

Panasonic

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For more information about Panasonic projectors, please visit: Projector Global Website – panasonic.net/cns/projector Facebook – www.facebook.com/panasonicprojector YouTube – www.youtube.com/user/PanasonicProjector

All information included here is valid as of June 2017.



SOLID SHINE LASER

Not Just Projection, a Holistic Solution

This case-study portfolio demonstrates how Panasonic SOLID SHINE Laser projectors work as part of end-to-end visual systems in real-life situations, from major outdoor events to roles at universities, museums, and monitoring facilities. Whatever application you have in mind, Panasonic has laser projectors in a comprehensive lineup purpose-built to suit your needs. Our products are shaped by the voices of professional end-users as well as content creators and professional installers. Know-how extends beyond next-generation projector design to expert on-site customer support, ensuring that SOLID SHINE Laser projectors harmonize with existing infrastructure; work flawlessly 24/7 without maintenance; and lower Total Cost of Ownership (TCO). So why choose SOLID SHINE? The answer is here in the pages of this catalog.

Strengthening Relationships in Every Field

Events / Rental Staging

- ▶ Olympic Games Rio 2016
- ▶ i Light Marina Bay
- ► Elbphilharmonie Inauguration Spectacular

Museum / Exhibition

- ► National Museum of Singapore
- Orbi Osaka
- ► Petersen Automotive Museum

Education

- ► Hiroshima City University
- Queensland University of Technology
- Australian Maritime College

Monitoring

- ► Kumamoto Prefectural Police Department
- ► Niigata Prefectural Police Department
- ► Integrated Security Operating Center



- Extremely compact and lightweight bodies with dedicated mounting-frame systems
- Free 360-degree installation flexibility with support for Portrait Mode
- 3-Chip DLP™ high-resolution imaging for accurate detail reproduction without visible pixels
- Single-cable DIGITAL LINK connection, advanced multi-screen mapping, and built-in Geometric Adjustment system

Equipment installed







3-Chip DLP™ Projector PT-RQ13K



3-Chip DLP™ Projector
PT-RZ12K



1-Chip DLP™ Projector PT-RZ970



1-Chip DLP™ Projector PT-RZ670



1-Chip DLP™ Projector PT-RZ370

More Information

Related video: panasonic.net/cns/projector/casestudies/rio2016/#video Website: https://panasonic.net/cns/projector/casestudies/rio2016/index.html





Opening Ceremony



Technology Operations Center

Panasonic Stadium of Wonders Pavilion

PT-RZ31K was deployed at key moments throughout the Opening Ceremony, vividly demonstrating 30,000 lumens of imaging power, while SOLID SHINE supported logistical operations and theater presentations at other venues.

- High brightness and class-leading picture quality deliver immersive and vibrant super-large-screen images at major events
- Portrait Mode and Geometry Manager Pro software enables projection on a wide array of screen shapes and surfaces

Equipment installed



3-Chip DLP™ Projector PT-RZ31K

More Information

Related video: https://www.youtube.com/watch?v=bm00et7-9rM Website: http://news.panasonic.com/global/topics/2017/46283.html

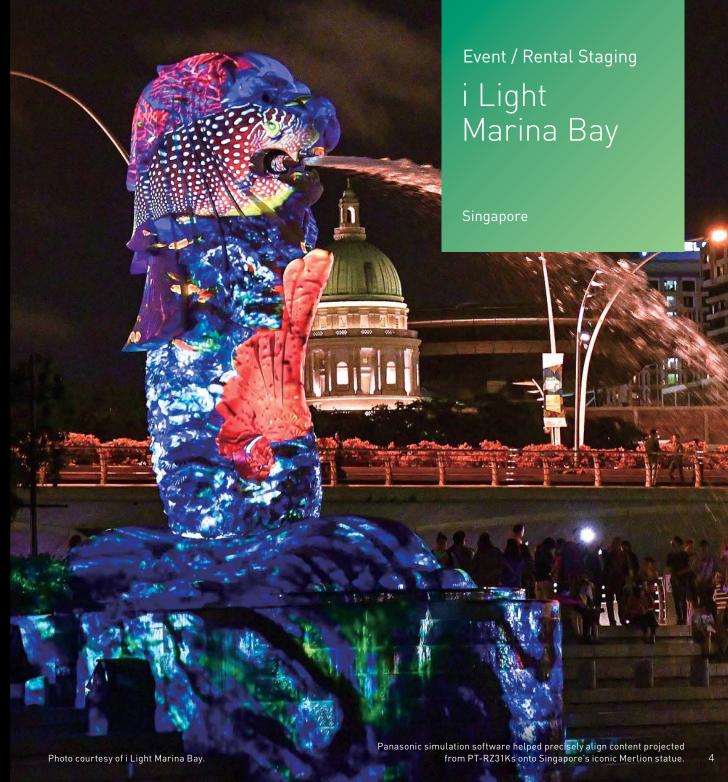


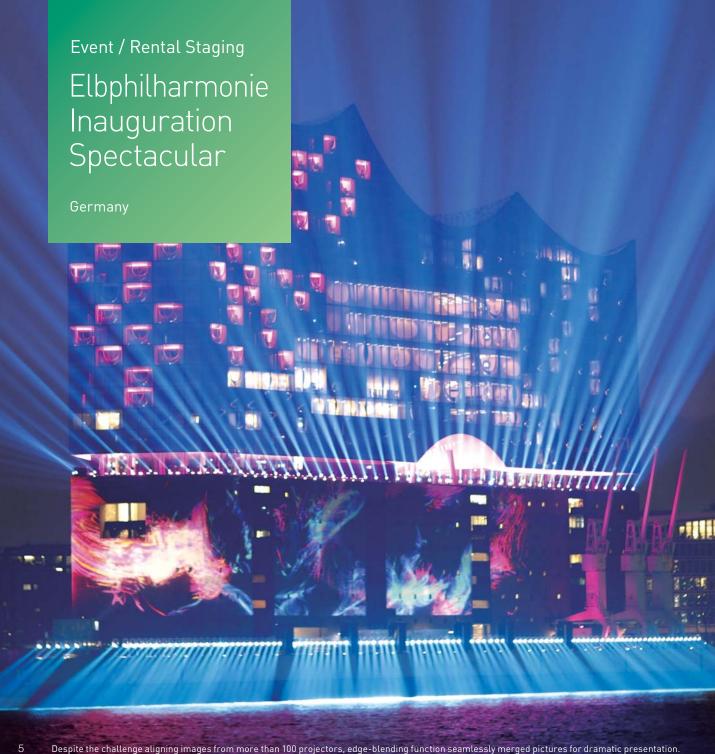






A variety of lenses were used, including the ET-D75LE6 Short Throw Lens, to enable easy projector installation at different throw distances.





- Ultra-high-brightness of PT-RZ31K units delivered efficient laser technology capable of up to 20,000 hours maintenance-free operation
- Abundant connections and wide interface compatibility enable centralized projection network setup and control via connected PC/server
- Extensive onboard edge blending and color matching functions to create seamless images of virtually limitless scale
- Fractional size and weight of competitive 30,000-lumens-class lamp projectors

Equipment installed



3-Chip DLP™ Projector PT-RZ31K

More Information

Website: https://panasonic.net/cns/projector/casestudies/events006/





A combined brightness of 800,000 lumens created immense high-resolution images totaling 17400 x 2160 pixels.





Reduced installation complexity and expedited setup is one of Panasonic's main strengths as a supplier at events with tight logistical deadlines.

- No lamp or filter replacement for up to 20,000 hours delivers outstanding economy in fixed permanent applications
- Free 360-degree installation flexibility broadens the scope of projection possibilities
- Edge blending and multi-screen calibration enable large-scale image mapping from any angle, including interior domes and curved walls
- High brightness, outstanding picture quality, and excellent reliability under continuous operation
- Strong on-site technical support for the projector layout design

Equipment installed



1-Chip DLP™ Projector PT-RZ670

More Information

Related video: https://www.youtube.com/watch?v=LHBryfQlbwg Website: https://panasonic.net/cns/projector/casestudies/museum004/





With the dedicated app, visitors can photograph animals to create a picture book.

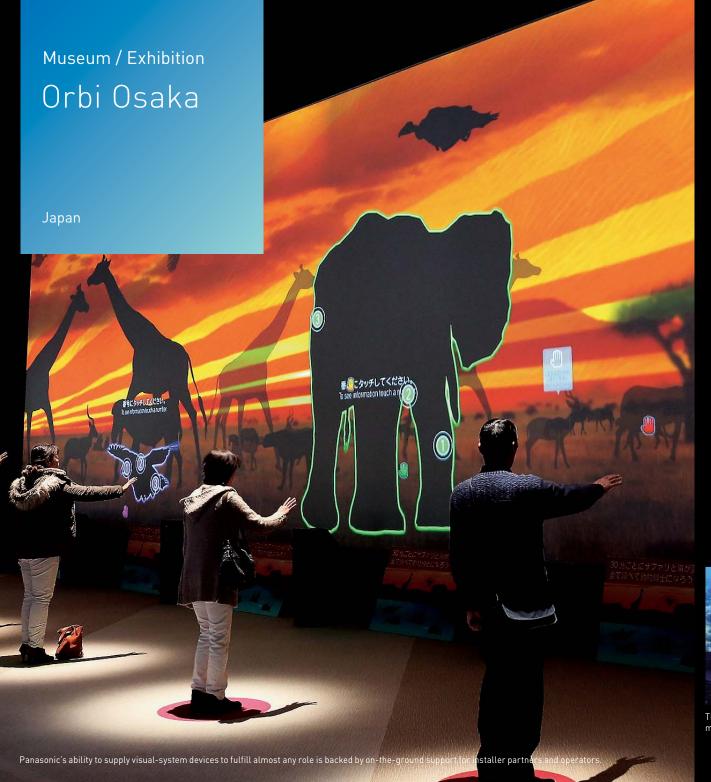


A section of the seamless 144-meter-long corridor projection. be concealed from obvious view.



SOLID SHINE Laser projectors can





- Panasonic 4K+ resolution capability ensures bright, vibrant, and pixel-free large-scale image projection
- SOLID SHINE projectors maintain excellent image quality and high brightness for a longer period with linear (not exponential) degradation
- Supports ET-DLE030/ET-D75LE90 Ultra Short-Throw lenses for large-screen projection from a short distance, perfect for non-conventional spaces
- Panasonic offers a full range of projectors and professional displays to work closely with clients to exceed objectives under budget

Equipment installed







3-Chip DLP™ Projector PT-RQ13K

3-Chip DLP™ Projector PT-RZ12K

1-Chip DLP™ Projector PT-RZ670





1-Chip DLP™ Projector PT-RZ475

1-Chip DLP™ Projector

PT-RZ370

More Information -

Website: https://panasonic.net/cns/projector/casestudies/069.html







The largest of its kind in Japan, Theater 23.4 features a giant screen measuring 40meters by 8 meters displaying larger-than-life images at film-like 4K+ resolution.

- Panasonic supports an extensive range of role-focused projectors and professional displays to assure best-in-class cost to performance in any application
- Multi-Screen Support System assures indiscernible edge-blends for beautiful wide-aspect images
- Single-cable DIGITAL LINK connectivity provides simple yet high-quality digital transmission of video and control signals to reduce installation costs
- Filterless and lampless design eliminates routine maintenance common to lamp projectors of similar brightness output

Equipment installed



1-Chip DLP™ Projector PT-RZ670

More Information

Related video: https://www.youtube.com/watch?v=C8UKlmlpnHk Website: https://panasonic.net/cns/projector/casestudies/062.html



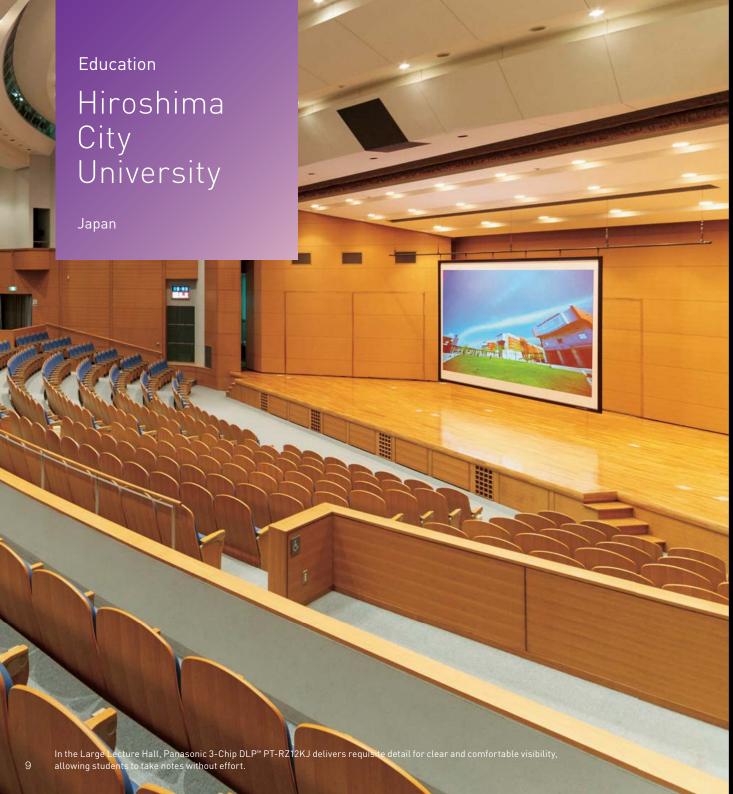






Compact and quiet, the PT-RZ670 Series delivers dynamic and arresting visuals without distraction.





- With high 20,000:1 contrast and brightness, there's no need to dim the lights, as projected images remain clearly legible
- Quick Start/Quick Off function prevents malfunctions caused by turning the projector on or off from the main switch, and reduces energy consumption during periods of non-operation
- Emulation modes and wide support for HDBaseT™-compliant control over LAN, RS-232C, and Crestron Connected™ allow easy integration with peripherals of differing brands
- Setup, installation, and control can be customized with DIGITAL LINK Switcher and DIGITAL LINK Interface Box

Equipment installed







1-Chip DLP™ Projector PT-RW630



1-Chip DLP™ Projector PT-RZ570

More Information -

Related video: https://www.youtube.com/watch?v=dX7BNYPprt8
Website: https://panasonic.net/cns/projector/casestudies/education003/





High brightness and color uniformity across a wide 250-inch screen enables projection without dimming the interior lights.



PT-RZ12KJ concealed in a projection booth opposite the stage.



Very high brightness assures excellent image visibility even in rooms exposed to natural sunlight.

- High 12,000 lm of brightness laser projector provides the immersive and detailed images required to enhance presentations and engage students
- Up to 20,000 hours maintenance-free operation and long-lasting reliability support prolonged, stable operation
- 3-Chip DLP™ imaging at 4K+ resolution without visible pixels
- Mount in any orientation without affecting projection longevity

Equipment installed







3-Chip DLP™ Projector PT-RQ13K

3-Chip DLP™ Projector PT-RZ12K

1-Chip DLP™ Projector PT-RZ670

More Information -

Related video: https://www.youtube.com/watch?v=f0ult0Cuh-A Website: https://panasonic.net/cns/projector/casestudies/education002/

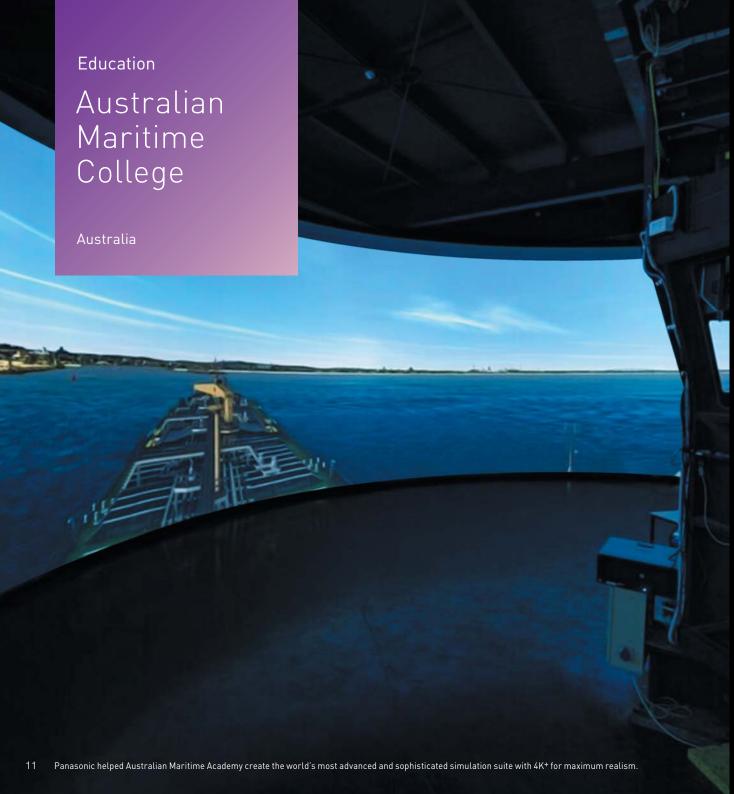






Three PT-RZ12K projectors are employed to create a single wide-aspect 3D image.





- Among the smallest and lightest laser light-source
 3-Chip DLP™ projectors with 4K+ resolution in the world
- High 10,000 lm of brightness and precise 20,000:1 contrast performance
- Geometry Manager Pro Software (ET-UK20) and Auto Screen Adjustment Upgrade Kit (ET-CUK10) interface with projectors to correct images on large convex screens
- HDBaseT™-based DIGITAL LINK connection supports single-cable transmission of 4K video signals for distances of up to 50 m (164 ft)

Equipment installed



3-Chip DLP™ Projector PT-RQ13K

More Information

Related video: https://youtu.be/P00moslw_B0
Website: https://panasonic.net/cns/projector/casestudies/education001/









A total of five PT-RQ13K projectors were installed for seamless panoramic display.

- Engineered to withstand 24-hour operation 365 days a year with efficient and extended maintenance schedule
- High brightness and pin-sharp high-resolution performance to enable clear image display in brightly lit rooms
- Networked multi-screen system produces 6.2 m x 4.2 m screen at WUXGA with undetectable edge-blends

Equipment installed



1-Chip DLP™ Projector PT-RZ670

More Information -

Website: https://panasonic.net/cns/projector/casestudies/others002/







Huge screen surface area is enabled with five sets of four PT-RZ670 projectors displaying 72-inch images at 16:10 aspect.



Monitoring

Niigata Prefectural Police Department



Why Choose Panasonic?

- Ultra Short-Throw projectors enable projection from short distances for use in areas with limited space
- Extremely stable operation and no maintenance for about 87,000 hours provides a dramatic reduction in TCO
- Panasonic can supply not only projectors, but also an entire multi-visual system service for efficient one-stop renewal
- SOLID SHINE Series projectors maintain consistently high image quality brightness for very long periods

Equipment installed



1-Chip DLP™ Projector PT-RZ475

More Information

Website: https://panasonic.net/cns/projector/casestudies/others001/





Short-throw lenses allowed existing rear-projection infrastructure to be preserved, reducing total cost of the renewal.



In dim conditions, brightness may be lowered to extend projector life to 87,000 hours of continuous maintenance-free projection.



SOLID SHINE Laser delivers requisite brightness even in bright environments.

Panasonic can provide consulting services and oversee installation of end-to-end visual systems in any venue to assure budget and performance objectives are met

- Supports ET-DLE030 Ultra Short-Throw Lens to prevent shadowing and allow concealed installation in confined areas
- Geometry Manager Pro easily adapts wide-aspect images for projection to curved screen surfaces
- Lamp and filter-free design assures virtually no maintenance for up to 20,000 hours
- Lightweight, compact, and easily connected to suit modern interior designs

Equipment installed



1-Chip DLP™ Projector PT-RZ670

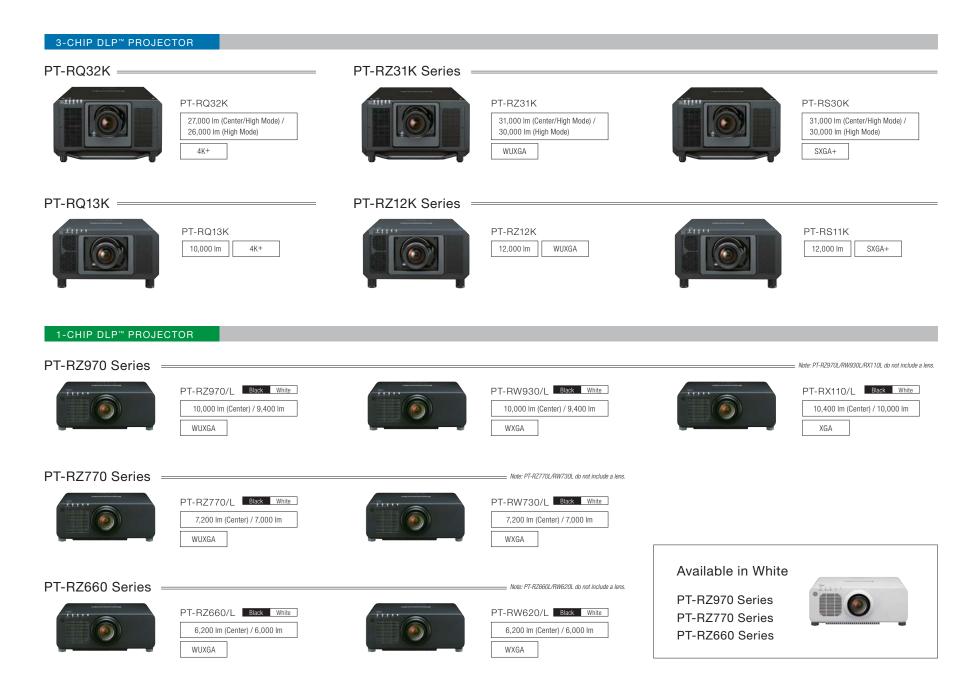




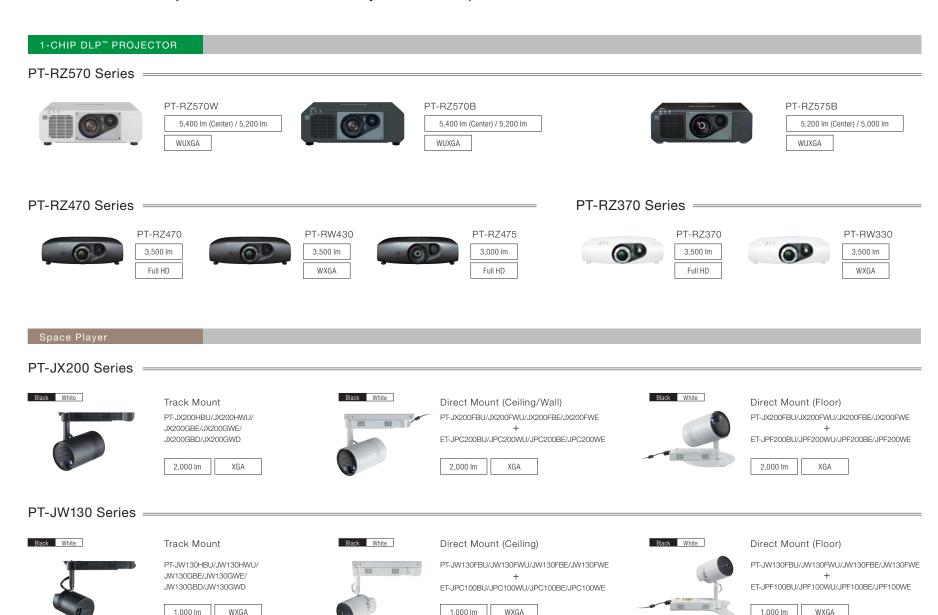
Split-screen and window-in-window projection capabilities allow for presentation of diverse information sources simultaneously.



Panasonic DLP™ System SOLID SHINE Projector Lineup



Panasonic $\mathsf{DLP}^{\scriptscriptstyle\mathsf{TM}}$ System SOLID SHINE Projector Lineup



Where Reference Imaging Meets Peak Efficiency

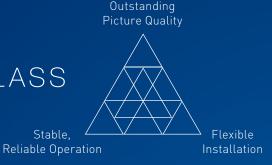
Panasonic SOLID SHINE DLP™ based solutions outperform in three areas: image quality, economy and reliability, and installation flexibility. Extremely high brightness, pixel-free detail resolution, and precise color reproduction result in wholly immersive pictures in single or multi-projector configurations. Robustly engineered for year-round 24/7 operation with virtually no maintenance, and extending image and brightness quality further, SOLID SHINE Laser is shaped by professional end-user experience, and therefore fully equipped to deliver class-leading performance in any application.



More Information https://panasonic.net/cns/projector/ solution/technology/laser/



HOW WE LEAD THE CLASS



Unique Panasonic Technology Equals Superior Quality







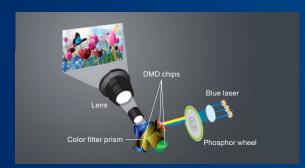






Outstanding Picture Quality

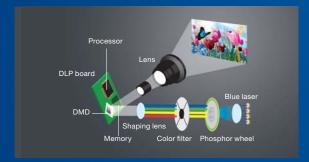
Stunning Pictures from Panasonic's SOLID SHINE DLP™ System



3-Chip DLP™

Three Independent DLP™ Chips for Accurate Color Reproduction

Panasonic 3-Chip DLP™ SOLID SHINE Laser Phosphor projectors feature independent DLP™ modules for red, green, and blue, and a Color Filter Prism for accurate Rec. 709-compliant color performance. The blue laser light, meanwhile, ensures greater precision while an expanded color gamut improves white balance accuracy for natural and lifelike image reproduction.



1-Chip DLP™ with Quartet Color Harmonizer

Excellent Image Quality with Quartet Color Harmonizer

Quartet Color Harmonizer delivers better image quality than lamp-based systems with the efficiency benefit of laser. The design improves white balance for natural color expression and enhances brightness by maximizing available light through four discrete color channels. Panasonic's LED/Laser hybrid source, meanwhile, combines technologies to extend life and improve color accuracy.

^{*1} Original filterless dust-resistant design for 1-Chip DLP™ SOLID SHINE Laser projectors only (as of June 2017).

² Note: 1-Chip DLP* SOLID SHINE Laser projectors do not require a filter. Panasonic 3-Chip DLP* SOLID SHINE Laser projectors feature a long-life filter. See product-specific information for further details

Color Accuracy

(1-Chip DLP)

Available light-source power is maximized through each color channel. The viewer is presented with a picture that closely resembles what is seen in real life.



► Accurate White Balance

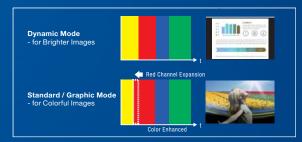
1-Chip DLP

On selected models, a wider section of the color gamut is captured, allowing pure white to be accurately reproduced on screen. With competitive LCD projectors, white appears with a distracting greenish tint.

▶ Rich Color Enhancer

PT-RZ570/RZ575

Rich Color Enhancer is a technology that includes a Dynamic Mode designed to increase the brightness of images such as documents and graphics. Graphic/Standard Mode, meanwhile, adjusts color-wheel timing to produce deeper, more vibrant colors in dim environments where maximum brightness is unnecessary



Dvnamic Contrast

Digital frame-by-frame scene-linking modulation ensures precise laser light output adjustment for 20,000:1*1 contrast even when bright and dark scenes frequently interchange, reducing power consumption.

> Stable, Reliable Operation

Innovation Balances High Performance and Low TCO

Eco Filter Delivers Up to 20,000-hour*2 **Replacement Cycle**

3-Chip DLP

Select Panasonic 3-Chip DLP™ SOLID SHINE Laser projectors feature an Eco Filter incorporating an electrostatic Micro Cut Filter that collects minute dust particles with an ion effect. It joins a dust-resistant cabinet to enable long-term use even in punishing conditions. A long maintenance

cycle of up to 20.000 hours*2 reduces hassle, and the washable filter*3 can be reused to reduce cost and waste. Select 1-Chip DLP™ SOLID SHINE Laser projectors. meanwhile, employ a filterless design.



Dust-Resistant for Less Maintenance

Select SOLID SHINE Laser series projectors have airtight laser modules and a unique air-intake system to extend life and maintain picture quality in dusty locations. SOLID SHINE Laser products exceed rigorous dustproofing requirements for operation in environments containing 0.150 mg of dust per cubic meter*4.

Guidelines for Dust Resistance

Particulate Matter per Cubic Meter in Different Environments

Clean Environment	WHO Europe Guideline for Dust Resistance	Japanese Building Maintenance Association ASHRAE*
0.030 mg/m³	0.110 mg/m³	0.150 mg/m³
CLEAN	***	DUSTY

Efficient Cooling System Assures Reliable Operation Selected models employ a unique direct liquid cooling system for the laser light source that features a redesigned air intake and a solid aluminum heat sink to

suppress temperature rises. This allows stable operation in ambient temperatures of up to 50 °C (122 °F)*5 while reducing operating noise.

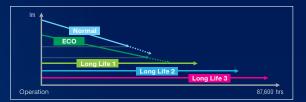
Air-Conditioning Engineers



Panasonic Dust Test Standard

Selectable Operational Modes

In environments where very high brightness is not necessary, such as surveillance, control, and simulation rooms, constant operation modes extend light source replacement to up to 87.600 hours*6 in Long Life 3 Mode—about 10 years*6 of 24/7 projection—with consistent brightness and color.



Durable Laser Optical Engine for Dependable Operation

Selected models feature a Dual Drive Laser Optical Engine that features two discrete modules of laser diodes. A redundancy circuit ensures minimal reduction in brightness and color uniformity in the event of diode failure. Further, brightness is arrested in a linear rather than exponential decline over its 20,000-hour*7 maintenance-free service life.



Flexible Installation

360-degree Free Installation

Select SOLID SHINE Laser projectors can be mounted vertically or horizontally through 360 degrees. This enables projection from virtually any angle.



Quick Start, Quick Off

By virtue of laser design, no warm-up or cool-down is required when operating select projectors. Images appear almost instantly from start-up, and the projector can be switched off from the mains.

Projection at Higher Altitudes

Select SOLID SHINE Laser projectors can be used with confidence at higher elevations than lamp-based products—up to 4,200 m^{*8}—with comparably lower reduction in brightness.

^{*1 20,000} contrast ratio featured on selected models only. See product-specific information for further details. *2 Usage environment may affect filter maintenance cycle. *3 Please follow the procedures listed in the operating instructions when washing the filter with water. Replacement is recommended after filter has been washed and reused twice, or if filter is not sufficiently clean after washing, "4 Excluding PT-R2570/R2470/R2370/JX200/JW130 Series. Dustproof tests are conducted to confirm operational effectiveness under conditions with 0.15 mg/m3 of particulate matter (based on tests by the American Society of Heating, Refrigerating, and Air-Conditioning Engineers [ASHRAE], and the Japanese Building Maintenance Association). Measurements are made using acceleration tests. *5 For PT-RZ12K/RS11K. Operating temperature varies depending on environmental and usage conditions. Please check product specification for further details. *6 With Operating Mode set to Long Life 3. Long Life Mode is tested in a rear-box projection environment, which is not compliant with ASHRAE. 24 hours/day x 365 days/year x 10 years = 87,600 hours. Replacement of parts other than the light source may be required in a shorter period. *7 At this time, brightness will have decreased to approximately half of its original level. Please refer to product-specific condition information on the Panasonic recommends cleaning or checkup at point of purchase after 20,000 hours (approximately). Light source lifetime may be reduced depending on environmental conditions. Replacement of parts other than the light source may be required in a shorter period. '8 Please visit the product specification pages for individual projector models for details on operating temperatures in various conditions.