

EPSON

Throw distance simulator

User's manual

REV.B

SEIKO EPSON CORPORATION

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【User’s manual revision history】

Rev.	Date	Page	Contents
A	Jan 17 th , 2020	All	New release
B	Mar 2 nd , 2020	All	Revised the explanation of all functions

1. Summary and notice

What's "Throw distance simulator"?

"Throw distance simulator" is HTML5 web application for calculating the throw distance between screen and the EPSON projector.

Supported browser

This simulator works with the following web browser.

- Google Chrome
- Firefox
- Safari

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2. Main User Interface



Search Projector

Categories

Please enter the model name Search result: **684 models** EB-L610U

Model Name

EB-L610U

Brightness: 6000lm
Resolution: WUXGA
Weight: Approx. 18.7 lbs. / 8.5 kg

[Spec. Info](#)

Near Models Select>>

- CB-109W
- CB-1780W
- CB-1785W
- CB-1795F
- CB-2048

Lenses (No lens exchange)

Lenses	V code	Zoom ratio	Lens shift(V)	Lens shift(H)
No result				

Basic setting

Room size: m m m

Position: Desktop Ceiling Wall

Units:

Screen Size

Diagonal: inch m

Width: m

Height: m

Aspect ratio:

Screen position

From floor to bottom of screen: m

Offset: m

Throw distance

From screen to lens: m

Advanced setting

Projector angle: °

Ambient condition:

Application:

Room brightness: lx

Screen gain:

View

Side View

Change the projector position

Available range

Project on outside of front wall

Front View

Change the projector position

Change the screen position

Lens shift range

Top View

Change the projector position

Available range

Project on outside of front wall

3D View

Change the projector position

Brightness & Contrast guide

Brightness on the screen (nit): 658.7
Brightness on the screen (lx): 2069.3
Actual Contrast: 7.9:1

Simulation result

Projector position

- (1) From floor to lens center: 1.750 m
- (2) Throw distance: 2.923 m
- (3) Screen size: 100.00 inch
- (4) From floor to bottom of screen: 1.158 m
- (5) Projector angle (Vertical): 0°
- (6) Projector angle (Horizontal): 0°

Projector setting

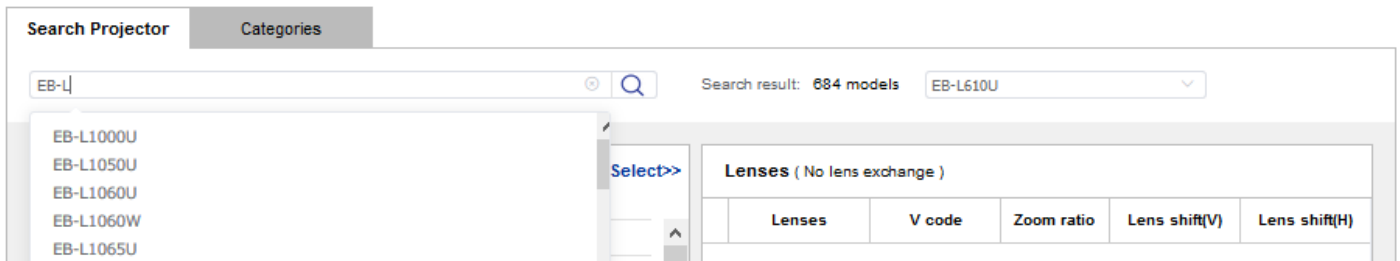
- Lens shift (Vertical): 6%
- Lens shift (Horizontal): 0%
- Keystone correction (Vertical): Available
- Keystone correction (Horizontal): Available


Notes and Disclaimer

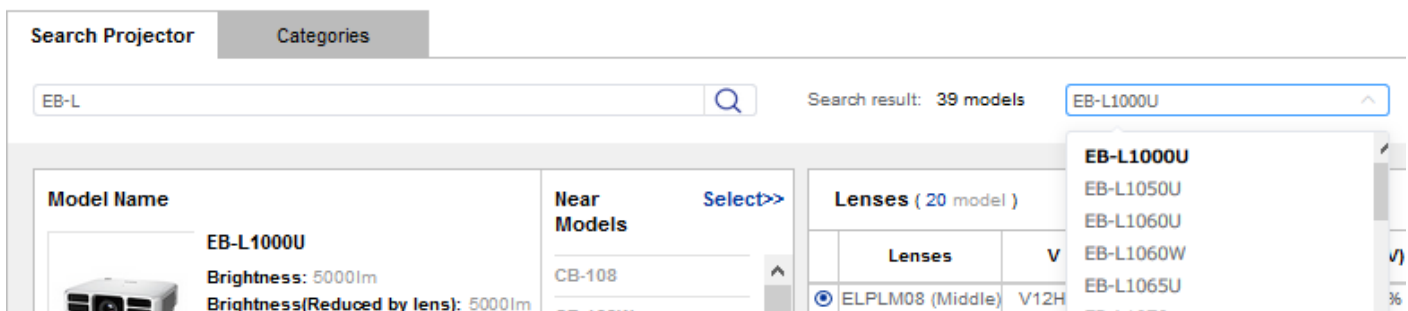
- The value displayed in this simulator is a computational value and does not guarantee actual performance.
- The projection distance is calculated from the lens center and the tip of the lens to the screen.
- Projector size is image.
- Specifications may change without notice.

3. Search the projector by model name

- Please input the partial or complete model number to find a specific model or list of matching projector models.

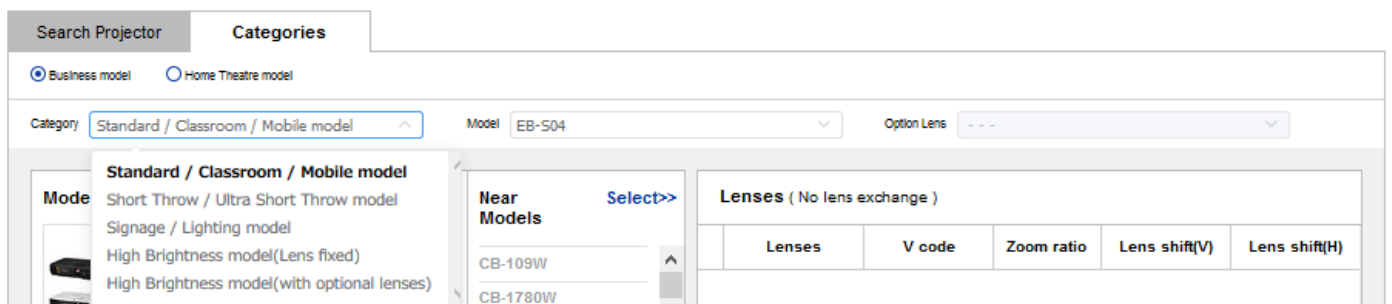


- After you input a partial model name and press  icon, the projector name automatically populates in the Model Name box and you can select from a list of models from the pull-down menu.



4. Select the projector from the category list

- You can select the projector from the categories (Also you can select an optional lens here.)



5. Confirm the projector's information

- The basic specification of the projector selected in steps "3" or "4" above will be displayed.
 - Brightness: The brightness of the selected projector
 - Brightness (Reduced by lens): The brightness reduction is a factor of the lens optical. (It will be displayed only on interchangeable lens projectors.)
 - Resolution: The native resolution of the LCD panel
 - Weight: The weight of projector with fixed lens (For interchangeable lens projectors, the weight does not include the lens.)

After pressing “Spec Info” button, the window will pop-up and you can confirm the detailed specification.

6. The model list which can be installed on the same conditions as the selected projector

- After simulating with selected projector by “3” or “4”, the other model which can be installed on the same conditions will be listed here.
ex) When having simulated on conditions with a screen size of 100 inch and a distance of 5m, all models which can be installed on the same condition will be listed.

7. Select a lens (interchangeable lens projectors only)

- You can select an optional lens here, you can also select a different lens when calculating throw distance, screen size, etc.
- In the option lens pull-down menu, lenses in black text are currently available; lenses in gray text are discontinued.

8. Input installation conditions

8.1 Basic settings

- Room size
- Position*
- Unit: m, mm, inch, feet

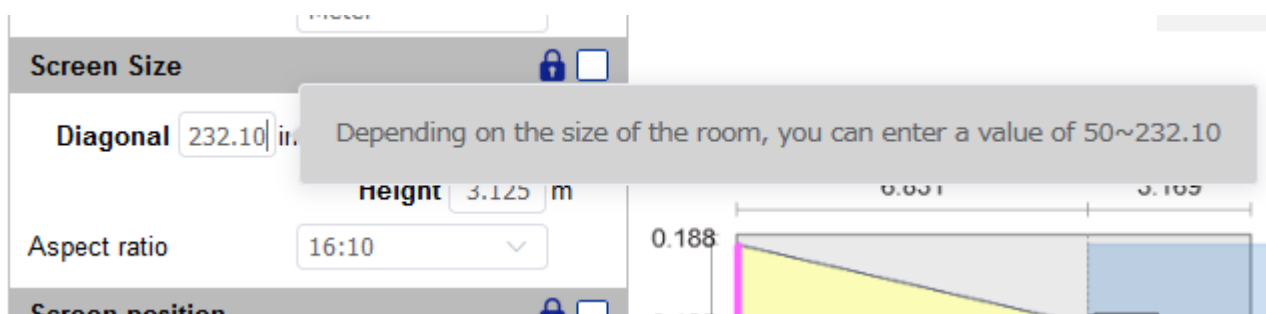
8.2 Screen Size

Please input the screen size in this box. Unit of measurement for the Diagonal settings box is preset to inches and cannot be changed.

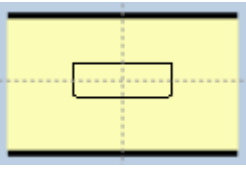
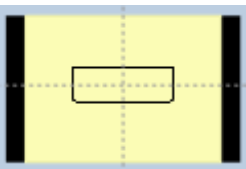
“Diagonal”, “Width” and “Height” fields adjust automatically when entering a value in any of the boxes, so you don’t need to input all values.


If the input screen size is bigger than the room size, the following message will pop up and indicate the available value automatically to the maximum or minimum value according to the input value.

ex) If you input “250 inch”, it automatically corrects to “232.10” and the following message will pop up.




- Aspect ratio: The initial value is the aspect ratio of the LCD panel. When the aspect ratio setting is changed from the initial value, the black band will appear on the left/right or top/bottom of the screen image.

	<p>Ex 1) In the case of the models with "16:10" LCD aspect ratio, when you change to "16:9"</p> <p>⇒ The black bands appear on the top/bottom of projection image.</p>
	<p>Ex 2) In the case of the models with "16:10" aspect ratio, when you change to "4:3"</p> <p>⇒ The black bands appear on the left/right of projection image.</p>

- Lock function  : The input screen size is locked.

8.3 Screen position

- From floor to the bottom of screen: Input the height from floor to bottom of screen.
- Offset: Input the thickness if you use blackboards or whiteboards and so on.
- Lock function  : The screen position will be locked (the base point is the left-bottom of the screen)

8.4 Throw distance

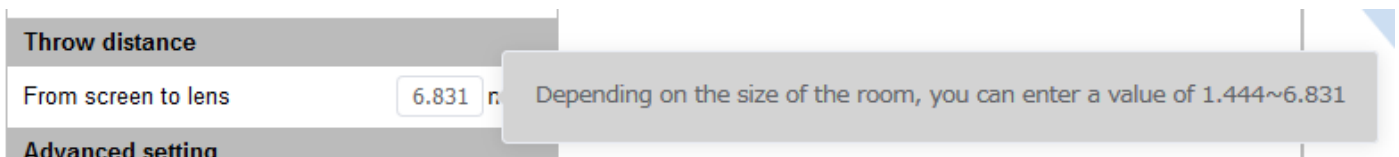
Please input the throw distance here. The input value is limited according to the lock status of the screen size.

1. If the screen size is not locked:

The screen size will be automatically adjusted to the maximum size (with wide zoom position) within the room size.

2. Screen size is locked:

- a. If the input throw distance is within the range limits, the position of the projector in the "View" boxes will adjust accordingly.
- b. If the input throw distance exceeds the range limits (wide ~ tele), the following message will pop up and the throw distance will be adjusted automatically.



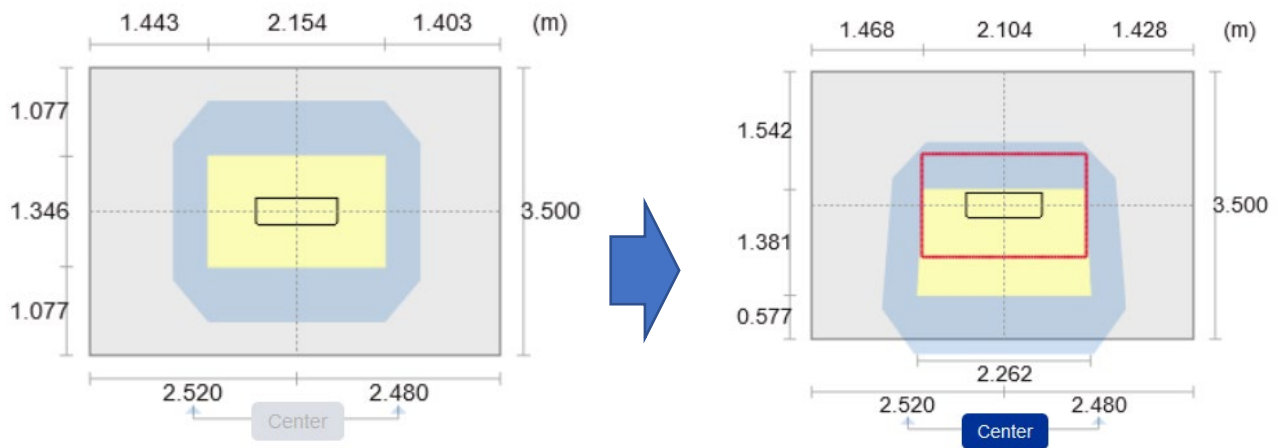
8.5 Advanced setting

8.5.1 Projector angle

If you want to simulate the diagonal projection in a horizontal or vertical direction, turn on this function. **Note:** You cannot turn on this function for both vertical and horizontal directions at the same time.

When this function is turned on, the slider bar and the input box will appear on the side view or front view window.

• When the projector angle setting is turned on and the screen position is locked, the screen position lock will be released and the red frame is displayed. This is useful for confirming whether the projector can diagonally project the image in the fixed screen position.



8.5.2 Ambient condition

When you input the room brightness and the screen gain, you can confirm the actual brightness, contrast on the screen, and whether the brightness of the selected projector is sufficient (see Brightness & Contrast guide" section (10) below)

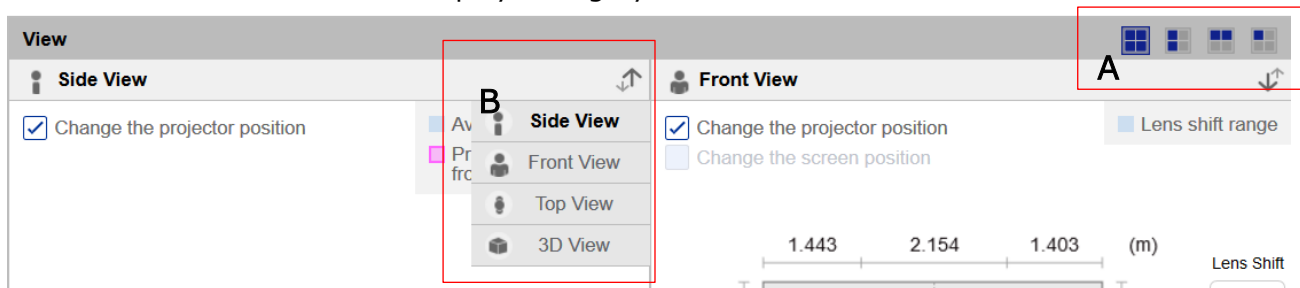
- Application: If the brightness in the installation environment is unknown, please select the appropriate application from the pull-down menu. The general brightness level for each application is automatically entered. If the brightness of the installation environment has a specific brightness level, please select "Custom" and input the brightness value.
- Room brightness: Input the brightness value for your installation environment. If you measure the actual brightness with a measurement tool, we recommend measuring the brightness of the wall surface on which you project the image.
- Screen gain: Please input the screen gain according to the screen spec.

9. View

You can check the projector's position visually in this area. Four Views (Side, Front, Top and 3D) work interactively with each other.

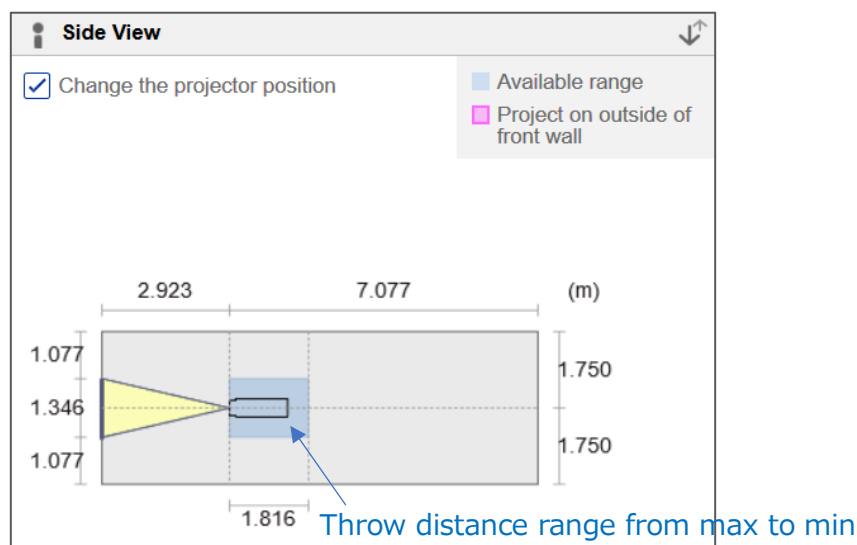
9.1 Change View

- Select the view format: Choose between 4 views, 2 views (Top/Bottom & Left/Right) or Single view
- Change the view type: You can change (swap) views. The current view is indicated in black text and the others are displayed in gray text.

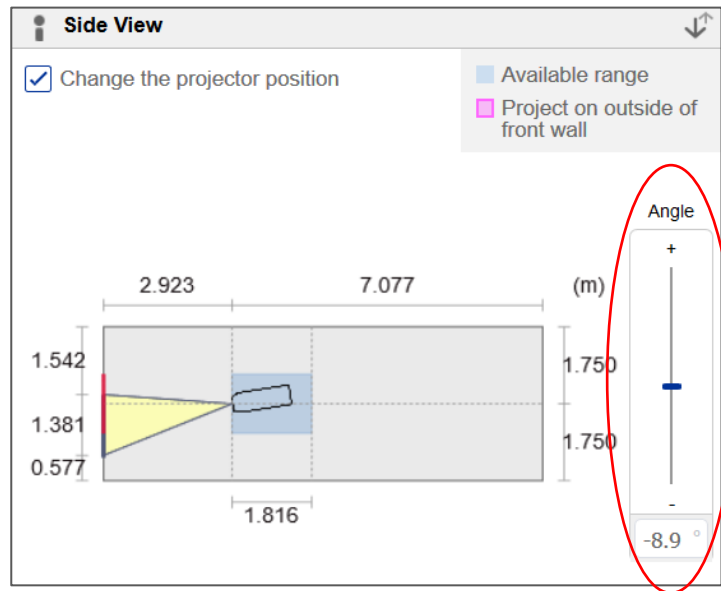


9.2 Side view

- The is the room viewed from the side. The projector position setting can be changed using a mouse or mouse + spacebar on a keyboard.
- If you want to change the projector's position (zoom ~ wide) without changing the screen size, first lock the screen size (see section 8.2)
- The "Available range" will be displayed if the selected model is using a lens that supports the lens shift function. If you want to change the projector's position in the available range area, first lock the screen size and the screen position (see sections 8.2 and 8.3)

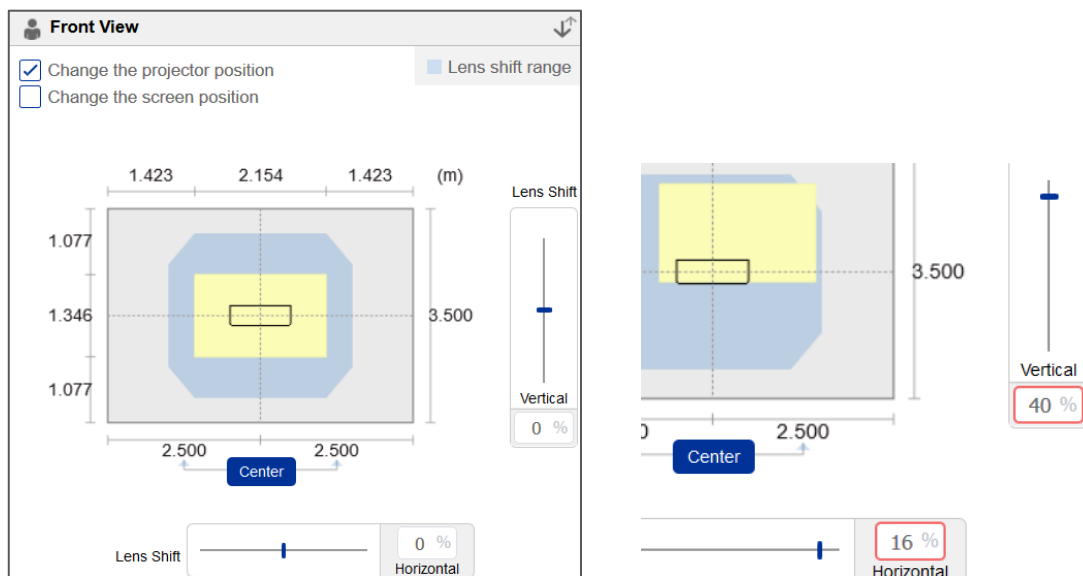


- When the vertical angle is set to "ON" (Ref: 8.5.2), the slider bar and input box appear on the right side in the view box.



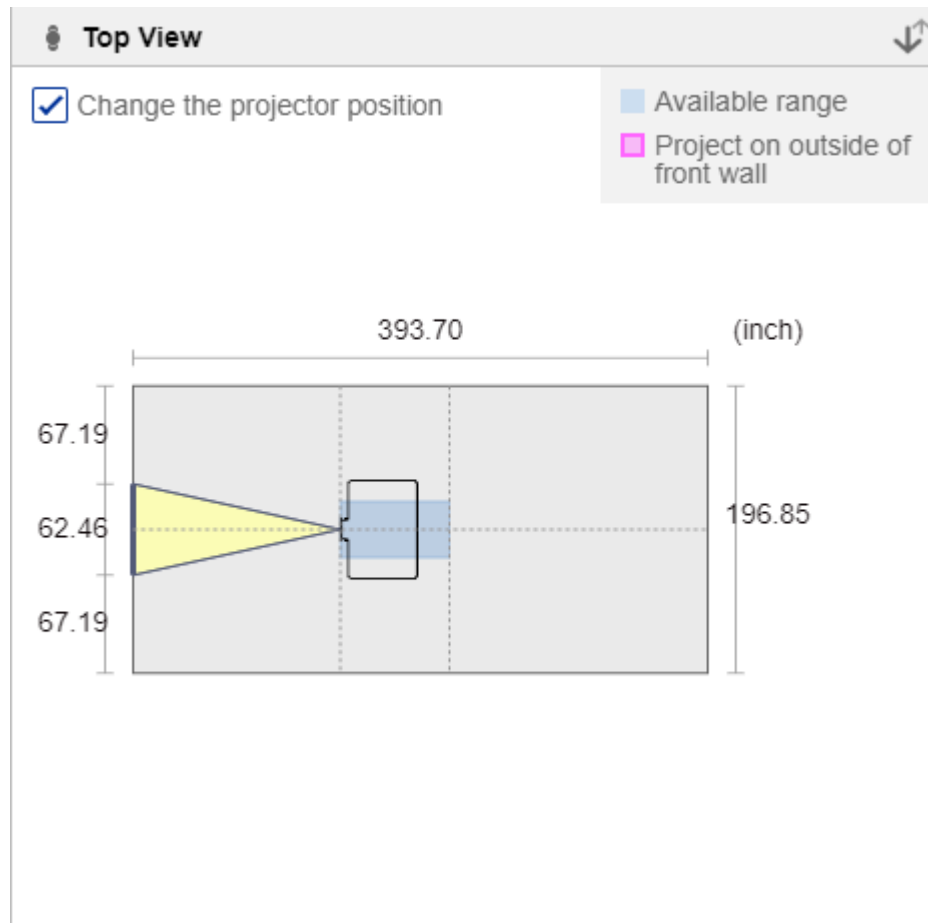
9.3 Front view

- This is the view when facing the wall of the projected image.
- The "Available range" will be displayed if the selected projector is using a lens that supports the lens shift function. If you want to change the projector's position in the available range area, please checkmark the "Change the screen position" box or use the Lens Shift slider bar (Right side: vertical lens shift, bottom side: horizontal lens shift). If the frame of input box becomes red, this indicates the value is "out of lens shift range".
- If you want to move the projector's position (and the lens shift position) to the center horizontally, press the "Center" button.



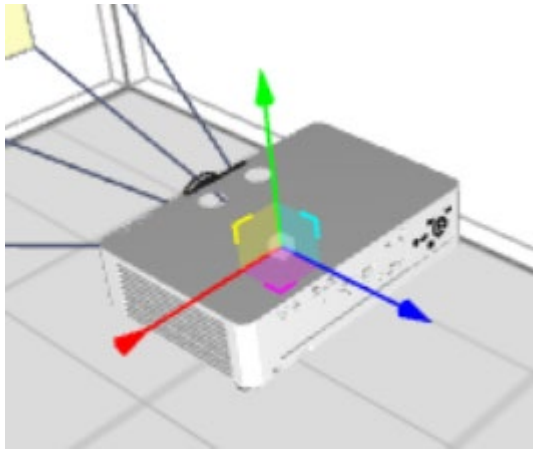
9.4 Top view

- This is the room view from the top.
- The basic operation is the same as “9.2 Side view”.
- When the horizontal angle is turned “ON” (see section 8.5.2), the slider bar and the input box will appear on the right side of top view area.



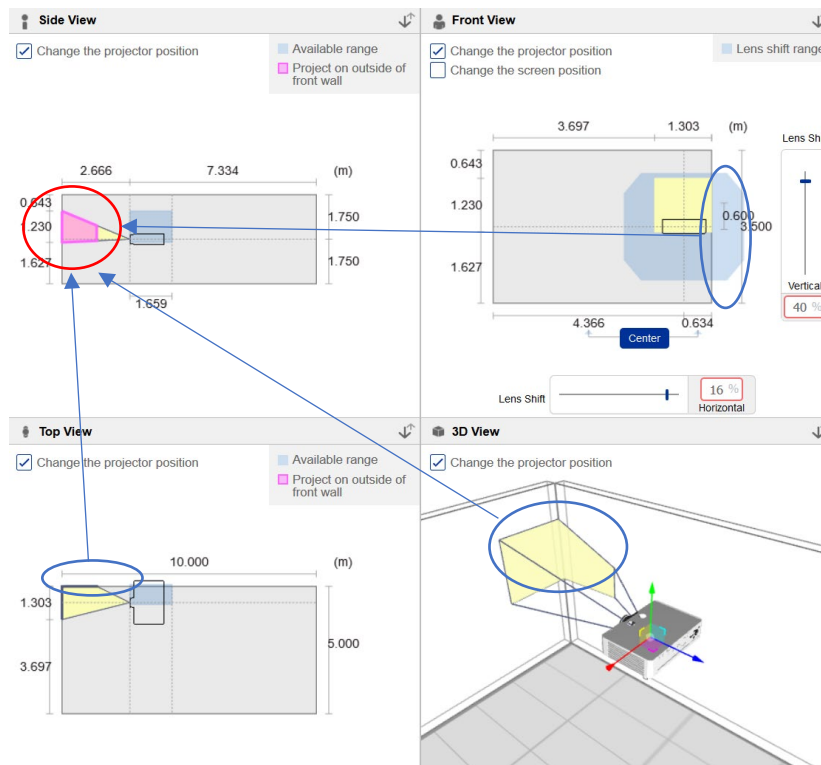
9.5 3D view

- This is the 3D room view. Operations are as follows:
 - Zoom: Rotate the mouse wheel or drag the mouse while clicking the wheel.
 - Rotation: Drag the mouse while left clicking.
 - Pan: Drag the mouse while pressing the “Shift” key or drag the mouse while right-clicking.
- Move the projector position by dragging the mouse while left clicking on each axis.
 - Green: Up-down direction
 - Blue: Front-back direction
 - Red: Left-right direction



9.6 Projected image position

If any part of the projected image hits the side wall, ceiling or floor, the image beam will show a shaded pink – see example below.








10. Guidelines for brightness & contrast

According to the ambient condition (see section 8.5.2), you can check whether the brightness of selected projector is sufficient.

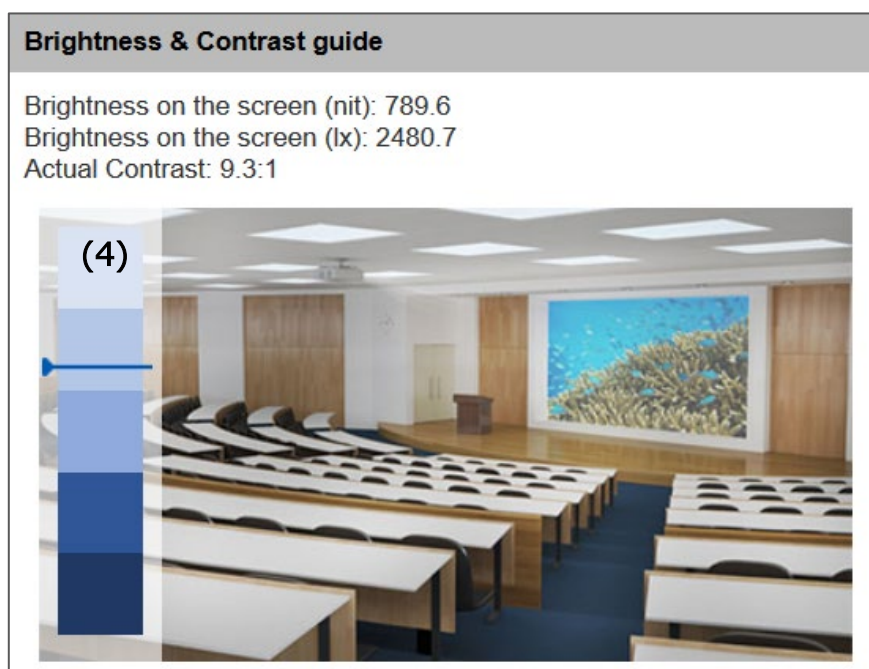
- (1) The actual brightness on the screen in nit (cd/m^2).
- (2) The actual brightness on the screen in lx (lux).
- (3) The actual contrast on the screen.
- (4) This guideline indicates whether the brightness of the selected projector is sufficient based on the actual contrast (3).

(NOTE: EPSON guidelines are based on the INFOCOMM guidelines.)

	The brightness is more than sufficient for this environment.
	The brightness is sufficient for this environment
	The brightness (contrast) meets the recommended value (1) (2)
	The brightness (3) (contrast) is marginal in this environment. EPSON recommends choosing another brighter model.
	The brightness might not be enough. Please select another brighter model.

- (5) The projection image based on the simulation results (4).

(NOTE: These are simulated images only; EPSON cannot guarantee the actual image.)



11. Simulation results

The simulation result will be displayed in a report. The “Keystone correction” lets you know whether the built-in keystone feature can correct the tilted image.

Simulation result

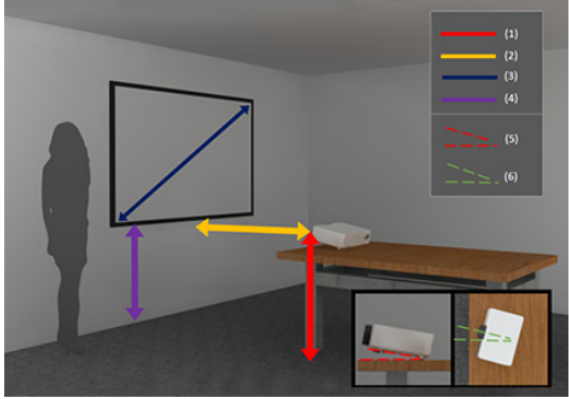
Projector position

- (1) From floor to lens center: 1.750 m
- (2) Throw distance: 2.666 m
- (3) Screen size: 91.33 inch
- (4) From floor to bottom of screen: 1.627 m
- (5) Projector angle (Vertical): 0°
- (6) Projector angle (Horizontal): 0°

Projector setting

- Lens shift (Vertical): 40%
- Lens shift (Horizontal): 16%
- Keystone correction (Vertical): Available
- Keystone correction (Horizontal): Available

[Copy to clipboard](#) [Output as PDF](#)



“Copy to Clipboard”: The above results can be copied to the clip board.

“PDF Output: The projector spec (including the lens spec), simulation results and Side/Front/Top view image are output to a PDF file.

EPSON Projector Throw Distance Simulation Report



EB-L610U

6000 lm Brightness	WUXGA Resolution	0.67 inch LCD Panel Size	100 - 240 V AC ±10%, 50/60 Hz Power Supply Voltage	353W/265W Power consumption
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Simulation result

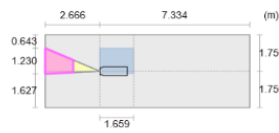
Projector position

- (1) From floor to lens center: 1.750 m
- (2) Throw distance: 2.666 m
- (3) Screen size: 91.33 inch
- (4) From floor to bottom of screen: 1.627 m
- (5) Projector angle (Vertical): 0°
- (6) Projector angle (Horizontal): 0°

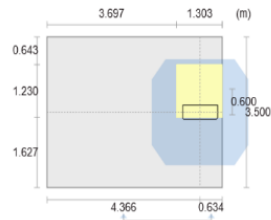
Projector setting

- Lens shift (Vertical): 40%
- Lens shift (Horizontal): 16%
- Keystone correction (Vertical): Available
- Keystone correction (Horizontal): Available

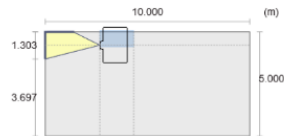
Side View



Front View



Top View



COMMENT

2020-01-14

End of document