

Panasonic

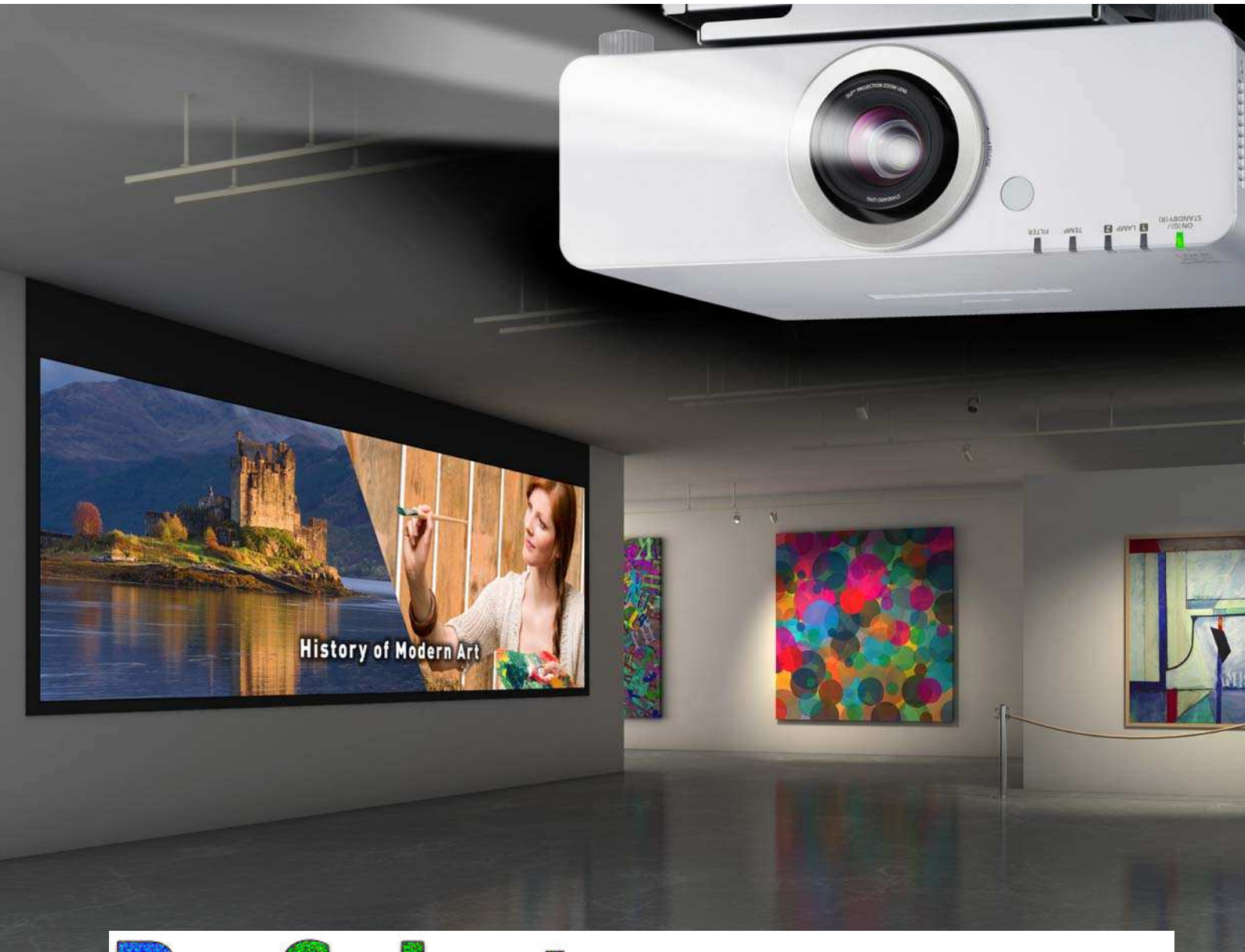
ideas for life

PT-DZ680 Series

1-Chip DLP™ Projectors

PT-DZ680
 PT-DZ680L
 PT-DW640
 PT-DW640L
 PT-DX610
 PT-DX610L

Enhancing Communication with Bright, Crisp Images



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PT-DZ680S
 PT-DZ680LS

WUXGA

6,000 lm

PT-DW640S
 PT-DW640LS

WXGA

6,000 lm

PT-DX610S
 PT-DX610LS

XGA

6,500 lm



PT-DZ680K
 PT-DZ680LK

WUXGA

6,000 lm

PT-DW640K
 PT-DW640LK

WXGA

6,000 lm

PT-DX610K
 PT-DX610LK

XGA

6,500 lm



The PT-DZ680LS/DZ680LK, PT-DW640LS/DW640LK, and PT-DX610LS/DX610LK are not equipped with a lens.
 The cabinet for each model is available in silver (PT-DZ680S/DW640S/DX610S) or black (PT-DZ680K/DW640K/DX610K).

Bright, Versatile Operation in a Compact Projector

Panasonic PT-DZ680 Series 1-chip DLP™ projectors, featuring a dual-lamp system, are compact but powerful. The RGB Booster ensures vivid, colorful images, and the original Eco Filter eliminates the need for filter replacement for up to 12,000 hours. A host of terminals and advanced management functions provides enhanced system flexibility. Ideal for a wide variety of applications, from education and business to museums.



PT-DZ680	PT-DW640	PT-DX610
WUXGA (1,920 × 1,200)	WXGA (1,280 × 800)	XGA (1,024 × 768)
6,000 lm	6,000 lm	6,500 lm



Vivid Picture Quality with High Brightness

High Brightness with High-Power AC Lamp

The high-efficiency light convergence technology and the color wheel work together to achieve the high brightness of 6,000 lm for the PT-DZ680/DW640 and 6,500 lm for the PT-DX610. Clear, crisp images are reproduced even in bright rooms.

RGB Booster Significantly Improves Color Reproduction

The RGB Booster achieves high image quality with levels of color reproduction and brightness that make each color stand out. It combines Panasonic's proprietary Vivid Color Control technology with a newly engineered Lamp Modulation Drive System for a 1-chip DLP™ projector that produces bright and vivid colors.

Vivid Color Control

This unique control technology optimizes the use of the color segment areas of the color wheel. It increases the brightness of each RGB color by minimizing the unallocated portions between the colors, to achieve truly vivid coloring.

Lamp Modulation Drive System

With the advanced lamp modulation technology, the projector is able to control the lamp intensity for each of the red, green, blue, and white segments of the color wheel separately. Because the actual light output is controlled in relation to each color segment, light usage is optimized and color balance is obtained without lowering the brightness. This results in bright vivid images with increased color fidelity.

RGB Booster



Color wheel

Lamp power



By modulating the lamp power, we can maximize the color reproduction of each color without sacrificing brightness. Light usage is optimized, and color balance is obtained without lowering the brightness.

Conventional system



Color wheel

Lamp power



Because the lamp power was fixed in conventional projectors, color reproduction was enhanced by sacrificing brightness.

Detail Clarity Processor Brings Depth and Clarity to Detail

This advanced image-processing circuit analyzes the video signal frequency range for each scene by extracting data on the distribution of high, mid, and low-frequency components, and brings out fine details accordingly. The resulting images have a more natural, three-dimensional appearance with crisp, clear detail.



Conventional sharpness control: Sharpness is applied uniformly, which can cause a halo or ring effect and diminish the sense of depth.

Detail Clarity Processor: Signal frequency is extracted real-time and necessary sharpness is applied at varying degrees for natural, life-like images.

System Daylight View 2 for Enhanced Color Perception

Image details are less clear when a projector is used in a room with the lights on. Panasonic's System Daylight View 2 improves brightness perception by adjusting sharpness, gamma curves, and color corrections. This produces crisper, more stunning images with vivid colors even under bright conditions.

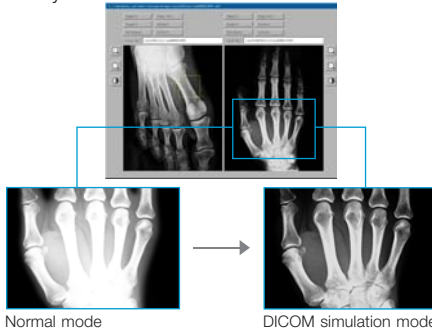


Without System Daylight View 2

PT-DZ680 Series with System Daylight View 2

DICOM Simulation Mode*1

This imaging mode is similar to DICOM part 14, which is a medical imaging standard. It reproduces X-ray images with remarkable clarity.



Normal mode

DICOM simulation mode

Rec. 709 Mode for HDTV Projection

Optimal color reproduction can be achieved by selecting this mode, compliant with ITU-R Recommendation BT.709, when images from an HDTV source are projected.

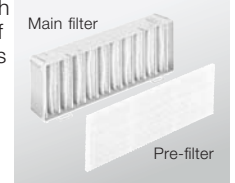
Full 10-Bit Picture Processing (PT-DZ680 Only)

The use of a full 10-bit image processing system provides smooth tonal expression. For example, skin tones appear natural and true to life.

Easy Maintenance and Superior Reliability

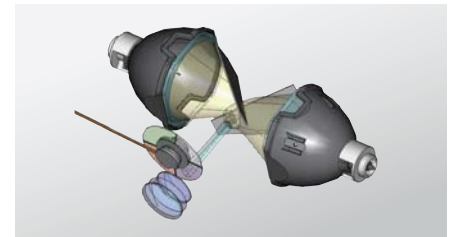
Eco Filter that Needs No Maintenance for up to 12,000 Hours*2

The original Eco Filter consists of two Micro Cut Filters (electrostatic filters), a pre-filter and a main filter, which use an ion effect to collect extremely small dust particles. The pre-filter has a honeycomb configuration and the main filter is pleated to achieve a large surface area that raises its dust collecting performance. Thanks to these features, the Eco Filter has a replacement cycle of up to 12,000 hours*2, which reduces the hassle of maintenance. And, as an environmental consideration, the filter can be washed with water and reused*3.



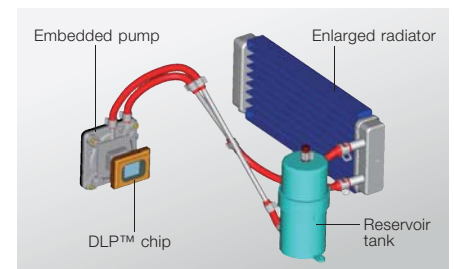
Dual-Lamp System Prevents Image Interruptions

The Dual-Lamp System eliminates the need to interrupt a presentation if a lamp should burn out (in dual-lamp operation mode). The Lamp Relay mode also operates the lamps alternately to enable 24/7 projector operation. The replacement lamp unit*4 can be used with all of the Panasonic PT-DZ770 Series*5, PT-DZ6700 Series*6 and PT-DZ570 Series*7 projectors. This reduces the number of lamp types that need to be kept in stock when multiple projectors are used.



Liquid Cooling System Attains a High Level of Reliability

The liquid cooling system directly cools the DLP™ chip to improve performance and enable operation up to 45 °C (113 °F)*8. This allows use in a wider variety of environments, while stabilizing performance and keeping the unit quiet even in harsh conditions.



System Integration Flexibility

Flexible Installation

The wide adjustment range of the powered horizontal/vertical lens shift function assures convenience and versatility during installation. It lets you easily make adjustments with the remote control. The unit can also be rotated 360 degrees vertically. This means you can install it at any angle you want, to accommodate different installation conditions.



A Wide Selection of Optional Lenses

Choose from a wide lineup of optional lenses for your system, including short-throw zoom lens, long-throw zoom and fixed-throw lenses for rear projection use. The additional lenses make it easy to adapt your projector to the installation site.



Multi-Screen Support System Seamlessly Connects Multiple Screens

The Multi-Screen Support System optimally adjusts multiple screens: Edge blending, color matching and multi-screen processor.

Edge Blending

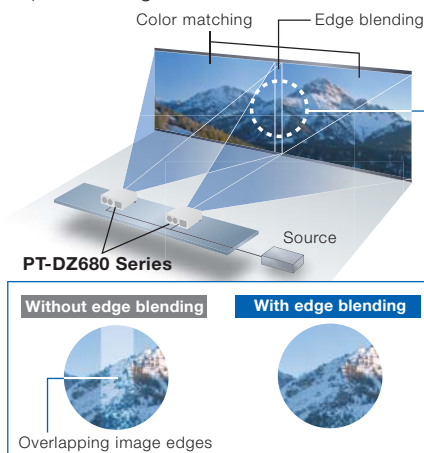
The edges of adjacent screens can be blended and their luminance controlled.

Color Matching

This function corrects for slight variations in the color reproduction range of individual projectors.

Multi-Screen Processor

The PT-DZ680 Series projector can project large, multi-screen images without any additional equipment. Up to 100 units (10 x 10) can be edge-blended at a time.



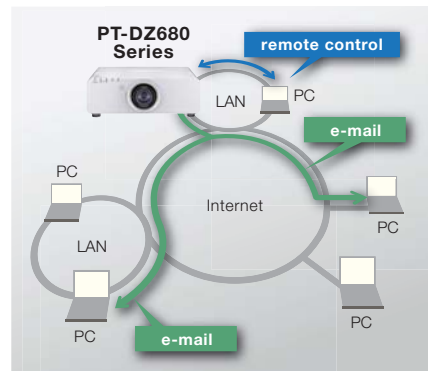
Side-by-Side Function*9

The PT-DZ680 and PT-DW640 can simultaneously display images from two sources onto a single screen. For example, you can display a PC image on the left and a video image on the right. Taking advantage of the wide-screen projection, this function gives you a host of new application possibilities to explore.



Multi Projector Monitoring & Control Software

Panasonic's original freeware, "Multi Projector Monitoring & Control Software," allows the user to control and monitor multiple projectors at the same time via LAN. Projectors can be scheduled to turn on and off at a certain hour everyday. When a problem occurs, an alarm message is sent to the monitoring/controlling PC.



Crestron RoomView™ and AMX Device Discovery

The LAN terminal allows a computer connected to the network to use Crestron RoomView™ application software to manage and control system devices. Besides, The AMX Device Discovery technology is built in the PT-DZ680 Series projector.



Standby Mode: ECO*10

The PT-DZ680 Series projector has attained a low standby power level of 0.2 W*11 (STANDBY MODE: ECO*10). It also helps to slash running costs, and reduces environmental impact.

Other Valuable Features

- Multiple terminals with HDMI compatibility
- 3D color management system
- HD IP conversion
- Digital noise reduction
- Dynamic sharpness control
- Web browser control/monitoring and e-mail message alert
- PJLink™ (Class 1) compatibility
- Scheduling function
- 30m long-range wireless remote control
- Mechanical lens shutter
- Direct Power Off allows unplugging the power cord right after use



Each model is available in both silver and black cabinet color.



Silver models: PT-DZ680S/DW640S/DX610S.



Black models: PT-DZ680K/DW640K/DX610K.

Lens-less models are also available. The specifications are the same as those of the projectors supplied with standard lens.



Silver models: PT-DZ680LS/DW640LS/DX610LS.



Black models: PT-DZ680LK/DW640LK/DX610LK.



The PT-DZ680 Series projector is carefully manufactured at the Panasonic factory in Japan, under strict quality control. This is another, very important advantage of a Panasonic projector.

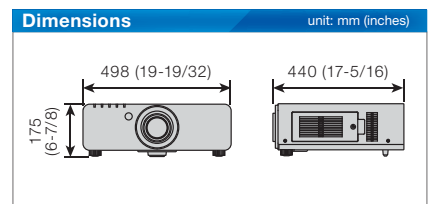
Ecology-conscious Design

Panasonic works from every angle to minimize environmental impact in the product design, production and delivery processes, and in the performance of the product during its life cycle. The PT-DZ680 Series projector reflects the following ecological considerations.

- No halogenated flame retardants are used in the cabinet.
- Lead-free solder is used to mount components to the printed circuit boards.
- Lamp power switching further reduces power consumption.
- Standby power consumption of only 0.2 W*11 has been achieved (STANDBY MODE: ECO*10).
- Auto Power Save activates standby mode when no signal is input.

Specifications				
Model	PT-DZ680/DZ680L		PT-DW640/DW640L	PT-DX610/DX610L
Power supply	120 V AC, 7.3 A, 50/60 Hz, 220–240 V AC, 4.0 A, 50/60 Hz		120 V AC, 6.8 A, 50/60 Hz, 220–240 V AC, 3.8 A, 50/60 Hz	
Power consumption	120 V AC 220–240 V AC	750 W (790 VA)(0.2 W when STANDBY MODE set to ECO*, 6 W when STANDBY MODE set to NORMAL) 730 W (930 VA)(0.3 W when STANDBY MODE set to ECO*, 8 W when STANDBY MODE set to NORMAL)	710 W (740 VA) (0.2 W when STANDBY MODE set to ECO*, 6 W when STANDBY MODE set to NORMAL) 690 W (860 VA) (0.3 W when STANDBY MODE set to ECO*, 8 W when STANDBY MODE set to NORMAL)	
DLP™ chip	Panel size Display method Pixels	17.0 mm (0.67 in) diagonal (16:10 aspect ratio) DLP™ chip × 1, DLP™ projection system 2,304,000 (1,920 × 1,200) pixels	16.5 mm (0.65 inches) diagonal (16:10 aspect ratio) DLP™ chip × 1, DLP™ projection system 1,024,000 (1,280 × 800) pixels	17.8 mm (0.7 inches) diagonal (4:3 aspect ratio) DLP™ chip × 1, DLP™ projection system 786,432 (1,024 × 768) pixels
Lens	PT-DZ680/DW640/DX610 PT-DZ680L/DW640L/DX610L	Powered zoom (throw ratio 1.8–2.4:1), powered focus F 1.7–2.0, f 26.8–35.7 mm	Powered zoom (throw ratio 1.8–2.4:1), powered focus F 1.7–2.0, f 25.6–33.8 mm	
Lamp	280 W UHM lamp × 2			
Screen size (diagonal)	1.27–15.24 m (50–600 in), 1.27–5.08 m (50–200 in) with the ET-DLE055, 16:10 aspect ratio		1.27–15.24 m (50–600 in), 1.27–5.08 m (50–200 in) with the ET-DLE055, 4:3 aspect ratio	
Brightness*2	6,000 lm (dual-lamp, LAMP MODE: NORMAL)		6,500 lm (dual-lamp, LAMP MODE: NORMAL)	
Center-to-corner uniformity*2	90 %			
Contrast*2	2,000:1 (full on/full off, CONTRAST MODE: HIGH*3)		2,000:1 (full on/full off, CONTRAST MODE: HIGH*4)	
Resolution	1,920 × 1,200 pixels		1,280 × 800 pixels (Input signals that exceed this resolution will be converted to 1,280 × 800 pixels.)	
Scanning frequency	HDMI/DVI-D RGB YPbPr (YCaCr)	fH: 15–91 kHz, fV: 50–85 Hz, dot clock: 25–162 MHz fH: 15–91 kHz, fV: 50–85 Hz, dot clock: 162 MHz or lower fH: 15.75 kHz, fV: 60 Hz [525i (480i)] fH: 31.50 kHz, fV: 60 Hz [525p (480p)] fH: 15.63 kHz, fV: 50 Hz [625i (576i)] fH: 31.25 kHz, fV: 50 Hz [625p (576p)] fH: 45.00 kHz, fV: 60 Hz [750 (720)/60p] fH: 15.75 kHz, fV: 60 Hz [NTSC/NTSC4.43/PAL-M/PAL60], fH: 15.63 kHz, fV: 50 Hz [PAL/PAL-NTSCAM]	fH: 37.50 kHz, fV: 50 Hz [750 (720)/50p] fH: 33.75 kHz, fV: 60 Hz [1125 (1035)/60i] fH: 33.75 kHz, fV: 60 Hz [1125 (1080)/60i] fH: 28.13 kHz, fV: 50 Hz [1125 (1080)/50i] fH: 28.13 kHz, fV: 25 Hz [1125 (1080)/25p]	fH: 27.00 kHz, fV: 24 Hz [1125 (1080)/24p] fH: 27.00 kHz, fV: 48 Hz [1125 (1080)/24sF] fH: 33.75 kHz, fV: 30 Hz [1125 (1080)/30p] fH: 67.50 kHz, fV: 60 Hz [1125 (1080)/60p] fH: 56.25 kHz, fV: 50 Hz [1125 (1080)/50p]
Optical axis shift*5	Vertical Horizontal	+50% from center of screen (powered) ±10% from center of screen (powered)	+60% from center of screen (powered) ±10% from center of screen (powered)	+50% from center of screen (powered)*6 ±10% from center of screen (powered)
Keystone correction range	Vertical: ±40° (±30° with the ET-DLE055/DLE080)			
Installation	Ceiling/floor, front/rear			
Terminals	HDMI IN DVI-D IN RGB 1 IN RGB 2 IN VIDEO IN S-VIDEO IN SERIAL IN SERIAL OUT REMOTE 1 IN REMOTE 1 OUT REMOTE 2 IN LAN	HDMI 19-pin × 1 (Deep Color*7, compatible with HDCP) 525p (480p), 625p (576p), 750 (720)/60p, 750 (720)/50p, 1125 (1080)/60i, 1125 (1080)/50i, 1125 (1080)/25p, 1125 (1080)/24p, 1125 (1080)/24sF, 1125 (1080)/30p, 1125 (1080)/60p, 1125 (1080)/50p VGA (640 × 480)–WUXGA (1,920 × 1,200)*8, compatible with non-interlaced signals only, dot clock: 25–162 MHz DVI-D 24-pin × 1 (DVI 1.0 compliant, compatible with HDCP, compatible with single link only) 525p (480p), 625p (576p), 750 (720)/60p, 750 (720)/50p, 1125 (1080)/60i, 1125 (1080)/50i, 1125 (1080)/25p, 1125 (1080)/24p, 1125 (1080)/24sF, 1125 (1080)/30p, 1125 (1080)/60p, 1125 (1080)/50p VGA (640 × 480)–WUXGA (1,920 × 1,200)*8, compatible with non-interlaced signals only, dot clock: 25–162 MHz BNC × 5 (RGB/YPbPr/YCaCr × 1) D-Sub HD 15-pin (female) × 1 (RGB/YPbPr/YCaCr × 1) BNC × 1 (composite video) Mini DIN 4-pin × 1 (S-Video) D-sub 9-pin (female) × 1 for external control (RS-232C compliant) D-sub 9-pin (male) × 1 for link control (RS-232C compliant) M3 × 1 for wired remote control M3 × 1 for link control (for wired remote control) D-sub 9-pin (female) × 1 for external control (parallel) RJ-45 × 1 (for network connection, 10Base-T/100Base-TX, compliant with PLink™)		
Cabinet materials	Molded plastic			
Dimensions (W × H × D)	PT-DZ680/DW640/DX610 PT-DZ680L/DW640L/DX610L	498 × 175*9 × 440 mm (19-19/32 × 6-7/8*9 × 17-5/16 in)(with supplied lens) 498 × 175*9 × 432 mm (19-19/32 × 6-7/8*9 × 17 in) (without lens)		
Weight*10	PT-DZ680/DW640/DX610 PT-DZ680L/DW640L/DX610L	Approximately 16.0 kg (35.3 lbs) (with supplied lens) Approximately 15.1 kg (33.3 lbs) (without lens)		
Operating environment	Operating temperature: 0–45 °C (32–113 °F)*11, operating humidity: 20%–80% (no condensation)			
Supplied accessories	Power cord, power cord secure lock, wireless/wired remote control unit, batteries (R6/AA type × 2), software CD-ROM (Logo Transfer Software, Multi Projector Monitoring & Control Software) (× 1)			

*1 When the STANDBY MODE is set to ECO, network functions such as power on over the LAN will not operate. Also, only certain commands can be received for external control using the serial terminal. *2 Measurement, measuring conditions, and method of notation all comply with ISO 21118 international standards. *3 Brightness becomes 3,000 lm with CONTRAST MODE set to HIGH. *4 Brightness becomes 3,250 lm with CONTRAST MODE set to HIGH. *5 Optical axis shift function cannot be operated when used with the ET-DLE055. *6 +45% from center of screen with the ET-DLE080. *7 For the PT-DZ680/DZ680L only. *8 Compliant with VESA CVT-RB. *9 With legs at shortest position. *10 Average value. May differ depending on the actual unit. *11 The operating temperature range is 0 °C to 40 °C (32 °F to 104 °F) when the high altitude mode is set to on (for altitudes from 1,400 m to 2,700 m (4,593 ft to 8,858 ft) above sea level).



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All information included here is valid as of November 2012.

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