Ultimate Short Throw LCD Projectors

HITACHI
Inspire the Next



• Projected image is a simulation.



• The tabletop use kit is optional.

ULTIMATE 究極 SHORT THROW

Ultimate Interactive Short Throw LCD Projectors
CP-AW2519N/CP-AW2519NM WXGA 2,500 Lumens

Ultimate Short Throw LCD Projectors
CP-AW251N/CP-AW251NM WXGA 2,500 Lumens
CP-A301N/CP-A301NM XGA 3,000 Lumens
CP-A221N/CP-A221NM XGA 2,200 Lumens

• Wall mount unit: included with CP-AW2519NM/CP-AW251NM/CP-A301NM/CP-A221NM, optional with CP-AW2519N/CP-AW251N/CP-A301N/CP-A221N.

AMX DEVICE DISCOVERY

3LCD

Projectors that previously only projected images now have interactive functions that surpass conventional uses

The CP-AW2519N/CP-AW2519NM projectors come with Starboard® Software that allows interactive operation. Until now you could only look at the image from the projector.

Now you can use the supplied interactive pen to perform mouse operations or to write letters or draw figures on the projected image using the StarBoard Software.

Interactivity provides several benefits:
- **Real time operation and revision**
- **Improved audience concentration**
- **Audience participation in image operations**
- **Prompt data saving and printing function of the displayed content**

These advanced projectors also feature Ultimate Short Throw and network functions.





Meeting room walls become interactive spaces.

With these projectors, as in the past you can write comments on a separate whiteboard while projecting images for effective meetings, and furthermore you can also write directly over the projected image on a wall using the StarBoard Software. What's more, the interactive function works on many types of surfaces: flat walls, whiteboards and even chalkboards.

Excellent Interactive Functions for Business Use*

*All interactive functions require StarBoard Software.

■ Write Directly with the StarBoard Software

You can write letters or draw shapes directly on the image with the interactive pen using the StarBoard Software and of course use it to erase what you have added. You can erase or change pen color or thickness from the floating tool bar.



● Interactive Pen

The interactive pen lets you select three mode variations. The Normal pen mode is best for annotations and freehand, Intelli-pen mode is best for writing notes and drawing shapes, and Pointer pen mode works like a laser pointer.



■ Operating a Mouse with the StarBoard Software

Using the supplied interactive pen as a mouse lets you perform computer operations on the projected image using the StarBoard Software.

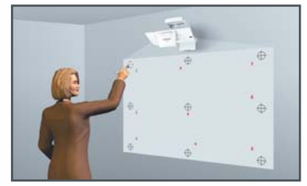


■ Save Handwritten Data

You can save what you have written or drawn on the image using the StarBoard Software in PNG, JPEG, BMP, HTML or PDF formats. This is handy for retaining meeting notes, and for sharing them via email or printing them out.

■ Simple Calibration

Initial setup is faster and easier, because you can perform calibration just by touching nine locations with the supplied interactive pen.



■ You can use Microsoft® Word, Microsoft Excel® and Microsoft PowerPoint® with the StarBoard Software and Interactive Pen

■ Conference Mode

You can share the StarBoard Software whiteboard with people in remote locations.

■ Tabletop Use

The optional tapletop use kit allows the projector to be used vertically. You can project a 1.5m (60") image down onto a table. And of course the StarBoard Software interactive function can be used.



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Ultimate Interactive Short Throw LCD Projectors

CP-AW2519N/CP-AW2519NM

WXGA 2,500 Lumens
- Wall mount unit: included with CP-AW2519NM, optional with CP-AW2519N.

StarBoard® Software Included.
- StarBoard® is a registered trademark of Hitachi Solutions, Ltd. in Japan and other countries.



• Projected images are simulations.

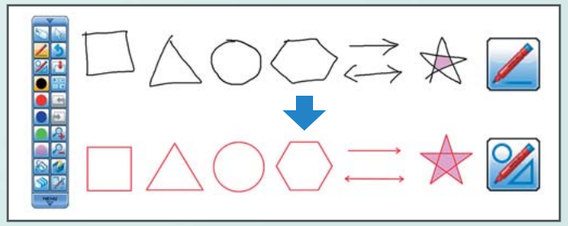
The handy interactive functions allow greater communication for a new style of lessons



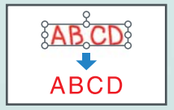
Useful Interactive Functions for Education Use*

*All interactive functions require StarBoard Software.

■ Neatly Convert Letters or Figures with the StarBoard Software

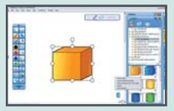


You can automatically convert freehand shapes into geometric objects and handwriting into text on the projected image using the StarBoard Software. These operations are easily accomplished with the interactive pen.



■ Clip Art, Adobe® Flash® Learning Objects

The StarBoard Software includes clip art. You can drag 3D shapes and other images onto the page and then move, resize and rotate them. There are many interactive Adobe Flash files, which are useful for lessons. Math and science are already included in Clip Art.



Clip art: 3D shapes

Adobe Flash file: adding 1 digit numbers



Select a number and drag it into the box.

Click the pen on the answer box and the answer appears.

Adobe Flash file: adding decimal masses

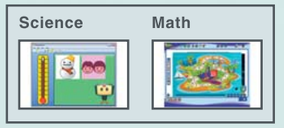


Drag the animals onto the scale.

As each animal is added, the numbers on the scale change.

■ Subject Toolbox

There are four subject toolboxes: Geography, Language Arts, Math and Science. You can choose one from the toolbar for display on the screen, and use the various tools to hold the students' attention and improve their comprehension of the subject.



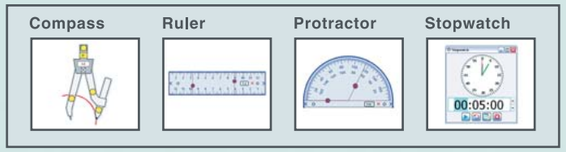


Have a student drag the random letters into the correct order.

You can give a hint, and when the word is correct, the word Correct! appears.

■ Select a Variety of Useful Tools

The interactive pen lets you operate a compass, ruler, protractor, stopwatch and other useful tools on the projected image using the StarBoard Software, making lessons even easier to understand.



■ Screen Capture

In addition to Full Screen capture, you can also select Partial and Freehand capture.



Full Screen



Partial Selection



Freehand Selection

Windows®:

■ StarBoard Software Requirement Specifications

CPU: Intel® Pentium® 4 1.8GHz or faster
Free Hard Drive Space: 600 MB or more
RAM: 1GB or more
Display Colors: High Color (16 bit) or higher
Operating System (OS): Windows XP 32bit/Windows Vista® 32bit/Windows 7 32/64bit (the latest service pack must be applied) (Tablet PC Edition and Server Edition are not supported)
Software Required: Internet Explorer® 6.0/7.0/8.0 (for viewing Online Help and using Internet search functions) PowerPoint 2002/2003/2007/2010 (for viewing PowerPoint documents) Microsoft DirectX® 9.0c/Windows Media® Player 9 or above (for using movie features) Adobe Flash Player 10 (for using Flash object)
Others: DVD drive; Video card with hardware overlay feature (for using movie features) (for Webcam playback and capturing feature); DV (Digital video, DV cameras, D-VHS, etc.); Capture devices which support DirectShow (with WDM drivers)

For Conference host feature
CPU: Intel® Core™ 2 Duo 2.0GHz or faster
Free Hard Drive Space: 2GB or more
RAM: 2GB or more
Others: TCP/IP 54Mbps or above

■ For using the interactive function, the recommended computer specification is shown below

CPU: Intel Core 2 Duo 2.0GHz or faster
Memory: 1GB or more (Windows Vista or Windows 7: 2GB or more
Free Hard Drive Space: 600MB or more
Display Colors: High Color (16bit) or higher
Web Browser: Internet Explorer 6.0/7.0/8.0
Others: For movie playback, hardware overlay is necessary for the video card. For web camera playback and capture, a DV capture device (digital video, DVD camera, etc.) that supports DirectShow with WDM device is necessary.
• Actual operating environment depends on the computer.

Macintosh®:

■ StarBoard Software Requirement Specifications

CPU: Intel CPU
Free Hard Drive Space: 600MB or more
RAM: 1GB or more
Display Colors: High Color (16 bit) or higher
Operating System (OS): Mac OS® X 10.5 / 10.6
Software Required: PowerPoint 2004/2008 for Mac® (for viewing PowerPoint documents) Apple® QuickTime® 7.1 or above (for using movie features) Adobe Flash Player 10 (for using Flash object)
Others: DVD drive

For Conference host feature
CPU: Intel Core 2 Duo 2.0GHz or faster
Free Hard Drive Space: 2GB or more
RAM: 2GB or more
Others: TCP/IP 54Mbps or above

■ For using the interactive function, the recommended computer specification is shown below

CPU: Intel Core 2 Duo 2.0GHz or faster
Memory: 2GB or more
• Actual operating environment depends on the computer.

For i-learn: maths toolbox
Display Resolution: 1024 x 768 or higher
Software Required: Adobe Reader
Others: 3D graphics card with 32-bit color

• Projected images are simulations.

A full line of projectors with a wide range of functions for classroom use



Tabletop Use

The optional tapletop use kit allows the projector to be used vertically. You can project a 1.5m (60") image down onto a table.





Ultimate Interactive Short Throw LCD Projectors
CP-AW2519N/CP-AW2519NM
2,500 Lumens

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WXGA

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CP-A221N/CP-A221NM
2,200 Lumens

XGA

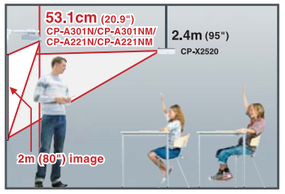
• Wall mount unit: included with CP-AW2519NM/CP-AW251NM/CP-A301NM/CP-A221NM, optional with CP-AW2519N/CP-AW251N/CP-A301N/CP-A221N.

ULTIMATE 究極 SHORT THROW

Ultimate Short Throw

■ Reduced Glare and Shadows

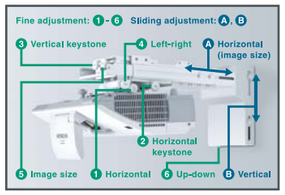
These projectors feature Ultimate Short Throw, for projecting a 2m (80 inches) image from only 53.1cm (20.9 inches)* onto a wall or whiteboard. Ultimate Short Throw greatly reduces glare from the projector's light source, making it easier for the teacher or presenter to see the audience. The audience also has a clearer view because the teacher's or presenter's hands and body shadows are minimized. The result is a better classroom or meeting room experience for both teachers or presenters and audience.



* CP-A301N/CP-A301NM/ CP-A221N/CP-A221NM. CP-AW2519N/CP-AW2519NM/ CP-AW251N/CP-AW251NM are 56.2cm (22.1 inches).

■ Precision Control Wall Mount Unit*.

The six-axis wall mount design ensures that the projector can be installed in exactly the right position. The entire unit slides horizontally and vertically, and fine adjustments can be made to each axis independently.

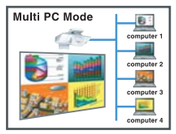


* Included with CP-AW2519NM/CP-AW251NM/CP-A301NM/CP-A221NM, optional with CP-AW2519N/CP-AW251N/CP-A301N/CP-A221N.
Do not attempt to install the projector yourself. Have your dealer or service center handle all installation work.

Advanced Network Functions*

■ Network Presentations

You can project still or moving images from one or more networked computers. The Single PC mode lets you select one computer on the network, while the Multi PC mode lets you use up to four computers. Displaying various images from computers makes lessons and presentations much more effective.



■ Messenger

The Messenger function transmits text data to the projector via a network, so the projector can display it. This is an easy and efficient way to send campus-wide announcements.

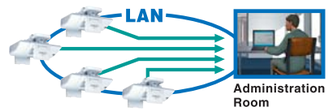
Messenger is ideal for:

• Campus Notifications • School Activities • Daily Schedules • Community/Local News

• This function is not intended or guaranteed for the distribution of warning messages created by security systems.

■ Centralized Reporting

With just one computer in an administration room, you can collect reports from all projectors connected to the network.



* Video transfer through network may not be supported depending on combination of computer hardware and software. For projecting video sources, video/computer cable is preferable.

Superior Convenient Features

■ WXGA (1280 x 800)* and 720p Capability

Featuring WXGA (1280 x 800) resolution, these projectors are capable of displaying wide and large images.

* CP-AW2519N/CP-AW2519NM/ CP-AW251N/ CP-AW251NM

■ Approximately 3.8kg (8.4 lbs.)* Light Weight

Even with their many functions, these projectors are light, with a weight of only 3.8kg (8.4 lbs).

* CP-AW251N/CP-AW251NM/ CP-A301N/ CP-A301NM/ CP-A221N/CP-A221NM

■ 5m USB Cable*

The supplied USB cable is 5m long, expanding the area where the projector can be placed.

* CP-AW2519N/CP-AW2519NM

■ Perfect Fit

Perfect Fit enables quick adjustment of the projected image by moving its four corners one at a time. In addition, barrel or pincushion distortion, which occur on rounded surfaces, can easily be corrected.

• Perfect Fit may decrease picture quality as a result of the compensation and resizing processes.



■ 10W Internal Speaker

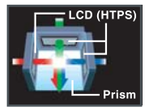
The projectors have a built-in 10W high power speaker.

■ HDMI® Input

With signals transferred completely in the digital domain, lessons and presentations are assured of the highest image quality.

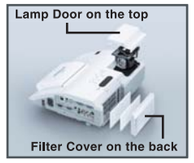
■ 3 LCD Panels with Inorganic Alignment Layers

These projectors incorporate three LCD panels with inorganic alignment layers that are extremely light resistant, increasing brightness and contrast ratio. They ensure smooth images and high reliability.



■ Easy Maintenance

The lamp door is on the top and the filter cover on the back, so maintenance and replacement of these parts can be done easily.



■ Hybrid Filter

The Hybrid Filter has an electrostatic design with hybrid protection filter layers, protecting the optics from dust, dirt and chalk particles. It also has a longer life than previous filters, so the projector requires less frequent maintenance.

■ Versatile Security Functions

The projectors are equipped with a security bar, PIN Lock, MyScreen Lock and Transition Detector functions.

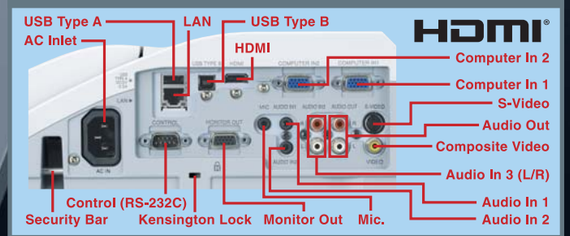


■ More Convenient Features

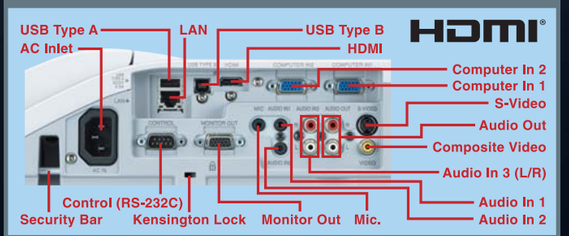
• 2,000 : 1 High Contrast Ratio (Presentation Mode) • Low Noise of 28dB*1 (Eco Mode) • Display via USB • Audio Pass Through*2 • Power Saving Mode • Template Function*3 • Daytime Mode • My Button • My Memory • Input Source Naming • 4-Second Quick Start • Direct Power On/Off • Closed Caption • Compatible with AMX Device Discovery

*1 Typical. Tested in 23°C environmental conditions.
*2 When in Normal mode at standby setting. It does not function in Saving mode.
*3 Patent pending

CP-AW2519N/CP-AW2519NM TERMINALS



CP-AW251N/CP-AW251NM/CP-A301N/CP-A301NM/CP-A221N/CP-A221NM TERMINALS



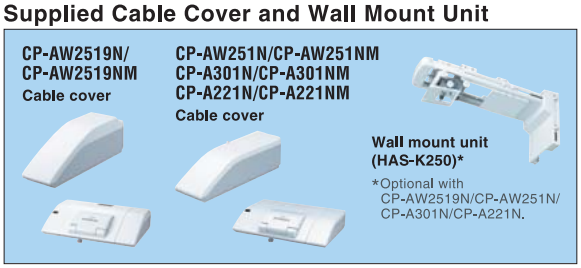
• Projected images are simulations.

Specifications

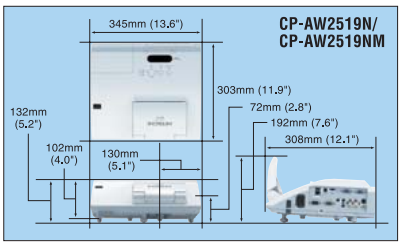
Model name		CP-AW2519N/CP-AW2519NM	CP-AW251N/CP-AW251NM	CP-A301N/CP-A301NM	CP-A221N/CP-A221NM
Liquid crystal panel		0.59 type (inch), 1.5cm polysilicon active-matrix TFT x 3		0.63 type (inch), 1.6cm polysilicon active-matrix TFT x 3	
Number of pixels		1,024,000 pixels (H1280 x V800)		786,432 pixels (H1024 x V768)	
Resolution		1280 x 800 color pixels (WXGA)		1024 x 768 color pixels (XGA)	
Digital zoom		x1.35			
Lamp		210W UHP			
Light output (brightness)		2,500 Lumens		3,000 Lumens	2,200 Lumens
Contrast ratio		2,000:1 (Presentation mode)			
Audio		10W			
Keystone correction		Manual Horizontal/Vertical Keystone			
Power supply		AC100-120V/AC220-240V			
Operating temperature		5-35°C/41-95°F (For interactive function: 16-35°C/61-95°F)*1	5-35°C/41-95°F		
Input signals	Computer input	VGA, SVGA, XGA, WXGA, WXGA+, SXGA, WSXGA+, UXGA, MAC16"		VGA, SVGA, XGA, WXGA, WXGA+, SXGA, SXGA+, UXGA, MAC16"	
	Video input	NTSC, NTSC4.43, PAL, SECAM, PAL-M, PAL-N, PAL (60Hz) 480i@60, 480p@60, 576i@50, 576p@50, 720p@50/60, 1080i@50/60, 1080p@50/60			
Input/output terminals	Video input	S-Video: Mini Din 4-pin x 1, Composite video: RCA jack x 1, Component video: via Mini-Dsub x 2			
	Audio input	Stereo Mini jack x 2, RCA jack x 2 (L/R)			
	Computer input	Analog RGB: 15-pin Mini-Dsub x 2			
	HDMI input	HDMI x 1 (HDCP compliant)			
	Audio output	RCA jack x 2 (L/R)			
	Monitor output	Analog RGB: 15-pin Mini-Dsub x 1			
	USB	USB type A x 1 (for PC-less presentation), USB type B x 1 (for USB display or USB mouse control, and interactive function)	USB type A x 1 for PC-less presentation, USB type B x 1 for USB display, USB mouse control		
	Control	9-pin Dsub x 1 for RS232C			
	Wired network (LAN)	RJ-45 x 1			
	Mic. input	Mono Mini jack x 1 (compatible with dynamic microphones and unbalanced signal lines)			
Agency certifications		UL/cUL, FCC Part15 class A, AS/NZS CISPR22 class A, CE, RoHS, GOST-R	UL/cUL, FCC Part15 class A, AS/NZS CISPR22 class A, CE, RoHS, GOST-R		
Dimensions (WxHxD)		345 x 102 x 303mm (13.6" x 4.0" x 11.9") [excluding protruding part, when mirror is closed.]	345 x 85 x 303mm (13.6" x 3.3" x 11.9") [excluding protruding part, when mirror is closed.]		
Weight		Approximately 4.1kg (9.0 lbs.)	Approximately 3.8kg (8.4 lbs.)		
Standard accessories*2		Remote control (Part#: HL02772) with two AA batteries, Power cord, Computer cable, USB cable, Interactive Pen*3, two AAA batteries and the tip of the pen for exchange, Cable cover, User's manuals, Security label, Software applications (CD x 1, DVD x 1), Wall mount unit and user's manual*4, Sensor cover	Remote control (Part#: HL02772) with two AA batteries, Power cord, Computer cable, Cable cover, User's manuals, Security label, Application CD, Wall mount unit and user's manual*4		
Optional accessories		Lamp: DT01251, Filter set: UX37191, Laser remote control: HL02651 (RC-R008), Tabletop use kit: TT-251			

*1 If the mouse cursor or drawing image does not match the actual pen tip point perfectly, please calibrate again to optimize the interactive system.
*2 Standard accessories, like power cord, vary across regions or countries.
*3 Depending on surface textures of screens or walls, etc. where images are projected, abrasion of the interactive pen tip may be accelerated, resulting in the need for pen tip exchange.
*4 Optional with CP-AW2519N/CP-AW251N/CP-A301N/CP-A221N

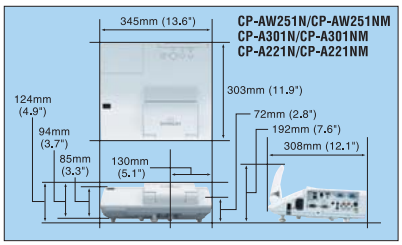
Supplied Cable Cover and Wall Mount Unit



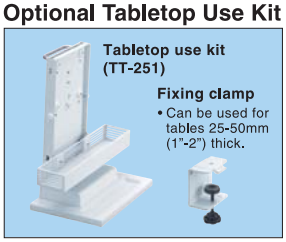
Dimensions



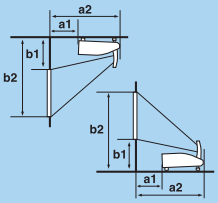
Dimensions



Optional Tabletop Use Kit



Projection Distance



CP-AW2519N/CP-AW2519NM/CP-AW251N/CP-AW251NM

Screen Size (16:10 Screen)	a1	a2	b1	b2
60 type (inch), 1.5m	0.120m (4.7")	0.426m (16.8")	0.295m (11.6")	1.102m (43.4")
70 type (inch), 1.8m	0.188m (7.4")	0.494m (19.5")	0.332m (13.1")	1.274m (50.2")
80 type (inch), 2.0m	0.256m (10.1")	0.562m (22.1")	0.369m (14.5")	1.446m (56.9")
90 type (inch), 2.3m	0.324m (12.8")	0.631m (24.8")	0.407m (16.0")	1.618m (63.7")
100 type (inch), 2.5m	0.392m (15.4")	0.699m (27.5")	0.444m (17.5")	1.791m (70.5")

CP-A301N/CP-A301NM/CP-A221N/CP-A221NM

Screen Size (4:3 Screen)	a1	a2	b1	b2
60 type (inch), 1.5m	0.096m (3.8")	0.403m (15.9")	0.281m (11.1")	1.196m (47.1")
70 type (inch), 1.8m	0.161m (6.3")	0.467m (18.4")	0.317m (12.5")	1.384m (54.5")
80 type (inch), 2.0m	0.225m (8.9")	0.531m (20.9")	0.352m (13.9")	1.571m (61.9")
90 type (inch), 2.3m	0.289m (11.4")	0.596m (23.4")	0.387m (15.2")	1.759m (69.2")
100 type (inch), 2.5m	0.353m (13.9")	0.660m (26.0")	0.423m (16.6")	1.947m (76.6")

• Manufacturer's recommended size is 60 type (inch), 1.5m – 100 type (inch), 2.5m. • Tolerance ±8% (for projection distance a2)
• Final specifications may vary slightly.

Consideration for the Environment

■ Compliance with EU Directive RoHS*1

*1 RoHS is the acronym of "DIRECTIVE 2002/95/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 27 January 2003 on the restriction of the use of certain hazardous substances in electrical and electronic equipment".

■ Reduction of resin usage in production

Use of hot runners in molds for making upper housing in order to reduce mill ends.

■ Reduction of CO_2 emissions

Carton volume has been cut down to 60% (CP-AW2519N)/40% (CP-AW251N/CP-A301N/CP-A221N)*2, reducing CO_2 emissions during transport.

*2 Compared to Hitachi CP-A100 ultra-short throw projector on the basis of one carton box.

■ Power saving mode engaged during standby

■ Eco mode

Eco mode provides power saving.

- Design and specifications are subject to change without notice.
- The projected images and comparison photos in this catalog are simulations.
- LCD panels, polarizers and other optical components and cooling fans may need replacement after prolonged usage. For more details, please consult a Hitachi sales representative.
- Do not use in places where there is a lot of water, dampness, steam, dust, soot or tobacco smoke. This may result in fire or malfunction.
- Optical components (lamp, LCD panel, polarizing plate, PBS [polarizer beam splitter]) have limited service lives. They must be repaired or replaced if they are used for a long period of time.
- These projectors use a mercury lamp with high internal pressure. Because of its properties, this lamp may burst with a loud noise or burn out if struck or after it has been used for a period of time. The time until it bursts or burns out varies greatly according to differences between lamps and usage conditions. Turning the lamp's power on and off frequently shortens its service life.
- Optical components other than the lamp: If the projector is used for six hours or more per day, they may need to be replaced in less than a year.
- LCD panel: If the projector is used continuously for six hours or more, its replacement cycle may be shortened.
- Do not turn projector on again for ten minutes after shutdown. Neglect can shorten the lifetime of the lamp. During use and immediately after use, do not touch anywhere near the lamp and the vents as these parts are extremely hot.
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Remote control warning: Do not look into the laser beam. Class 2 Laser product; maximum output 1mW; wavelength 650nm.

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