottom oblique projection onto a flat screen, left / right oblique projection, projection to a vertical curve screen, or projection to a horizontal curve screen. When you select diagonal projection, the angle setting text box will be displayed. When you select projection onto a curved screen, the following two types of text boxes are displayed: <ul style="list-style-type: none"> 1. The text box to set the length of the curve depth 2. The text box to set the radius length of the circle forming the curve When you input a compatible value in either text box 1 or 2, the other value will be automatically calculated. For any simulation-type input, the text box will turn red if the value is outside the specifications of the projector.
17	Screen size	You can set the screen size. However, it cannot be set if a box for fixed screen size or fixed projection distance is checked. If the simulation type is other than flat, it is equivalent to the value when projecting at right angles to the flat screen.
18	Distance to screen	You can set the projection distance. However, it cannot be set if a box for fixed screen size or fixed projection distance is checked.

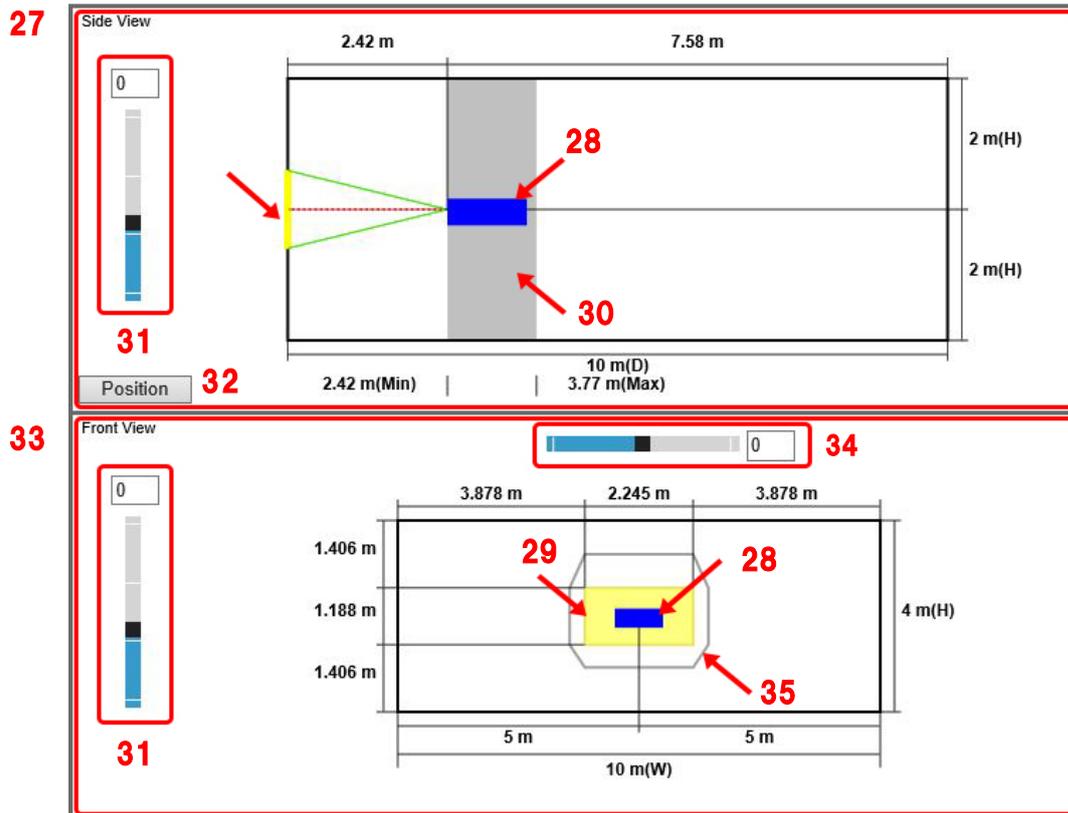
19	Screen gain	You can set the reflection characteristics screen gain. When you set it, it will be reflected in calculation of screen brightness (center).
20	Ambient light	You can set ambient light in the center of the screen. The unit is lux. When you set it, it will be reflected in calculation of screen contrast (center).
21	Reset Button	When you press the button, the Aspect, Lock, Simulation type, Screen size, Distance to screen, Screen gain, Ambient light, Projector position, Lens shift are the initial values.

Advanced Mode

Size of screen 22	96 inch ~ 114 inch
Width	2.064 m ~ 2.456 m
Height	1.29 m ~ 1.535 m
Distance to screen(Min~Max) 23	2.42 m ~ 2.893 m
Screen illuminance(Center) 24	7160 lux
Screen luminance(Center) 25	2279 cd/m ²
Screen contrast(Center) 26	37:1

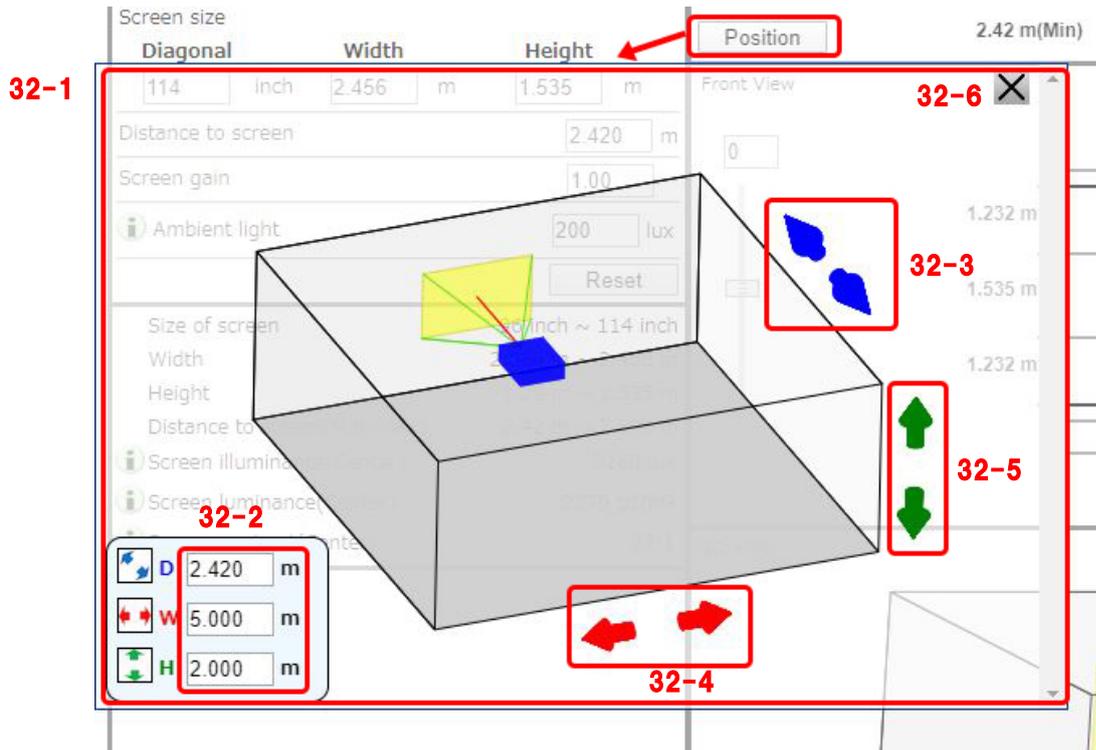
22	Report: Screen size	<p>Displays screen sizes that can be projected, based on the setting position of the projector.</p> <p>If the simulation type is other than flat, it is equivalent to the value when projecting at right angles to a flat screen.</p>
23	Report: Distance to screen	<p>Displayable projection distance based on screen size is displayed.</p> <p>If the simulation type is other than flat, it is equivalent to the value when projecting at right angles to a flat screen.</p>
24	Report: Screen illuminance (Center)	<p>Displays the illuminance at the center of the screen. The unit is lux.</p> <p>Calculate the illuminance value based on the brightness of the projector specs and the projection distance.</p> <p>Actual screen illuminance varies depending on usage conditions and environment.</p> <p>When the center of screen is on the ceiling, floor or left and right walls in the simulation results, the value will be displayed in red.</p>
25	Report: Screen luminance (Center)	<p>Displays the luminance value at the center of the screen. The unit is cd/m².</p> <p>Calculate the luminance value based on the brightness of the projector specs, the projection distance and the input screen gain.</p> <p>Actual screen luminance varies depending on usage conditions and environment.</p> <p>When the center of screen is on the ceiling, floor or left and right walls in the simulation results, the value will be displayed in red.</p>
26	Report: Screen contrast (Center)	<p>Displays the contrast on the screen at the center of the screen.</p> <p>When you mouse over the “i” icon, a reference image of screen contrast is displayed. The image is for reference only, and may differ from the actual contrast.</p> <p>Calculate the contrast based on the brightness and contrast ratio of the projector specs, the projection distance, and the input ambient light.</p> <p>Actual screen contrast varies depending on usage conditions and environment.</p> <p>When the center of screen is on the ceiling, floor or left and right walls in the simulation results, the value will be displayed in red.</p> <p>If the value of screen contrast is lower than 10, the value will be displayed to two decimal places.</p>

Advanced Mode



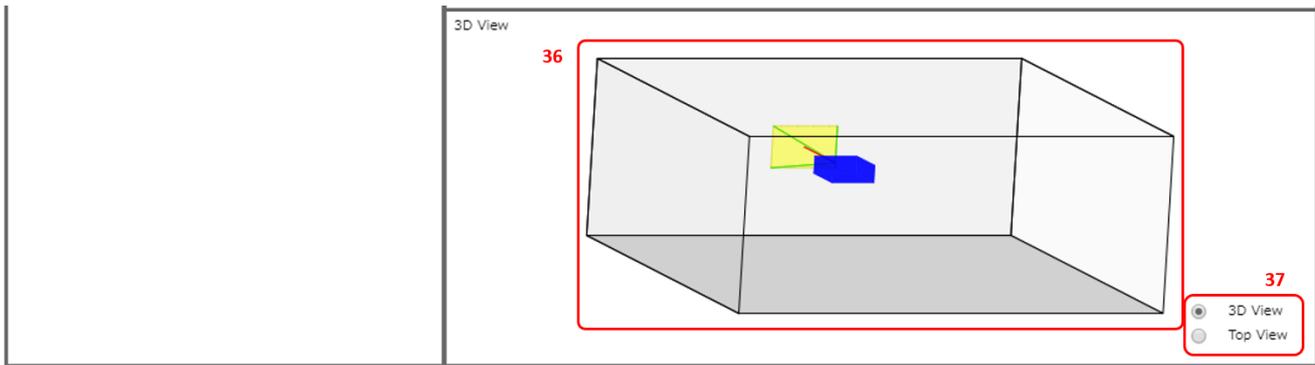
27	Side view	An image diagram showing the projector and the room directly from the side.
28	Projector	This represents the projector. It is different from the actual shape and size. Depending on the browser type, you can move it with the mouse. For projectors released before March 11, 2020, the unit will be displayed at its actual size when any of the following lenses are selected: <ul style="list-style-type: none"> ▪ET-D75LE90 ▪ET-D75LE95 ▪ET-DLE030 ▪ET-DLE035
29	Projection image	The range of the projection screen.
30	Lens zoom area	The range of the projection distance that makes the same screen size using lens zoom.
31	Vertical lens shift	This is a lens shift setting in the vertical direction. If it is set outside the lens shift range, the text box will be displayed in red.
32	Position button	Opens the projector position adjustment window. In the projector position adjustment window, the following operations can be performed: <ul style="list-style-type: none"> ▪Adjustment of projector position by inputting values ▪Adjustment of projector position by pressing arrows
33	Front view	Image view of the projector and the room seen from the back of the projector.
34	Horizontal lens shift	Lens shift setting in the horizontal direction. If it is set outside the lens shift range, the text box will be displayed in red.
35	Lens shift area	Indicates the lens shift range. If it is set outside the lens shift range, the lens shift frame will be displayed in red.

Adjust Projector Position (Advanced Mode)



32-1	<p>Projector position adjustment window</p> <p>Viewpoint of the displayed 3D view cannot be changed.</p>
32-2	<p>Projector position input field</p> <ul style="list-style-type: none"> ▪ Text box for D: Projector and depth direction distance input field If the simulation type is other than flat, it is the distance in the depth direction from the corner of the front wall to the projector It cannot be set if a box for fixed projection distance is checked ▪ Text box for W: Distance input field from left wall It cannot be set if a box for fixed horizontal position is checked ▪ Text box for H: Distance input field from floor It cannot be set if a box for fixed vertical position is checked <p>Input value will be automatically reflected in the simulation. When you input a value beyond the limiting one, the latter will be automatically input in the text box and reflected in the simulation.</p>
32-3	<p>Projector and depth direction distance adjustment button</p> <p>The projector moves in the direction of the arrow you pressed. This button will not be displayed if a box for fixed projection distance is checked</p>
32-4	<p>Distance adjustment button from left wall</p> <p>The projector moves in the direction of the arrow you pressed. This button will not be displayed if a box for fixed horizontal position is checked</p>
32-5	<p>Distance adjustment button from floor</p> <p>The projector moves in the direction of the arrow you pressed. This button will not be displayed if a box for fixed vertical position is checked</p>
32-6	<p>Button to close the projector position adjustment window</p>

Advanced Mode



NOTE:

- The calculated values may vary depending on usage and ambient conditions.
- Calculator accuracy: $\pm 5\%$ (for all values except projector output and screen luminance).
- The scale of projector is not accurate.
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- Lens layout varies dependent on projector.

36	3D View	Image of the projector and the room looking diagonally or from directly above.
37	View point button	When you select the 3D view, the image viewed from the diagonal is displayed. When top view is selected, the image viewed from directly above is displayed.
38	Note	Displays notifications.

Simple Mode

Projected image size 39

	meter	inch	feet
Diagonal	1.78	70.00	5.83
Height	0.94	37.10	3.09
Width	1.51	59.36	4.95

Projection distance (L) 40

	meter	inch	feet
Minimum	2.05	80.52	6.71
Maximum	2.65	104.16	8.68

41

42

NOTE: 43

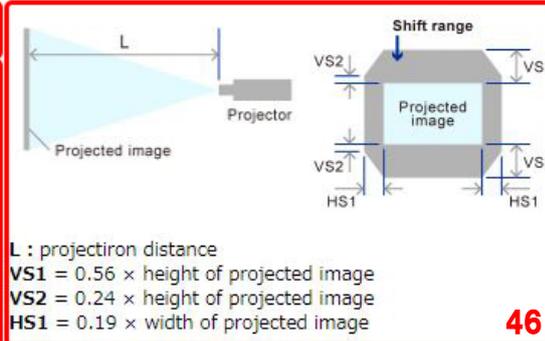
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39	Projected image size	Input the size of the image (diagonal, height, width).
40	Projection distance	Input the projection distance.
41	Calculate button	Calculates based on the input values and displays result.
42	Reset button	Deletes all input values and resets the calculation result.
43	Note	Displays notifications.

Simple Mode

Calculation result

Projector: PT-RQ32K **44**
 Lens: ET-D3LEW60
 [Projection size] **45**
 Aspect ratio: 16:10
 Diagonal: 1.778 m / 70.00 in / 5.83 ft
 Height: 0.942 m / 37.10 in / 3.09 ft
 Width: 1.508 m / 59.36 in / 4.95 ft
 [Projection distance]
 L: 1.483-1.747 m / 57.61-68.80 in / 4.80-5.73 ft
 [Optical shift range]
 VS1: 0.528 m / 20.78 in / 1.73 ft
 VS2: 0.228 m / 8.90 in / 0.74 ft
 HS1: 0.286 m / 11.28 in / 0.94 ft
 [Brightness]
 Projector output (ANSI): 28,000 lm
 Screen illuminance: 18,300 lx
 * m: meter in: inch ft: feet



Select the calculation result **47**

44	Display set value	Displays the model number of the selected projector and lens.
45	Display calculation result	<p>Displays calculation result together with selected aspect ratio.</p> <p>Display contents are: projection size, projection distance, optical shift adjustment range, and brightness. Displayed units: meters, inches, and feet.</p> <p>The value of the projector's brightness is shown in lumens (ANSI).</p>
46	Display dimensions of calculation result	Element values of projection distance and optical shift adjustment range, displayed in the calculation result, are displayed in the figure.
47	“Select the calculation result” button	Copies the calculation result to the clipboard so it can be pasted in other applications, etc.