Panasonic
BUSINESS

Evolution Reaches a New Peak

PT-RZ31K Series
3-Chip DLP™ Projectors
PT-RZ31K
PT-RS30K

Worldwide Olympic Partner
Worldwide Paralympic Partner

DLP LASER

SOLID SHINE LASER
BOOST PERFORMANCE, EFFORTLESSLY

The evolution of 3-Chip DLP™ SOLID SHINE Laser culminates in the PT-RZ31K Series, a flagship forged by end-user experience with 31,000-lumen (Center/High Mode)*1 of brightness for rental/staging events. Convenient on-site rigging and dust-resistant optics push service-free projection beyond 20,000 hours*2 in Normal Mode for permanent installations. In every detail, these flagships make elite performance last longer.

<table>
<thead>
<tr>
<th>PT-RZ31K SERIES</th>
<th>3-Chip DLP™ Projectors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Resolution</td>
<td>PT-RZ31K</td>
</tr>
<tr>
<td></td>
<td>PT-RS30K</td>
</tr>
<tr>
<td>Brightness</td>
<td>WUXGA</td>
</tr>
<tr>
<td></td>
<td>SXGA+</td>
</tr>
<tr>
<td>Contrast</td>
<td>31,000 lm (Center)<em>1 / 30,000 lm</em>2</td>
</tr>
<tr>
<td></td>
<td>20,000:1</td>
</tr>
</tbody>
</table>

*1 Luminance measured at center of screen in High Mode. Operation in High Mode may reduce maintenance timing in comparison to use in Normal Mode. *2 At this time the brightness will have decreased to approximately 50% of its original level (Normal Mode, Dynamic Contrast Mode, 3:1 Image Mode, Dynamic, ISOB2067:2008 Broadcast Content, dust density of 0.15 mg/m³). Optional Long Life Filter is required for continuous 20,000 hours operation. In High Mode, no maintenance required for 4,000 hours. *3 Luminance measured in High Mode. Operation in High Mode may reduce maintenance timing in comparison to use in Normal Mode.

Lighting Up the Rio 2016 Olympic Games Opening Ceremony

As Official Worldwide Olympic Partner, Panasonic supplied about 110 projectors—including a prototype PT-RZ31K Series SOLID SHINE Laser projector—to light up the Opening Ceremony at the Rio 2016 Olympic Games. Chosen for high brightness, brilliant color performance, and advanced mapping capabilities, the projectors performed flawlessly throughout the event.
**Outstanding Picture Quality**

**Superior Brightness Meets True-to-Life Color Accuracy**

Combining 3-Chip DLP™ imaging with original SOLID SHINE Laser Phosphor technology, the PT-RZ31K Series produces detail-rich and vividly colored pictures with best-in-class* 31,000 lumens brightness (Center)* in High Mode. Dual solid-state laser light-sources and specially engineered heat-resistant phosphor wheels work together with three DLP™ modules (R/G/B) for outstanding brightness, color accuracy, and contrast in large venues.

**Operational Mode Brightness**

<table>
<thead>
<tr>
<th>Operational Mode</th>
<th>Brightness</th>
<th>Operational Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>High Mode</td>
<td>31,000 lm</td>
<td></td>
</tr>
<tr>
<td>Normal Mode</td>
<td>26,000 lm</td>
<td></td>
</tr>
</tbody>
</table>

* *1 Claim for Laser Phosphor projectors in its class accurate as of October 2016.
* *2 Luminance measured at center of screen in High Mode. Operation in High Mode may reduce maintenance timings in comparison to use in Normal Mode.

**Stable, Reliable Operation**

**Dual-Laser Optical Engine Assures Failsafe Reliability**

Dual-Drive Laser Optical Engine groups laser diodes into two discrete modules. A redundancy circuit works to minimize brightness- and color-uniformity loss should a laser diode fail, making the PT-RZ31K Series ideal for mission-critical applications where picture presentation must be maintained.

**Dustproof Optics Extend Longevity**

The PT-RZ31K Series has hermetically sealed laser modules, durable filtering, and a new air-intake system to extend life and maintain picture quality in dusty locations. SOLID SHINE Laser products are tested against more severe guidelines than other projectors for stable operation in environments containing 0.150 mg of dust per cubic meter.*

* 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.

**Flexible Installation**

**Flexible 360-degree Installation**

SOLID SHINE Laser enables free 360-degree installation through any axis. Together with powered lens shift and a wide range of optional lenses, the projector can be mounted in any way desired without picture distortion temporarily or in permanent applications.

**Quick Start, Quick Off**

The laser light-source doesn’t require any time to warm up, so images appear almost instantly with PT-RZ31K Series projectors. There’s also no cool-down period when turning the power off at the mains—the projector can be turned on and off any time as necessary.
Next-Generation Systems Present Amazing Images

**120 Hz**\(^{*1}\) Drive Reduces Motion Blur

Real Motion Processor interpolates images for a 120 Hz**\(^{*1}\)** frame-rate. Smooth, stutter-free 120 Hz**\(^{*1}\)** reproduction is also possible using simultaneous inputs (two 3G-SDI inputs or DVI-D/HDMI combination). Together with a refined optical engine that enhances focus, Real Motion Processor delivers a better sense of resolution, contrast, and fluidity of motion, particularly with fast-paced scenes.

**Detail Clarity Processor 5 Provides Pin-sharp Insight**

Proprietary circuitry analyzes individual frames to clarify areas of the image containing fine details and textures. Algorithms pull information from the super-high, high, medium, and low frequency bands of the signal, sharpening outlines, correcting contours, and reducing ringing noise.

**System Daylight View 3 Optimizes for Mapping and Bright Conditions**

Panasonic’s premium System Daylight View 3 stops pictures washing out in bright light and enhances impact in mapping and multi-projector applications. It uses sensor information to adjust sharpness, manipulate gamma curves, and correct colors to suit on-site conditions.

**Power Management Reduces Downtime**

Auto power management compensates for voltage fluctuations. Image display is maintained at a reduced brightness even if voltage drops below specified requirements, rather than shutting the projector off.

**Leads the Class with 90 % Brightness Uniformity**

SOLID SHINE Laser delivers superior screen brightness uniformity thanks to highly accurate white balance control. Brightness uniformity is greater than 90 % when measured at the corners, edges, and center of the screen.

**Efficient Cooling System Enhances Reliability**

The light source’s liquid-cooling system features a redesigned air intake and solid aluminum radiator to suppress temperature rises, allowing stable operation in temperatures up to 45 °C (113 °F)**\(^{*4}\)** and reducing noise to 49 dB.

**Selecteable Operational Modes**

Select your preferred operational mode to control brightness decline according to application. High Mode maintains 70 % brightness over 8,000 hours**\(^{*2}\)** with linear declination and minimal fluctuation. In Normal Mode, linear brightness decline is about 50 % over 20,000 hours**\(^{*3}\)** of continuous operation with no maintenance required.
Quick Installation, Easy Mapping, Simple Multi-screen Setup

Contrast Sync Function for Multi-screen Configurations
Contrast Sync function for multi-screen applications allows the dynamic contrast control to be synchronized for consistent picture quality across screens, while Shutter Sync synchronizes shutter on/off timing.

Single-Cable DIGITAL LINK Video and Control Connection
DIGITAL LINK transmits uncompressed Full HD video and control commands through a single CAT 5e or higher STP cable for distances of up to 150 m (492 ft)*1. Optional DIGITAL LINK Switcher or Digital Interface Box further simplifies installation, reduces cabling and associated costs, and enhances reliability.

Backup Input Setting Assures Reliability
Projectors smoothly switch to a backup input signal should the primary input signal be disrupted*2, enhancing reliability in mission critical control rooms and in applications such as projection mapping displays and staging events where image display must be maintained.

Multi-screen Support System Seamlessly Connects Multiple Screens
- **Edge Blending**: Edges of adjacent screens can be blended and their luminance controlled
- **Color Matching**: Corrects color reproduction variations of each projector via PC control software
- **Digital Image Enlarging**: Digital zoom up to 10X (H/V)*4. Up to 100 units (10 x 10) can be edge-blended to create large multi-screen images

Multi-Unit Brightness and Color Control
Sensors detect color and brightness apparent on screen. Projectors automatically calibrate for a uniform multi-screen image, adding a layer of convenience and cost saving for long-term events.

Built-in Geo Adjustment for Unique Screen Surfaces
Geo Adjustment adapts images for projection onto specially shaped screens with fine-tuning via remote control. Enhanced with Multi-Screen Support System, Geo Adjustment makes creative mapping presentations easy.

Geometry Manager Pro Software and Upgrade Kits
Geo software expands image adjustment and simplifies multi-screen setup. The free software performs color matching, edge blending, and other functions via network. Optional upgrades and plug-ins further streamline and automate setup.

Common Lenses Cut Your Inventory Costs
The PT-RZ31K Series share optional lenses with Panasonic’s 3-Chip DLP™ projector range, potentially reducing inventory for rental/staging professionals, while also supporting the ET-D75LE95 Ultra-Short Throw Lens.

Active 3D Projection Capability
The PT-RZ31K Series is compatible with active 3D projection technology. It supports an external transmitter and active-shutter glasses, or an active filter and passive glasses*4 for viewing 3D images.

Terminals for Every Application
Connect any source device to the PT-RZ31K Series via its array of terminals including 3G-SDI, DIGITAL LINK, DVI-D, and HDMI.

Supports Art-Net DMX, Crestron Connected™, and PJLink™
The PT-RZ31K Series supports Art-Net DMX protocol for lighting management. This enables connection with lighting consoles for added functionality and control options. Crestron Connected™ and PJLink™ (Class 1) also streamline integration into existing AV infrastructure.

*1 150 m (492 ft) transmission available only with ET-YFB200G DIGITAL LINK Switcher for signals up to 1080p. *2 Combination of primary/secondary input terminals is fixed. Supported combinations are DVI-D (primary) and HDMI (secondary) terminals, or DVI-D (primary) and SDI (secondary) terminals. The luminance value is calculated when the input signal to the primary and secondary terminals is the same. *3 White output will not appear; maintaining image quality in the center for images enlarged horizontally and vertically via the digital zoom function. *4 Please contact your sales representative for further information.
Supports rigging at angles greater than 60°

18 mm (2/4 x") = 30 mm (1 3/8 x")

Eyebolt-Ready for Easy Installation

Eyebolts allow the PT-RZ31K Series to hang from a crane, simplifying rigging at large-scale events for rental/staging professionals.

**Projection Distance**

<table>
<thead>
<tr>
<th>Projection Distance</th>
<th>PT-RZ31K (16:10 aspect ratio)</th>
<th>PT-RS30K (4:3 aspect ratio)</th>
<th>Unit: meters (feet)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diagonal image size</td>
<td>ET-D75LE95</td>
<td>ET-D75LE95</td>
<td>ET-D75LE95</td>
</tr>
<tr>
<td>(mm)</td>
<td>(in)</td>
<td>(mm)</td>
<td>(in)</td>
</tr>
<tr>
<td>1.07</td>
<td>1.11</td>
<td>0.90</td>
<td>0.99</td>
</tr>
<tr>
<td>1.90</td>
<td>2.04</td>
<td>1.64</td>
<td>1.83</td>
</tr>
<tr>
<td>2.54 (100)</td>
<td>2.17</td>
<td>2.47</td>
<td>1.97</td>
</tr>
<tr>
<td>3.06 (120)</td>
<td>2.36</td>
<td>2.82</td>
<td>2.32</td>
</tr>
<tr>
<td>3.81 (150)</td>
<td>2.95</td>
<td>3.65</td>
<td>2.95</td>
</tr>
<tr>
<td>5.08 (200)</td>
<td>3.55</td>
<td>4.38</td>
<td>3.55</td>
</tr>
</tbody>
</table>

**Dimension Definitions**

- Dimension Definitions
- If using lens other than the ET-D75LE95
- If using the ET-D75LE95

**Terminals**

1. REMOTE 1 IN terminal
2. REMOTE 1 OUT terminal
3. REMOTE 2 IN terminal
4. SERIAL IN terminal
5. SERIAL OUT terminal
6. MULTIPROJECTOR SYNC IN
7. MULTIPROJECTOR SYNC OUT
8. AC IN terminal
9. DVI IN terminal
10. HDMI IN terminal
11. DIGITAL LINK/CLAN terminal
## Specifications

<table>
<thead>
<tr>
<th>Model</th>
<th>PT-RZ71K</th>
<th>PT-RS30K</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Power supply</strong></td>
<td>AC 200–240 V, 50/60 Hz; AC 100–240 V, 50 Hz (brightness is restricted with lower voltage)</td>
<td></td>
</tr>
<tr>
<td><strong>Power consumption</strong></td>
<td>2,870 W (3.5 W with Standby Mode set to Eco, 4 W with Standby Mode set to Normal) [2,870 VA, AC 200 V]</td>
<td></td>
</tr>
<tr>
<td><strong>DLP</strong>&lt;sup&gt;<strong>n</strong>&lt;/sup&gt;</td>
<td>Panel size</td>
<td>24.4 mm (0.96 inches) diagonal (1:1 aspect ratio)</td>
</tr>
<tr>
<td><strong>Display method</strong></td>
<td>DLP&lt;sup&gt;<strong>m</strong>&lt;/sup&gt; chip × 3, DLP&lt;sup&gt;<strong>m</strong>&lt;/sup&gt; projection system</td>
<td></td>
</tr>
<tr>
<td><strong>Video/YC</strong></td>
<td>±50 % (±40 % with ET-D75LE6, ±67 % – ±71 % with ET-D75LE95) (powered)</td>
<td></td>
</tr>
<tr>
<td><strong>Vertical (from center of screen)</strong></td>
<td>±55 % (±44 % with ET-D75LE6, +68 % – +78 % with ET-D75LE95) (powered)</td>
<td></td>
</tr>
<tr>
<td><strong>±20 % (±15 % with ET-D75LE6, ±12 % with ET-D75LE95) (powered) Vertical (from center of screen)</strong></td>
<td>±20 % (±15 % with ET-D75LE6, ±12 % with ET-D75LE95) (powered)</td>
<td></td>
</tr>
<tr>
<td><strong>°</strong></td>
<td>Vertical: ±40 ° (± 22 ° with ET-D75LE50, ±28 ° with ET-D75LE6), Horizontal: ±15 °</td>
<td></td>
</tr>
<tr>
<td><strong>Keystone correction range</strong></td>
<td>Vertical: ±45 ° (± 40 ° with ET-D75LE60/20, ±22 ° with ET-D75LE50, ±28 ° with ET-D75LE6), Horizontal: ±40 ° (±15 ° with ET-D75LE50/6), Up to a total of ±55 ° during simultaneous horizontal and vertical correction</td>
<td></td>
</tr>
</tbody>
</table>

### Optional Accessories

- **ET-D75LE6**
  - Zoom Lens

- **ET-D75LE20**
  - Zoom Lens

- **ET-D75LE8**
  - Zoom Lens

- **ET-EF1330**
  - Replacement Filter Unit

- **ET-SF1330**
  - Smoke Cut Filter

- **ET-EMF1330**
  - Long-life Filter

- **ET-UK20**
  - Geometry Manager Pro Upgrade Kit

- **ET-SWA100**
  - Early Warning Software

- **ET-EK10 Series**
  - Auto Screen Adjustment Upgrade Kit (Except in the United States)

- **ET-YB200G**
  - DIGITAL LINK Switcher

- **ET-YFB100G**
  - Digital Interface Box

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<sup>**n**</sup> When Standby Mode is set to Eco, network functions such as power over LAN will not operate. Additionally, only certain commands can be received for external control using the serial terminal. *2 Refresh rate varies depending on vertical scanning frequency. *3 Brightness will have decreased to approximately 90 % of its original level after 6,000 hours operation. *4 With less than 0.1 % of the light being emitted (VESA DMT 3.1 Standard). *5 Operation temperature: 5 °C to 40 °C (41 °F to 104 °F), Humidity: 20 % to 80 % (without condensation). *6 Measured in accordance with the VESA DMT 3.1 Standard. *7 Power consumption is measured at the point where the unit enters Eco mode. *8 Measured in accordance with the VESA DMT 3.2 Standard. *9 WUXGA resolution is supported when the video signal is compliant with VESA DMT 3.2 Standard. *10 Two large display, two small display, two medium display. *11 Video signals that are not supported on the ET-D75LE6. *12 Video signals that are not supported on the ET-D75LE8. ** Note: Part number suffix may differ depending on the license type. **13 If ambient temperature exceeds 35 °C (95 °F) when used in locations from 0 m to 1,400 m above sea level, it exceeds 25 °C (77 °F) when used in locations from 2,700 m to 4,200 m above sea level, it exceeds 20 °C (68 °F) when used in locations from 4,200 m to 5,500 m above sea level, and it exceeds 15 °C (59 °F) when used in locations from 5,500 m to 7,000 m above sea level. The maximum height is 14,000 m (45,932 ft). **14 Note: Part number suffix may differ depending on the license type. **15 Note: Part number suffix may differ depending on the license type.
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