

Panasonic

PT-RZ475 Series

1-Chip DLP™ Projectors



**Ideal for Rear Projection—
Extremely Long-Term Continuous Operation**



A Short-Throw SOLID SHINE Projector Featuring Long-Term Reliability and Excellent TCO



No Maintenance
10 YEARS
Variable Brightness Setting

DIGITAL LINK
SINGLE CABLE SOLUTION

The PT-RZ475, a new Panasonic SOLID SHINE projector member, has no lamps or air filters, allowing it to achieve an extraordinarily long period of maintenance-free operation. This high-performance LED/Laser projector boasts up to 87,600 hours*¹ of continuous operation, i.e., about 10 years of 24/7 projection, while maintaining excellent brightness and picture quality. The total cost of ownership (TCO) has also been reduced because you no longer have to keep replacement lamps and filters on hand. Equipped with a high-precision short-throw lens, the PT-RZ475 is ideal for rear projection, for use in monitoring/control rooms, or for digital signage.



PT-RZ475
Full HD
3,000 lm

SOLID SHINE series uses the newly developed LED/Laser-combined light source



SOLID SHINE series projectors provide solid reliability and long-lasting brightness unprecedented by conventional lamp-based projectors.

Approximately up to 10 years*¹ of maintenance-free operation

No need to replace the light source or air filter, providing a dramatic reduction in the Total Cost of Ownership (TCO).

Long-lasting picture quality

Excellent picture quality and brightness are maintained for a long time.

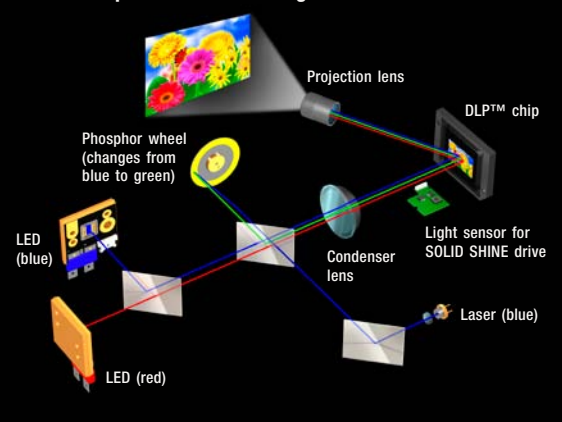
Superb color reproduction

Beautiful, vivid colors exceeding the levels of conventional projectors.

Quick start, quick off

The image appears almost instantly upon powering up, and there is no need for cooling after turning the power off. The power can be turned on immediately after being turned off, and it can be turned on/off as many times as you want.

PT-RZ475 Optical Structure Image

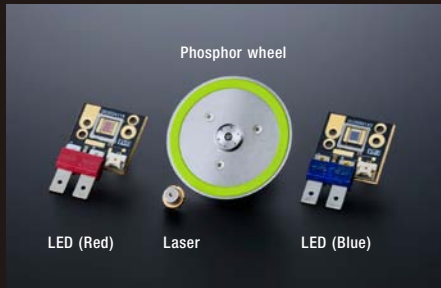


*¹ With LIGHT POWER set to Eco2. Replacement of other parts than the light source may be required in shorter period.
24 hours/day × 365 days/year × 10 years = 87,600 hours

Long-Lasting Reliability

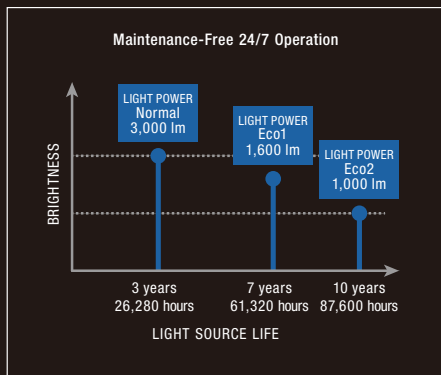
Outstanding Approx. up to 10 Years*¹ of Continuous Operation

This new LED/Laser-combined light source requires no maintenance for approximately up to 10 years.*¹ In many cases, this means no maintenance until your next refresh cycle. Naturally, there are no lamp burnout problems during use, so reliability is further increased. There is also no filter to clean due to carefully engineered sealed optics. As a consequence, running cost is dramatically lowered because of the savings on lamp costs, maintenance labor and hassle of stocking lamps.



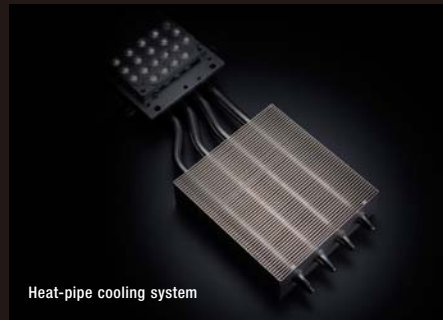
Beautiful Picture Quality for a Long Period of Time with 24/7 Operation

The rate of brightness deterioration in the LED/Laser-combined light source is extremely slow compared to lamp-based projectors. The SOLID SHINE drive uses a built-in sensor to constantly detect the intensity of the light source and correct corresponding changes in white balance. This all helps to maintain excellent picture quality for a long period of time. Contrast is outstanding too, at 20,000:1, and images are reproduced with a wide dynamic range. There is no maintenance required because the PT-RZ475 does not use a lamp or air filter. And it has an efficient cooling system and dust-resistant structure, and uses a DLP™ chip that has a long life. Together, this makes the PT-RZ475 ideal for 24/7 operation.



Heat Pipe Cooling System Maintains Stable Operation up to 45 °C (113 °F)*²

Laser cooling is performed by releasing the heat to cooling fins, then cooling with a heat pipe cooling system. This suppresses temperature rises inside the projector and allows stable operation up to an ambient temperature of 45 °C (113 °F)*². The use of this heat pipe-cooled system also achieves quiet operation of 35 dB*³, enabling viewers to concentrate on the presentation or on quiet movie scenes.

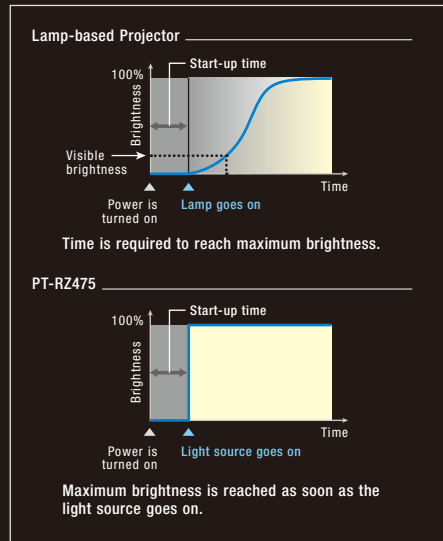


Dust-Resistant Structure with an Airtight Optical Block

The area between the LED/Laser to the DLP™ chip and prism is hermetically sealed to form an airtight structure for the optical block, the heart of the projector. This resists the effects of dust and other particles in the air, and enables use of the projector in a wide range of environments.

Image Appears Immediately—No Need for Cooling after Use

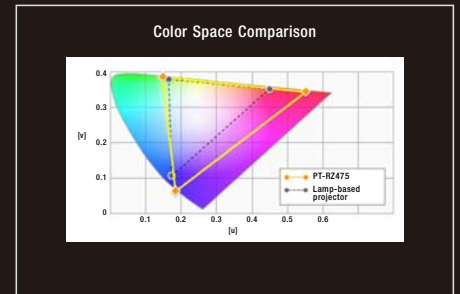
Images do not appear quickly with lamp-based projectors because the projector requires time to warm up. With the PT-RZ475, the image appears almost instantly. There's also no cooling time required when turning the power off, so you can quickly turn the projector on and off as many times as needed.



High Picture Quality

Superior Color Reproduction

The LED/Laser-combined light source has a higher level of color purity than an ordinary lamp, allowing it to achieve color reproduction with wider color space. Colors are more vibrant than those of conventional projectors.



30× Drive*⁴ Switching Prevents Color Breaking

In 1-chip DLP™ system projectors with conventional lamp, a color wheel is used for time-division multiplexing in a method where the human eye combines the result to achieve a full-color palette. In the PT-RZ475, this is done by on/off switching of the LED/Laser-combined light source. A unique Panasonic power supply circuit provides time-division multiplexing with ultrafast 30× drive*⁴. The resulting, high-definition images exhibit virtually no color breaking*⁵.

Connection Flexibility

DIGITAL LINK—The Single Cable Solution



- Transmits Digital Signals up to 100 m (328 ft) with a Single Cable

Equipped with a DIGITAL LINK terminal, the PT-RZ475 allows transmission of HDMI, uncompressed HD digital video, audio and control signals (Ethernet, RS-232C) for up to 100 meters (328 feet) through a single CAT5e (STP) cable or higher. This simplifies cabling and system upgrades, making it ideal for ceiling-mounted and other permanent installations.

• Optional ET-YFB100G Digital Interface Box for Easy Setup

Used together with the new ET-YFB100G Digital Interface Box, or other compatible equipment*⁶, the installation of this projector is easier than ever, without any need for external receivers. The input signal can also be easily switched*⁷.

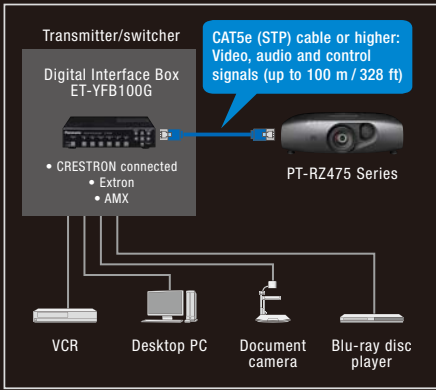
*² The operating temperature range is 0 °C to 40 °C (32 °F to 104 °F) when used in locations from 1,400 m to 2,700 m (4,593 ft to 8,858 ft) above sea level. If the ambient temperature exceeds 35 °C (95 °F), the light output may be reduced to protect the projector.

*³ With LIGHT SOURCE MODE set to NORMAL.

*⁴ Picture mode: Dynamic. 10× drive in other picture modes. The rate for each vertical sync/blanking interval, with R/G/B light source switching set to 1×.

*⁵ A condition in which incorrect color expression causes color flickering.

from control panel or remote control of the projector to enable attractive presentations or lessons using multimedia content.



For details on other manufacturers' equipment, visit our Projector Global Web Site:
panasonic.net/avc/projector

Abundant Connection Terminals

Interfaces include HDMI and DVI-I inputs. The serial terminal (RS-232C) has an Emulate function that lets you continue using existing control systems when replacing previous Panasonic models. It is also possible to output audio during Standby mode*⁸. This is convenient when connecting an external audio system through the projector*⁹. A closed caption decoder is built in.

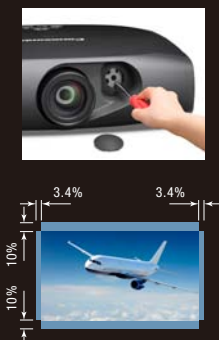
Easy Remote Monitoring and Control over a LAN

Web browser on a computer connected through a wired LAN system lets you remotely operate projectors and check their status. An e-mail messaging function can also notify you the overall projector status. In addition, Multi Projector Monitoring and Control Software Ver. 2.8 is available for monitoring and controlling multiple Panasonic projectors from a single PC. The wired LAN terminal is compatible with PLink™ (class 1).

Enhanced Installation

Powered Focus, Short-Throw Lens

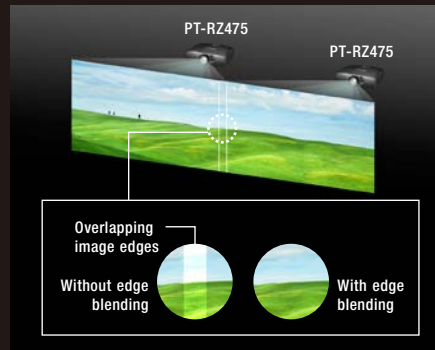
The lens axis can be shifted $\pm 10\%$ vertically and $\pm 3.4\%$ horizontally. This enables to replace an existing projector and to make fine tweaks after installation. Because it is a powered focus, the focus can be adjusted by remote control when it is installed in a rear projection configuration.



Multi-Screen Support System Seamlessly Connects Multiple Screens

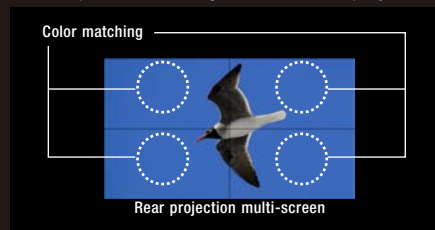
• Edge Blending

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



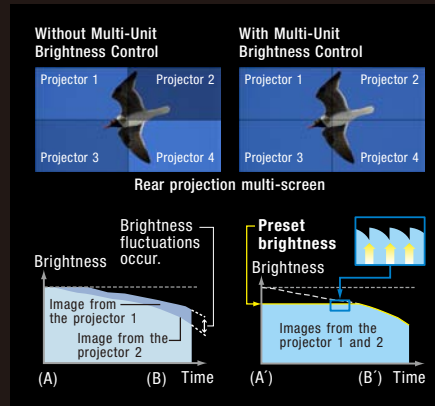
• Color Matching*¹⁰

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



Multi-Unit Brightness Control

This function automatically corrects the brightness fluctuations that occur over time in the individual projectors of a multi-screen system. Up to eight projectors can be controlled by connecting to each other via a hub, and this can be increased to a maximum of 2,048 projectors by using "Multi Projector Monitoring & Control Software"*¹¹.



Portrait Mode Capability

Portrait mode allows the projector to be mounted with its side surface facing down*¹², for projecting onto a long, vertical screen. The optional ET-PKR100P ceiling mount bracket for portrait projection is also available.



3D Projection Capability

The PT-RZ475 can deliver impressive 3D images when viewed with active 3D glasses*¹³.



- The HDMI input terminal supports 3D to project Blu-ray 3D images.
- DLP™ Link™: You can build a 3D system without the need for the optional transmitter.
- An additional 3D IR transmitter can be connected to the projector's 3D SYNC OUT terminal.

Other Features

- Daylight View Basic ensures clear images even in brightly lit rooms.
- DICOM simulation mode*¹⁴ for clear X-ray images.
- Rec. 709 mode for HDTV projection.
- Compatible with Crestron Connected.™
- 15 m (49 ft) long-range wireless remote control.
- Scheduling function.
- Flexible 360-degree installation
- A unique ID number can be assigned to each projector using the supplied wireless remote control unit.
- A lens-centered, symmetrical design provides ease of installation.
- Customized startup logo: You can change the default Panasonic start up logo to any logo you want*¹⁵.
- Security features include a security bar, key lock, and security password.

Ecology-Conscious Design

- Lamp-free (no mercury)
- Low heat dissipation
- RoHS Directive compliant
- No halogenated flame retardants are used in the cabinet.
- Lead-free glass is used for the lens.
- Light source mode is selectable to reduce power consumption.
- "ECO" button on the remote control for easy setting up of Eco Management functions.
- Standby power consumption of only 0.5 W has been achieved. (STANDBY MODE: ECO)
- An Auto Off Timer switches the projector to standby mode when no input signal is received for a preset time.

- *6 Crestron's DigitalMedia 8G+™, Extron's XTP Systems and AMX's Enova DVX.
- *7 Input selection and other ET-YFB100G operations can be performed only when connecting to a DIGITAL LINK compatible projector.
- *8 Requires menu selection.
- *9 Audio monitoring requires external speakers and an audio amplifier.
- *10 Consult you dealer for information about color matching software.
- *11 If the temperature of the projector's surroundings is elevated, light output may be reduced in order to protect the projector unit. If this software is used for the brightness control of multiple projectors, please ensure that as far as possible the temperature of the surroundings is the same for all projectors.
- *12 The projector itself cannot be set vertically by itself. Also, the side with terminals should be facing downward. Using the projector at an angle that exceeds the available angle of 210° may result in malfunctions. If setting up the projector at an angle that exceeds 210° is required, consult your dealer.
- *13 To view 3D images, active-shutter 3D glasses are separately required. (In the active shutter system, the right/left liquid crystal shutter is opened and closed alternately according to projected images.)
- *14 This product is not a medical instrument. Do not use it for actual medical diagnosis.
- *15 A new logo can be uploaded by connecting a computer to the PT-RZ475 through the LAN or serial connection by using the Logo Transfer Software. Still images that can be uploaded are limited to 1024 x 768 pixel bitmap files. Also, the application will reduce the number of colors to 191.

Options

ET-PKR100P

Ceiling mount bracket for portrait



ET-PKR100H

Ceiling mount bracket for high ceilings



ET-PKR100S

Ceiling mount bracket for low ceilings



ET-YFB100G

Digital interface box



Brackets included for various installation needs, including server rack (EIA standards) mounting.



ET-MWP100G

Multi Window Processor



NOTE: Photos show the brackets attached to the PT-RZ470K.

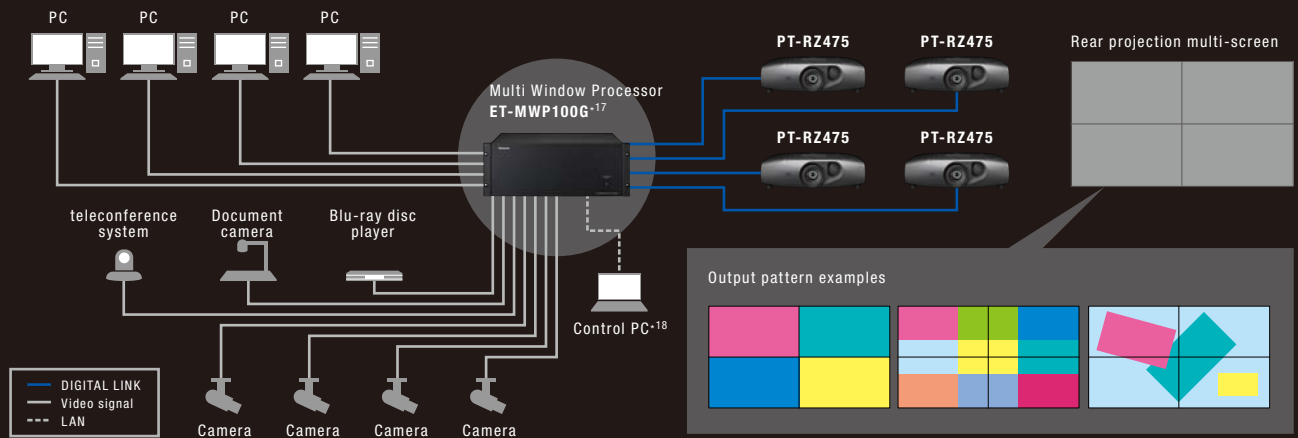
ET-MWP100G Multi Window Processor Turnkey Solution for Multi Window Presentations

The ET-MWP100G Panasonic Multi Window Processor makes it possible to quickly and efficiently combine multiple PT-RZ475 projectors into a multi vision system. Equipped with 16 slots for input/output terminals, the ET-MWP100G enables a combination of 5 optional interface boards, including a DIGITAL LINK output board, to support a variety of input sources and output devices. Interface boards are also easy to add or change, making the system highly flexible even after it has been configured. Images can be split among multiple display units, and multi-windows (PinP) can be freely allotted in desired sizes, locations, inclinations and overlapping orders. Display patterns can be registered and switched by control software for Multi Window Processor, which is included with the ET-MWP100G, installed onto a PC. Even with interface boards mounted onto all 16 slots, the ET-MWP100G features low power consumption of 160 W or less, helping to lower the total cost of ownership (TCO) in 24/7 continuous operation.

Major ET-MWP100G Features

- Dedicated "Control Software for Multi Window Processor" supplied
- 360° output rotation
- Simultaneous use of multiple layouts and canvases
- One or more windows (PinPs) on each canvas with 360° rotation of each window
- 16 interface board slots
- Easy addition and replacement of optional interface boards
- Low power consumption of max 160 W*16 with 16 interface boards mounted
- DIGITAL LINK compatibility (when the ET-MCQDL350 interface board mounted)
- Capability of up to 28 inputs with the ET-MCYDV100 DVI-U and ET-MCYSD200 3G/HD/SD-SDI interface boards
- Up to 56 inputs with the ET-MCYSD210 HD/SD-SDI interface board
- Capability of up to 28 outputs with the ET-MCQDV150 DVI-U and ET-MCQDL350 DIGITAL LINK interface board

System Connection Example



*16 When using a single power supply unit. The power consumption becomes 180 W when the optional ET-RPS100 power supply unit is added.

*17 Input/output interface boards must be mounted.

*18 The control software for Multi Window Processor, which is included with the ET-MWP100G, must be installed.

Specifications

Model	PT-RZ475	
Power supply	100–240 V AC, 5.0–1.8 A, 50/60 Hz	
Power consumption	430 W (440 VA) (230 W ¹ with LIGHT POWER set to NORMAL/Eco1, 170 W ¹ with LIGHT POWER set to Eco2, 0.5 W with STANDBY MODE set to ECO ² , 8 W with STANDBY MODE set to NORMAL)	
DLP™ chip	16.5 mm (0.65 in) diagonal (16:9 aspect ratio)	
Panel size	DLP™ chip × 1, DLP™ projection system	
Display method	2,073,600 (1,920 × 1,080) × 1, total of 2,073,600 pixels	
Pixels		
Lens	Fixed, powered focus, F 1.8, f 11.9 mm	
Throw ratio	0.8:1	
Light source	LED/Laser-combined (R, B: LED; G: Laser diode)	
Screen size (diagonal)	1.02–5.08 m (40–200 inches) diagonally, 16:9 aspect ratio	
Brightness ³	3,000 lm	
Center-to-corner uniformity ³	90 %	
Contrast ³	20,000:1 (full on/off)	
Resolution	1,920 × 1,080 pixels (Input signals that exceed this resolution will be converted to 1,920 × 1,080 pixels.)	
Scanning frequency	HDMI/DVI-I (digital)	fr: 27–100 kHz, fv: 24–120 Hz, dot clock: 25–162 MHz
	DVI-I (analog)/RGB YPbPr (YCbCr)	fr: 15–100 kHz, fv: 24–120 Hz, dot clock: 162 MHz or lower
		fr: 15.75 kHz, fv: 60 Hz [480i (525i)]
		fr: 15.63 kHz, fv: 50 Hz [576i (625i)]
		fr: 31.50 kHz, fv: 60 Hz [480p (525p)]
		fr: 31.25 kHz, fv: 50 Hz [576p (625p)]
		fr: 45.00 kHz, fv: 60 Hz [720 (750)/60p]
		fr: 37.50 kHz, fv: 50 Hz [720 (750)/50p]
		fr: 33.75 kHz, fv: 60 Hz [1035/60i]
		fr: 33.75 kHz, fv: 60 Hz [1080 (1125)/60i]
		fr: 28.13 kHz, fv: 50 Hz [1080 (1125)/50i]
		fr: 28.13 kHz, fv: 25 Hz [1080 (1125)/25p]
		fr: 27.00 kHz, fv: 24 Hz [1080 (1125)/24p]
		fr: 27.00 kHz, fv: 48 Hz [1080 (1125)/24sF]
		fr: 33.75 kHz, fv: 30 Hz [1080 (1125)/30p]
		fr: 67.50 kHz, fv: 60 Hz [1080 (1125)/60p]
		fr: 56.25 kHz, fv: 50 Hz [1080 (1125)/50p]
		fr: 15.75 kHz, fv: 60 Hz [NTSC/NTSC4.43/PAL-M/PAL60]
		fr: 15.63 kHz, fv: 50 Hz [PAL/PAL-N/SECAM]
Video		
Optical axis shift	Vertical: ±10% (manual), horizontal: ±3.4% (manual)	
Keystone correction range	Vertical: ±40°	
Installation	Ceiling/floor, front/rear	
Terminals	HDMI IN	HDMI 19-pin × 1 (Deep Color, compatible with HDCP) 480p (525p), 576p (625p), 720 (750)/60p, 720 (750)/50p, 1080 (1125)/60i, 1080 (1125)/50i, 1080 (1125)/25p, 1080 (1125)/24p, 1080 (1125)/24sF, 1080 (1125)/30p, 1080 (1125)/60p, 1080 (1125)/50p, VGA (640 × 480)–WUXGA ⁴ (1,920 × 1,200), compatible with non-interlaced signals only, dot clock: 25–162 MHz, audio signal: linear PCM (sampling frequencies: 48 kHz, 44.1 kHz, 32 kHz)
	DVI-I IN	DVI-I 29-pin × 1 (DVI 1.0 compliant, compatible with HDCP, compatible with single link only) 480p (525p), 576p (625p), 720 (750)/60p, 720 (750)/50p, 1080 (1125)/60i, 1080 (1125)/50i, 1080 (1125)/25p, 1080 (1125)/24p, 1080 (1125)/24sF, 1080 (1125)/30p, 1080 (1125)/60p, 1080 (1125)/50p, VGA (640 × 480)–WUXGA ⁴ (1,920 × 1,200), compatible with non-interlaced signals only, dot clock: 25–162 MHz
	Digital	R/B: 0.7 Vp-p, 75 ohms, G: 0.7 Vp-p (G: 1.0 Vp-p for sync on G), 75 ohms, HD/VD, SYNC: TTL, high impedance, positive/negative automatic
	RGB	Y: 1.0 Vp-p (including sync signal), Pb/Pr (Cb/Cr): 0.7 Vp-p, 75 ohms
	YPbPr/YCbCr	D-Sub HD 15-pin (female) × 1 (RGB/YPbPr/YCbCr × 1)
	COMPUTER (RGB) IN	Pin jack × 1
	VIDEO IN	M3 (L, R) × 1
	AUDIO IN	M3 (L, R) × 1
	AUDIO OUT	D-sub 9-pin (female) × 1 for external control (RS-232C compliant)
	SERIAL IN	RJ-45 × 1 (for network and DIGITAL LINK (video/audio/network/serial control) connection, 100Base-TX, compatible with PLink™, HDCP compatible, Deep Color compatible)
	LAN / DIGITAL LINK	480p (525p), 576p (625p), 720 (750)/60p, 720 (750)/50p, 1080 (1125)/60i, 1080 (1125)/50i, 1080 (1125)/25p, 1080 (1125)/24p, 1080 (1125)/24sF, 1080 (1125)/30p, 1080 (1125)/60p, 1080 (1125)/50p, VGA (640 × 480)–WUXGA ⁴ (1,920 × 1,200), compatible with non-interlaced signals only, dot clock: 25–162 MHz
	3D SYNC OUT	Mini DIN 3-pin × 1, for 3D transmitter connection
Cabinet materials	Molded plastic	
Dimensions (W × H × D)	455 × 137 ⁵ × 409 mm (17-29/32 × 5-13/32 ⁵ × 16-3/32 in) (lens included)	
Weight ⁶	Approximately 11.5 kg (25.4 lbs)	
Operation noise ³	35 dB (LIGHT POWER MODE: NORMAL)	
Operating environment	Operating temperature: 0–45 °C ⁷ (32–113 °F ⁷), operating humidity: 20–80 % (no condensation)	
Supplied accessories	Power cord (with secure lock) × 1, wireless remote control unit, batteries for remote control (R6/LR6/AA type × 2), software CD-ROM (Logo Transfer Software, Multi Projector Monitoring & Control Software)	

Projection Distance

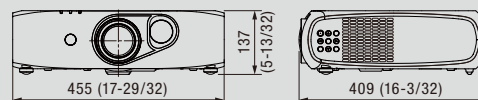
PT-RZ475 (16:9 aspect ratio)

unit: meters (feet)

Projection size [diagonal]	Projection distance	Height from the edge of screen to center of lens
[m] [in]		
1.02 / 40	0.67 (2.2)	0.20–0.30 (0.7–1.0)
1.52 / 60	1.03 (3.4)	0.30–0.45 (1.0–1.5)
2.03 / 80	1.39 (4.6)	0.40–0.60 (1.3–2.0)
2.54 / 100	1.75 (5.7)	0.50–0.75 (1.6–2.5)
3.05 / 120	2.11 (6.9)	0.60–0.90 (2.0–2.9)
3.81 / 150	2.65 (8.7)	0.75–1.12 (2.5–3.7)
5.08 / 200	3.55 (11.7)	1.00–1.49 (3.3–4.9)

Dimensions

unit: mm (inches)



- *1 In STANDARD/GRAPHIC picture mode. Measured based on the power consumption rate and a measurement method for the TV receiver.
- *2 When the STANDBY MODE is set to ECO, network functions such as power on over the LAN network will not operate. Also, only certain commands can be received for external control using the serial terminal.
- *3 Measurement, measuring conditions, and method of notation all comply with ISO 21118 international standards.
- *4 WUXGA resolution is supported only when the signals are compliant with VESA CVT-RB (Coordinated Video Timing-Reduced Blanking).
- *5 With legs at shortest position.
- *6 Average value. May differ depending on the actual unit.
- *7 0–40 °C (32–104 °F) between 1,400 m and 2,700 m (4,593 ft and 8,858 ft) above sea level. If the ambient temperature exceeds 35 °C (95 °F), the light output may be reduced to protect the projector.

NOTES ON USE

1. Do not install the projector in locations that are subject to excessive water, humidity, steam, or oily smoke. Doing so may result in fire, malfunction, or electric shock.
2. Please observe the following precautions:
 - Never place objects on top of the projector while it is operation.
 - Make sure there is an unobstructed space of 500 mm (1 ft 8 in) or more around the projector's exhaust openings.
 - Do not stack projector units directly on top of one another for the purpose of multiple (stacked) projection. When stacking projector units, be sure to provide the amount of space indicated below between them. These space requirements also apply to installations where only one projector unit is operating at one time and the other unit is used as a backup.
 - Make sure that nothing blocks the projector's air intake and exhaust openings. Also, install the projector so that cool or hot air from other air conditioning equipment does not flow directly toward the projector's air intake or exhaust openings.
 - Do not install the projector in an enclosed space. If it is necessary to install it in an enclosed space, add a separate ventilation system. If ventilation is insufficient, hot air will accumulate at the intake opening. This may cause the projector's protective circuit to interrupt projector operation.
 - If the projector is placed in a box, ensure that the projector's intake and exhaust openings are not blocked. Take particular care to ensure that hot air from the exhaust openings is not sucked into the intake openings.
 - To install and use the projector via a method that does not use the adjustable feet in a floor standing installation, fix the projector using the four screw holes for ceiling mounting. (Screw diameter: M4, tapping depth inside the set: 10 mm, torque: 1.25 ± 0.2 N·m)

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