

2018 Visual Solutions Preliminary Brochure



# **PRELIMINARY BROCHURE**

February 2018



## Projectors

- PT-RQ22K 3-Chip DLP<sup>™</sup> Projector
- PT-MZ770 Series
   LCD Projectors
- PT-RZ120 1-Chip DLP<sup>™</sup> Projector
- PT-VW360 Series LCD Projectors
- PT-RZ870 1-Chip DLP<sup>™</sup> Projector

# Flat-Panel Displays







Tentative

# Compact and Filterless 21 klm<sup>\*1</sup> 4K<sup>+</sup> 3-Chip DLP<sup>™</sup> Projector Leverages SOLID SHINE Laser Technology for Awesome Large-Format Pictures and Low TCO



	PT-RQ22K
Brightness	21,000 lm (Center)*1 / 20,000 lm*2
Resolution	4K <sup>+</sup> (5120 x 3200)* <sup>3</sup>
Contrast	20,000:1

## Flagship 4K<sup>+</sup> Imaging Performance

- Harnesses next-generation 3-Chip DLP<sup>™</sup> imaging system with Panasonic SOLID SHINE Laser technology for bright and film-like picture reproduction
- High 21,000 lm<sup>\*1</sup> brightness in a compact, lightweight, and easy-to-handle body
- Quad Pixel Drive produces supremely detailed 4K+ images
- Real Motion Processor 240 Hz frame interpolation achieves fluid reproduction of fast-paced action sequences
- Features 4K BT.2020 color-space emulation and supports HDR standard for accurate handling of next-generation video formats
- Efficient heat-pipe-based cooling system assures stability and long life

#### Peak Performance Extended for Low TCO

- Minimal maintenance required for continuous 24/7 projection applications
- Dust-resistant design features hermetically shielded optical unit and cost-saving filterless cooling system
- Digital laser light-source modulation achieves high 20,000:1 dynamic contrast
- Detail Clarity Processor 5+ technology with 4K optimization to enhance detail expression with all video sources
- System Daylight View 3 boosts image sharpness in projection mapping applications and in bright environments

#### Flexible Installation and System Integration

- Two slots for optional SLOT NX terminal boards suiting various applications
- Supports 12G SDI Interface Board (ET-MDN12G10)
- Shares optional lenses with Panasonic 3-Chip DLP<sup>™</sup> projector family including ultra-short-throw and fisheye lenses
- Compact body and free 360-degree installation (vertical and horizontal)
- 4K DIGITAL LINK supports transmission of uncompressed 4K video signals and control commands through single LAN cable
- Multi-Screen Support System blends and calibrates multiple screens
- Multi-Unit Brightness and Color Control
- Free Geometry Manager Pro software with optional Upgrade Kit (ET-UK20)
- Supports Auto Screen Adjustment Upgrade Kit (ET-CUK10)

Model		PT-R022K					
DLP <sup>™</sup> chip Pane	el size	22.9 mm (0.9 in) diagonal (16:10 aspect ratio)					
	play method	DLP <sup>™</sup> chip x 3, DLP <sup>™</sup> projection system					
Pixels		49,152,000 (12,288,000 x 4) pixels with Quad Pixel Drive set to ON, 4,096,000 (2560 x 1600) x 3, total of 12,288,000 pixels with Quad Pixel Drive set to OFF					
Refresh rate		240 Hz*1					
Lens		Optional (no lens included with this model)					
Light source		Laser diodes (Laser class: Class 1) (Class 3R for US models), Light source life: 20,000 hours (NORMAL mode, brightness decreases to approx. 50 %)					
Screen size (diag	jonal)	1.78-25.4 m (70-1,000 in) with 16:10 aspect ratio 1.78-15.24 m (70-600 in) with the ET-D75LE8 / ET-D3LET80, 16:10 aspect ratio 3.05-15.24 m (120-600 in) with the ET-D75LE95, 16:10 aspect ratio					
Brightness		21,000 lm (Center)*2 / 20,000 lm*3 (HIGH Mode)*4					
Center-to-corner	r uniformity*3	90 %					
Contrast*3		20,000:1 (Full On/Full Off, Dynamic Contrast Mode: 3)					
Resolution		4K <sup>+</sup> (5120 x 3200) (Quad Pixel Drive: ON)					
	cal (from center of screen)	±59 % (±56 % with ET-D75LE6 / ET-D3LEW60, +69 % - +84 % with ET-D75LE95) (powered)					
axis shift*5 Horizo	contal (from center of screen)	±29 % (±19 % with ET-D75LE6 / ET-D3LEW60, ±21 % with ET-D75LE95) (powered)					
Keystone correcti	tion range	Vertical: ±40° (± 22° with ET-D75LE50 / ET-D3LEW50, ±28° with ET-D75LE6 / ET-D3LEW60, +5° with ET-D75LE95), Horizontal: ±15° (0° with ET-D75LE95)					
Keystone correcti with optional Upg	tion range grade Kit ET-UK20	Vertical: ±45° (± 40° with ET-D75LE10 / ET-D3LEW10, ET-D75LE20 / ET-D3LES20, ±22° with ET-D75LE50 / ET-D3LEW50, ±28° with ET-D75LE6 / ET-D3LEW60, +5° with ET-D75LE95) Horizontal: ±40° (±15° with ET-D75LE50, ET-D75LE6 / ET-D3LEW60, ET-D75LE10 / ET-D3LEW10, 0° with ET-D75LE95), Up to a total of ±30° during simultaneous horizontal and vertical correction					
Installation		Horizontal/vertical, free 360-degree installation					
Terminals SDI	1 IN	BNC x 1: 3G/HD/SD-SDI input, Dual-link HD-SDI (Link-A), Dual-link 3G-SDI (Link 1), Quad-link HD-SDI (Link 1), Quad-link 3G-SDI (Link 1)					
SDI	2 IN	BNC x 1: 3G/HD/SD-SDI input, Dual-link HD-SDI (Link-B), Dual-link 3G-SDI (Link 2), Quad-link HD-SDI (Link 2), Quad-link 3G-SDI (Link 2)					
SDI	3 IN	BNC x 1: 3G/HD/SD-SDI input, Dual-link HD-SDI (Link-C), Dual-link 3G-SDI (Link 3), Quad-link HD-SDI (Link 3), Quad-link 3G-SDI (Link 3)					
SDI	4 IN	BNC x 1: 3G/HD/SD-SDI input, Dual-link HD-SDI (Link-D), Dual-link 3G-SDI (Link 4), Quad-link HD-SDI (Link 4), Quad-link 3G-SDI (Link 4)					
MUL7	TI PROJECTOR SYNC IN	BNC x 1					
MULT	TI PROJECTOR SYNC OUT	BNC x 1					
SER	RIAL IN	D-sub 9-pin (female) x 1 for external control (RS-232C compliant)					
SER	RIAL OUT	D-sub 9-pin (male) x 1 for link control					
REM	NOTE 1 IN	M3 x 1 for wired remote control, link control					
REM	NOTE 1 OUT	M3 x 1 for wired remote control, link control					
REM	NOTE 2 IN	D-sub 9-pin (female) x 1 for external control (parallel)					
LAN	I/DIGITAL LINK	RJ-45 x 1 for network, DIGITAL LINK connection (HDBaseT <sup>™</sup> compliant), 100Base-TX, compatible with Art-Net, PJLink <sup>™</sup> (Class 2), Deep Color, HDCP2.2					
DC (	OUT	USB Type A x 2 (for power supply DC 5V total of 2 A)					
Expa	ansion Slot	SLOT 1 / SLOT 2 (total two terminals, vacant) for interface boards, SLOT NX compatible					
Power supply		AC 200–240 V, 50/60 Hz; AC 100–200 V, 50/60 Hz (brightness is restricted with lower voltage)					
Power consumpti	tion	TBD					
Cabinet materials	s	Molded plastic					
Dimensions (W x	H x D)	598 x 270 x 725 mm (23 1/ <sub>32</sub> " x 10 5/ <sub>8</sub> " x 28 17/ <sub>32</sub> ") (not including protruding parts)					
Weight*6		Approx. 55 kg (122 lbs)					
Operation noise*3	3	TBD					
operation noise							
Operating enviror	nment	Operating temperature: 0-45 °C (32-113 °F)*7, operating humidity: 10-80 % (no condensation)					

\*1 Refresh-rate varies depending on vertical scanning frequency. \*2 Luminance measured at center of screen (in HIGH Mode). \*3 Measurement, measuring conditions, and method of notation all comply with ISO/IEC 21118: 2012 international standards. Value is average of all products when shipped. \*4 Operation in HIGH Mode may reduce maintenance timing in comparison to use in NORMAL Mode. \*5 Optical axis shift is not supported on the ET-D75LE50/ET-D3LEW50. \*6 Average value. May differ depending on the actual unit. \*7 Light source brightness may decrease depending on operating temperature. When projector is operating at high temperature or at high altitude, brightness will decrease correspondingly.

#### **Optional Accessories**

- Fisheye Lens ET-D3LEF70
- Fixed-Focus Lens ET-D75LE50 / ET-D3LEW50, ET-D75LE95
- Zoom Lens ET-D75LE6 / ET-D3LEW60, ET-D75LE8 / ET-D3LET80, ET-D75LE10 / ET-D3LE100, ET-D75LE10 / ET-D3LEW10, ET-D75LE20 / ET-D3LES20, ET-D75LE30 / ET-D75LE40
- Stepping Motor Kit ET-D75MKS10
- Mount Bracket ET-PKD520H/S/B Frame
- ET-PFD510
- Interface Board for 12G-SDI Input (Input x 2, Output x 2) ET-MDN12G10
- Interface Board for HDMI (HDCP2.2) Input (Input x 2) ET-MDNHM10
- Interface Board for DVI Input (Input x 2) ET-MDNDV10
- Geometry Manager Pro Software Upgrade Kit ET-UK20
- Interface Board for 3G-SDI Input (Input x 4) TY-TBN03G
- Early Warning Software ET-SWA100 Series
- Auto Screen Adjustment Upgrade Kit ET-CUK10



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# Packing 12,000 Im Brightness into a Compact Body, the PT-RZ120 Dual-Drive SOLID SHINE Laser Projector Lets You Do More





P	T-RZ120/L
Resolution	WUXGA
Brightness	12,000 lm
Contrast	10,000:1

Note: PT-RZ120L offers the same performance as PT-RZ120, but comes without a lens.

#### Consistently Stable and Reliable Performance

- Dust-resistant projector structure with airtight optical block
- Dual-drive laser optical engine with dual phosphor wheels assures reliable 24/7 operation with light-source failover protection
- Up to 20,000 hours of continuous maintenance-free operation\*<sup>2</sup>
- Efficient cooling system for stable operation in ambient temperatures of up to 45 °C (113 °F)\*<sup>3</sup>
- High-speed backup input switching prevents screen blanking during projection

# Versatile System Adaptability and Flexible Installation

- Shares optional lenses with Panasonic 1-Chip DLP<sup>™</sup> projector family
- Compact body and free 360-degree installation (vertical and horizontal)
- DIGITAL LINK/HDMI<sup>®</sup> support transmission of uncompressed 4K signal
- Built-in Geometric Adjustment for projection onto specially shaped screens
- Supports Geometry Manager Pro and optional Upgrade Kit (ET-UK20)
- Auto Screen Adjustment Upgrade Kit (ET-CUK10)
- Direct Power Off function allows projector shutdown from mains

### High-Quality Pictures and Long-Lasting Reliability

- Combines 1-Chip DLP<sup>™</sup> imaging with proprietary SOLID SHINE Laser technology for accurate and immersive pictures at 12,000 Im
- Dynamic Light Control for 10,000:1\*1 contrast
- Accurate white balance and color reproduction in any projection mode
- High picture quality maintained for very long periods
- Detail Clarity Processor 3 clarifies and enhances the finest details
- System Daylight View 3 optimization for sharp and vivid images in bright environments

\*1 With Dynamic Contrast Mode set to 3. \*2 At 20,000 hours, projector brightness will have decreased to approximately half of its original level (Dynamic Contrast Mode: 3, Image Mode: Dynamic). Panasonic recommends cleaning or checkup at point of purchase after every 20,000-hour period (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. \*3 Light output may be reduced to protect the projector depending on environmental conditions.

Model		PT-RZ120/RZ120L
DLP <sup>™</sup> chip	Panel size	17.0 mm (0.67 in) diagonal (16:10 aspect ratio)
DEI OMP	Display method	DLP <sup>™</sup> chip x 1, DLP <sup>™</sup> projection system
Pixels		2,304,000 (1920 x 1200) pixels
Lens		PT-R2120: Powered zoom (throw ratio 1.7–2.4:1), powered focus F 1.7–1.9, f 25.6–35.7 mm PT-R2120: Optional powered zoom/focus lenses
Light source		Laser diodes laser Class 1 (Class 3R for US models)
Screen size	(diagonal)	1.27-15.24 m (50-600 in), 1.27-5.08 m (50-200 in) with ET-DLE055, 2.54-8.89 m (100-350 in) with ET-DLE030, 16:10 aspect ratio
Brightness*1	· · · · · ·	12,000 lm
Center-to-co	rner uniformity*1	90 %
Contrast*1		10,000:1 (Full On/Full Off, Dynamic Contrast Mode: ON)
Resolution		1920 x 1200 pixels
	/ertical (from center of screen)	+50 %, -16 % (+40%, -16% with ET-DLE060) (powered)
axis shift*2	lorizontal (from center of screen)	+30 %, -10 % (+19%, -10% with ET-DLE060 / +28 %, -10 % with ET-DLE085) (powered)
Keystone co	rrection range	Vertical: ±40° (±16° with ET-DLE060, ±22° with ET-DLE085/DLE055, +5° with ET-DLE030), Horizontal: ±15° (±10° with ET-DLE060) (cannot be operated with ET-DLE030)
	rrection range I Upgrade Kit ET-UK20	Vertical: ±45° (±16° with ET-DLE060, ±40° with ET-DLE150/DLE250 / supplied lens, ±22° with ET-DLE085/DLE055), Horizontal: ±40° (±10° with ET-DLE060, ±15° with ET-DLE085/DLE055), Up to a total of ±55° during simultaneous horizontal and vertical correction.
Installation		Ceiling/floor, front/rear, free 360-degree installation
Terminals	SDI IN	BNC x 1: 3G/HD/SD-SDI input
	HDMI IN	HDMI 19-pin x 1 (Deep Color, compatible with HDCP)
	DVI-D IN	DVI-D 24-pin x 1 (DVI 1.0 compliant, compatible with HDCP, compatible with single link only)
	RGB 1 IN	RGB x 1 (BNC x 5): RGB/YPBPR/YC8CR/YC/VIDEO
	RGB 2 IN	D-sub HD 15-pin (female) x 1: RGB/YPBPR/YCBCR
	SERIAL IN	D-sub 9-pin (female) x 1 for external control (RS-232C compliant)
	SERIAL OUT	D-sub 9-pin (male) x 1 for link control
	REMOTE 1 IN	M3 x 1 for wired remote control
	REMOTE 1 OUT	M3 x 1 for link control (for wired remote control)
	REMOTE 2 IN	D-sub 9-pin (female) x 1 for external control (parallel)
	LAN	RJ-45 x 1 for network connection, 10Base-T, 100Base-TX, compatible with PJLink <sup>™</sup> (Class 2)
	DIGITAL LINK	RJ-45 x 1 for network and DIGITAL LINK connection, 100Base-TX, compatible with PJLink <sup>™</sup> (Class 2), HDCP, Deep Color
Power supply	у	AC 100–240 V, 50/60 Hz
Power consu	Imption	TBD
Operation no	ise*1	TBD
Cabinet mate	erials	Molded plastic
Dimensions	(W x H x D)	PT-RZ120: 498 x 200* <sup>3</sup> x 581 mm (19 <sup>19</sup> / <sub>32</sub> " x 7 <sup>7</sup> / <sub>6</sub> "* <sup>3</sup> x 22 <sup>7</sup> / <sub>8</sub> ") (with supplied lens) PT-RZ120L: 498 x 200* <sup>3</sup> x 538 mm (19 <sup>19</sup> / <sub>32</sub> " x 7 <sup>7</sup> / <sub>9</sub> "* <sup>3</sup> x 21 <sup>3</sup> / <sub>16</sub> ") (without lens)
Weight*4		TBD
Operating en	vironment	Operating temperature: 0-45 °C (32-113 °F)*5, operating humidity: 10-80 % (no condensation)
Applicable so	oftware	Logo Transfer Software, Multi Monitoring & Control Software, Geometry Manager Pro

Note: PT-RZ120L offers the same performance as PT-RZ120, but comes without a lens.

"<sup>1</sup> Measurement, measuring conditions, and method of notation all compty with ISO/IEC 21118: 2012 international standards. Value is average of all products when shipped. "2 Optical axis shift is not supported on the ET-DLE055, and the optical axis is fixed with the ET-DLE030. "3 With legs at shortest position. "4 Average value. May differ depending on the actual unit. "5 When using the projector at an altitude lower than 2,700 m (8,658 ft) above sea level, and the operating environment temperature becomes 30 °C (86 °F) or higher, the light output may be reduced to protect the projector. When using the projector at an altitude between 2,700 m (8,658 ft) and 4,200 m (13,780 ft), and the operating environment temperature becomes 25 °C (77 °F) or higher, the light output may be reduced to protect the projector.

#### **Optional Accessories**

 Fixed-Focus Lens

 ET-DLE030

 Zoom Lens

 ET-DLE085 / ET-DLE150 /

 ET-DLE250 / ET-DLE350 /

 ET-DLE450 / ET-DLE055 /

 ET-DLE060

Ceiling Mount Bracket ET-PKD130H (6-axis, for high ceiling) ET-PKD120H (for high ceiling) ET-PKD120S (for low ceiling)

Projector Mount Bracket ET-PKD130B Geometry Manager Pro Software Upgrade Kit ET-UK20

Auto Screen Adjustment Upgrade Kit ET-CUK10

- Early Warning Software ET-SWA100 Series
- DIGITAL LINK Switcher
- ET-YFB200G Digital Interface Box

ET-YFB100G



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# Rugged SOLID SHINE Laser Projector Extends Maintenance-Free Imaging Brilliance to 20,000 Hours<sup>\*1</sup>, Leading Class in Low TCO for Professionals





PT-RZ870/L					
Resolution	WUXGA				
Brightness	8,500 lm				
Contrast	10,000:1				

Note: PT-RZ870L offer the same performance as PT-RZ870 respectively, but come without a lens.

### High-Quality Pictures and Long-Lasting Reliability

- Combines 1-Chip DLP<sup>™</sup> imaging with proprietary SOLID SHINE Laser technology for accurate and immersive pictures at 8,500 lm
- Dynamic Light Control for 10,000:1\*<sup>2</sup> contrast
- Accurate white balance and color reproduction in any projection mode
- High picture quality maintained for very long periods
- Detail Clarity Processor 3 clarifies and enhances the finest details
- System Daylight View 3 optimization for sharp and vivid images in bright environments

#### Consistently Stable and Reliable Performance

- Dust-resistant projector structure with airtight optical block
- Dual-drive laser optical engine with dual phosphor wheels assures reliable 24/7 operation with light-source failover protection
- Up to 20,000 hours of continuous maintenance-free operation\*1
- Efficient cooling system for stable operation in ambient temperatures of up to 45 °C (113 °F)\*3
- High-speed backup input switching minimizes screen blanking during projection

# Versatile System Adaptability and Flexible Installation

- Shares optional lenses with Panasonic 1-Chip DLP<sup>™</sup> projector family
- Compact body and free 360-degree installation (vertical and horizontal)
- Built-in Geometric Adjustment for projection onto specially shaped screens
- Supports Geometry Manager Pro and optional Upgrade Kit (ET-UK20)
- Auto Screen Adjustment Upgrade Kit (ET-CUK10)
- Direct Power Off function allows projector shutdown from mains

\*1 At 20,000 hours, projector brightness will have decreased to approximately half of its original level (Dynamic Contrast Mode: 3, Image Mode: Dynamic). Panasonic recommends cleaning or checkup at point of purchase after every 20,000-hour period (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. \*2 With Dynamic Contrast Mode set to 3. \*3 Light output may be reduced to protect the projector depending on environmental conditions.

Model		PT-RZ870/RZ870L					
DLP <sup>™</sup> chip	Panel size	17.0 mm (0.67 in) diagonal (16:10 aspect ratio)					
	Display method	DLP <sup>∞</sup> chip x 1, DLP <sup>∞</sup> projection system					
	Pixels	2,304,000 (1920 x 1200) pixels					
Lens		PT-RZ870: Powered zoom (throw ratio 1.7–2.4:1), powered focus F 1.7–1.9, f 25.6–35.7 mm PT-RZ870L: Optional powered zoom/focus lenses					
Light source		Laser diodes laser Class 1 (Class 3R for US models)					
Screen size (	(diagonal)	1.27-15.24 m (50-600 in), 1.27-5.08 m (50-200 in) with ET-DLE055, 2.54-8.89 m (100-350 in) with ET-DLE030, 16:10 aspect ratio					
Brightness*1		8,500 lm					
Center-to-co	rner uniformity*1	90 %					
Contrast*1		10,000:1 (Full On/Full Off, Dynamic Contrast Mode: ON)					
Resolution		1920 x 1200 pixels					
Optical V	ertical (from center of screen)	+50 %, -16 % (+40%, -16% with ET-DLE060) (powered)					
axis shift <sup>*2</sup> $H$	lorizontal (from center of screen)	+30 %, -10 % (+19 %, -10 % with ET-DLE060 / +28 %, -10 % with ET-DLE085) (powered)					
	rrection range	Vertical: ±40° (±16° with ET-DLE060, ±22° with ET-DLE085/DLE055, +5° with ET-DLE030), Horizontal: ±15° (±10° with ET-DLE060) (cannot be operated with ET-DLE030)					
	rection range I Upgrade Kit ET-UK20	Vertical: ±45° (±16° with ET-DLE060, ±40° with ET-DLE150/DLE250 / supplied lens, ±22° with ET-DLE085/DLE055), Horizontal: ±40° (±10° with ET-DLE060, ±15° with ET-DLE085/DLE055), Up to a total of ±55° during simultaneous horizontal and vertical correction					
Installation		Ceiling/floor, front/rear, free 360-degree installation					
Terminals	SDI IN	BNC x 1: 3G/HD/SD-SDI input					
	HDMI IN	HDMI 19-pin x 1 (Deep Color, compatible with HDCP)					
	DVI-D IN	DVI-D 24-pin x 1 (DVI 1.0 compliant, compatible with HDCP, compatible with single link only)					
	RGB 1 IN	RGB x 1 (BNC x 5): RGB/YPaPar/YC6/CR/YC/VIDEO					
	RGB 2 IN	D-sub HD 15-pin (female) x 1: RGB/YPBPR/YCBCR					
	SERIAL IN	D-sub 9-pin (female) x 1 for external control (RS-232C compliant)					
	SERIAL OUT	D-sub 9-pin (male) x 1 for link control					
	REMOTE 1 IN	M3 x 1 for wired remote control					
	REMOTE 1 OUT	M3 x 1 for link control (for wired remote control)					
	REMOTE 2 IN	D-sub 9-pin (female) x 1 for external control (parallel)					
	LAN / DIGITAL LINK	RJ-45 x 1 for network and DIGITAL LINK connection, 100Base-TX, compatible with PJLink <sup>™</sup> , HDCP, Deep Color					
Power supply	y	AC 100–240 V, 50/60 Hz					
Power consu	Imption	TBD					
Operation noi	ise*1	TBD					
Cabinet mate	erials	Molded plastic					
Dimensions (	(W x H x D)	PT-RZ870: 498 x 200* <sup>3</sup> x 581 mm (19 1 <sup>9</sup> / <sub>32</sub> " x 7 7/ <sub>8</sub> "* <sup>3</sup> x 22 7/ <sub>8</sub> ") (with supplied lens) PT-RZ870L: 498 x 200* <sup>3</sup> x 538 mm (19 1 <sup>9</sup> / <sub>32</sub> " x 7 7/ <sub>8</sub> "* <sup>3</sup> x 21 <sup>3</sup> / <sub>16</sub> ") (without lens)					
Weight*4		PT-RZ870: Approx. 23.2 kg (51.1 lbs.) (with supplied lens) PT-RZ870L: Approx. 22.4 kg (49.4 lbs.) (without lens)					
Operating en	vironment	Operating temperature: 0-45 °C (32-113 °F)*5, operating humidity: 10-80 % (no condensation)					
Applicable so	oftware	Logo Transfer Software, Multi Monitoring & Control Software, Geometry Manager Pro					

Note: PT-RZ870L offer the same performance as PT- RZ870 respectively, but come without a lens.

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#### **Optional Accessories**

Fixed-Focus Lens

ET-DLE030

Zoom Lens

ET-DLE085 / ET-DLE150 / ET-DLE250 / ET-DLE350 / ET-DLE250 / ET-DLE055 / ET-DLE060

## Ceiling Mount Bracket

ET-PKD130H (6-axis, for high ceiling) ET-PKD120H (for high ceiling) ET-PKD120S (for low ceiling)

ET-PKD130B

- Geometry Manager Pro Software Upgrade Kit ET-UK20
- Auto Screen Adjustment Upgrade Kit ET-CUK10
- Early Warning Software ET-SWA100 Series
- DIGITAL LINK Switcher ET-YFB200G

Digital Interface Box ET-YFB100G

Projector Mount Bracket





LCD Projectors

Available from July 2018 Tentative

# Bright SOLID SHINE Laser LCD Projectors Blend High Performance and Low Running Costs for Best Value in Mid-sized Venues



PT-MZ770 Series					
	PT-MZ770/L	PT-MW730/L			
Brightness	7,50	0 lm			
Resolution	WUXGA	WXGA			
Contrast	3,000,	000:1*1			

Note: PT-MZ770L and PT-MW730L offer the same performance as PT-MZ770 and PT-MW730 respectively, but come without a lens.

# Outstanding Brightness and Picture Quality

- SOLID SHINE Laser technology with 3LCD optical engine serves bright, vivid, and detailed pictures
- Up to 7,500 Im brightness delivered from compact and lightweight body
- 3,000,000:1\*1 dynamic contrast via digitally modulated laser light source improves text legibility and assists with crisp and accurate pictures
- Available in WUXGA\*<sup>2</sup> for detailed Full HD video reproduction and high-resolution images, text, and graphics
- Detail Clarity Processor 4 enhances image clarity and sharpness
- Daylight View Basic optimizes pictures for best visibility in bright environments
- DICOM Simulation Mode\*<sup>3</sup> for medical presentations
- Color Adjustment Function corrects color variations in multi-projector applications

# High Efficiency and Low Maintenance

- Laser light source returns 20,000 hours\*4 of continuous operation (no exchange required)
- Inorganic LCD panels and inorganic polarizing plates maintain high image quality for extended periods
- Extended 20,000-hour\*<sup>5</sup> maintenance-free period for reusable Eco Filter\*<sup>6</sup>
- One-way airflow design improves efficacy of lens-assembly sealing to maintain high brightness and picture quality
- Dust-resistant cabinet design improves filter-module and air-intake-duct sealing
- ECO Management System effectively reduces power consumption

## Easy Setup and Operation

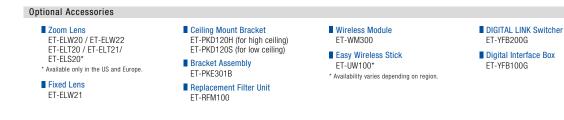
- DIGITAL LINK/HDMI<sup>®</sup> support transmission of uncompressed 4K signal (PT-MZ770/L only)
- Powered lens shift, zoom, and focus via remote control
- Supports wireless projection with optional module (ET-WM300)
- Corner Keystone & Curved Screen Correction
- Network function via LAN for stress-free remote operation
- Supports free Multi Monitoring & Control Software
- Incorporates LinkRay<sup>™</sup> Light ID Transmission function delivering information to smartphones<sup>\*7</sup>, ideal for signage and exhibition/display applications

\*1 With Dynamic Contrast 1/2, Image Mode set to Dynamic. \*2 PT-MZ770/L has WUXGA and PT-MW730/L WXGA resolution. \*3 This product is not a medical instrument. Do not use for actual medical diagnosis. \*4 Around this time, original light source brightness will have decreased by approximately 50 %. With IEC62087: 2008 Broadcast content, Dynamic Contrast [2], in environments with 0.15 mg/m<sup>3</sup> of particulate matter. Estimated maintenance time varies depending on environment. \*6 In environments with 0.15 mg/m<sup>3</sup> of particulate matter. Estimated maintenance time varies depending on environment. \*6 Los Filter is designed to be washed and reused twice. If filter is not sufficiently clean after washing with water, replacement is advised. \*7 Requires purchase and activation of a LinkRay" service contract.

Model		PT-MZ770/MZ770L	PT-MW730/MW730L					
LCD panel	Panel size	19.3 mm (0.76") diagonal (16:10 aspect ratio)						
	Display method	Transparent LCD panel (x 3, R/G/B)						
	Drive method	Active matrix						
	Pixels	2,304,000 (1920 x 1200) x 3, total of 6,912,000 pixels	1,024,000 (1280 x 800) x 3, total of 3,072,000 pixels					
Lens		PT-MZ770/MW730: Powered zoom (throw ratio 1.6–2.8 :1), F = 1.7–2.3, f = 26.4 PT-MZ770L/MW730L: Optional powered zoom/focus lenses	8–45.5 mm					
Light source	9	Laser diode (Class 1) (Class 3R for US models)						
Screen size	(diagonal)	1.02–10.16 m (40–400 in), 16:10 aspect ratio 1.52–10.16 m (60–400 in) with the ET-ELW22, 16:10 aspect ratio						
Brightness*		7,500 lm						
	orner uniformity*1	90 %						
Contrast		3,000,000:1 (Dynamic Mode/Dynamic Contrast 1/2)						
Resolution		1920 x 1200 pixels	1280 x 800 pixels					
Optical	Vertical (from center of screen)	±67 % (powered) (for supplied lens [ELS20]/ELW20/ELT20/ELT21, ELW22; max. ±	±60 %, ELW21; cannot use optical axis shift function)					
axis shift	Horizontal (from center of screen)	$\pm 35$ % (powered) (for supplied lens [ELS20]/ELW20/ELT20/ELT21, ELW22; max $\pm$	30%, ELW21; cannot use optical axis shift function)					
Keystone correction range*2		Vertical: ±25°, Horizontal: ±30°	Vertical: $\pm 35^\circ,$ Horizontal: $\pm 35^\circ$ (Up to a total of $\pm 55^\circ$ during simultaneous horizontal and vertical correction)					
Installation		Horizontal/Vertical, free 360-degree installation						
Terminals	HDMI IN	HDMI 19-pin x 2 (Deep Color, compatible with HDCP), audio signal: Linear PCM (Sampling frequency: 48 kHz/44.1 kHz/32 kHz)						
	RGB 1 IN	BNC x 5 (RGB or YPBPR/YCBCR x 1)						
	RGB 2 IN	D-sub HD 15-pin (female) x 1 (compatible with component input)						
VIDEO IN MONITOR OUT		Pin jack x 1 (composite video)						
		D-sub HD 15-pin (female) x 1 (RGB x 1) (compatible with RGB or YPePR/YCeCR)						
	AUDIO IN	Pin jack x 2 (L-R), M3 stereo mini jack x 2						
	AUDIO OUT	M3 stereo mini-jack x 1 for output						
	SERIAL IN	D-sub 9-pin (female) x 1 for external control (RS-232C compliant)						
	REMOTE 1 IN	D-sub 9-pin (female) x 1 for external control (parallel)						
	REMOTE 2 IN	M3 x 1 for wired remote control						
	LAN	RJ-45 x 1 for network connection, 10Base-T, 100Base-TX, compatible with PJLink™ (Class 2)						
	DIGITAL LINK	RJ-45 x 1 for network and DIGITAL LINK connection, 100Base-TX, compatible with PLInK <sup>™</sup> (class 2), HDCP, Deep Color						
	Memory Viewer/Pairing	USB (Type A) x 1						
	DC OUT	USB (Type A) x 1, DC 5 V/2 A*3						
Power supp	ly	100–240 V AC, 50/60 Hz						
Power cons	-	TBD TBD						
Built-in spea	aker	10 W (monaural)						
Operating n	oise*1	35 dB (NORMAL/ECO Mode), TBD (Quiet Mode)						
Filter		x 1, estimated maintenance time: approx. 20,000 hours*4						
Cabinet mat	terials	Molded plastic (PC + ABS)						
Dimensions	(W x H x D)	PT-MZ770/MW730: 560 x 205*5 x 443 mm (22 1/16" x 8 1/16"*5 x 17 7/16") (with supplied lens) PT-MZ770L/MW730L: 560 x 205*5 x 428 mm (22 1/16" x 8 1/16"*5 x 16 27/32") (without lens)						
Weight*6		PT-MZ770/MW730: Approximately 17.1 kg (37 lbs) (with supplied lens) or less PT-MZ770L/MW730L: Approximately 16.3 kg (35.7 lbs) (without lens)						
Operating e		Operating temperature: 0 °C-45 °C (32 °F-113 °F)*7, operating humidity: 20 %-	80 % (no condensation)					
Applicable s	oftware/application	Wireless Manager for Windows/Mac, Logo Transfer Software, Multi Monitoring & C Wireless Projector Apps for iOS/Android <sup>™</sup>	control Software, Smart Projector Control, Plug and Share,					

Note: PT-MZ770L and PT-MW730L deliver the same performance as PT-MZ770 and PT-MW730 but respectively come without a lens.

"<sup>1</sup> Measurement, measuring conditions, and method of notation all comply with ISO 21118 international standards. <sup>2</sup> With supplied lens. Value differs when correction for both directions is operated. <sup>3</sup> On standby, power supply is available with Quick Startup set to ON or Power Management set to Ready. <sup>4</sup> Under conditions with 0.15 mg/m<sup>3</sup> of particulate matter (based on tests by the American Society of Heating, Refrigerating, and Air-Conditioning Engineers [ASIRAE], and the Japanese Building Maintenance Kascitation). Estimated maintenance time varies depending on environment. <sup>\*</sup>5 With legs at shortest position. <sup>\*</sup>6 Average value. May differ depending on models. <sup>\*</sup>7 Brightness is limited at operating temperatures higher than 36 °C (96 °F), and projectors cannot be operated at altitudes higher than 2,700 m (8,858 ft) above sea level.



Early Warning Software ET-SWA100 Series





Tentative

# Brilliant High-Contrast Portables Put Picture Quality First with Compact Convenience to Make Life Easy





PT-VW360 Series					
	PT-VW360	PT-VX430			
Brightness	4,000 lm	4,500 lm			
Resolution	WXGA	XGA			
Contrast	20,0	00:1			

## Bright and Clear Video Images

- Outputs 4,500 lm\*1 of brightness from a compact body
- Mechanical Iris enables 20,000:1 dynamic contrast for enhanced text legibility, clearer graphics, and naturally balanced image quality
- WXGA resolution for HD video via PC (PT-VW360 only)
- Daylight View Basic Lite optimizes brightness, color, and contrast for outstanding picture quality in bright rooms

## **Convenient Function and Low TCO**

- Supports optional Panasonic apps for wireless media casting from Android<sup>™</sup> and iOS devices<sup>\*2</sup>
- Compatible with Crestron Connected<sup>™</sup>, AMX<sup>®</sup> Device Discovery, and PJLink<sup>™</sup> protocols over LAN for smooth control integration
- Lamp and filter\*<sup>3</sup> replacement timing extended to 7,000 hours\*<sup>4</sup>
- Quiet 29 dB operation in ECO Mode to minimize distractions during presentations
- Efficient ECO modes and environmentally friendly projector design

#### Easy Operation, Quick Setup

- Corner Keystone Correction image alignment for off-axis projection
- Optional Early Warning Software monitors device status and sends alerts if abnormalities are detected
- 2 HDMI<sup>®</sup> inputs display digital content from a variety of media players
- Built-in 10 W monaural speaker
- Direct Power Off function allows projector shutdown from mains

Model		PT-VW360	PT-VX430					
LCD panel	Panel size	15.0 mm (0.59 in) (16:10 aspect ratio)	16.0 mm (0.63 in) (4:3 aspect ratio)					
	Display method	Transparent LCD panel (x 3, R/G/B)						
	Pixels	1,024,000 (1280 x 800) pixels	786,432 (1024 x 768) pixels					
Lens		Manual zoom (1.6x) (throw ratio: 1.18–1.90:1), manual focus, F 1.60–1.90, f 15.31–26.24 mm						
Screen size (diagonal)		0.76–7.62 m (30–300 in), 16:10 aspect ratio	0.76-7.62 m (30-300 in), 4:3 aspect ratio					
Resolution		1280 x 800 pixels (Input signals that exceed this resolution will be converted to 1280 x 800 pixels)	1024 x 768 pixels (Input signals that exceed this resolution will be converted to 1024 x 768 pixels)					
Brightness*1		4,000 Im (input signals: PC, lamp power: NORMAL, picture mode: Dynamic, Iris: Off, Daylight View: Off, Auto Power Save: Off)	4,500 lm (input signals: PC, lamp power: NORMAL, picture mode: Dynamic, Iris: Off, Daylight View: Off)					
Lamp		240 W x 1 lamp						
	Lamp replacement cycle	NORMAL: 5,000 hours / ECO: 7,000 hours						
Center-to-cor	ner uniformity*1	85 %						
Contrast*1		20,000:1 (Full On/Off) (input signals: PC, lamp power: NORMAL, picture mode: Dynam	ic, Iris: On, Daylight View: Off, Auto Power Save: Off)					
Optical axis sl	hift	49:1 (fixed)	9:1 (fixed)					
Keystone corr	rection range	Vertical: ±35° (±30° when using AUTO) (maximum value of WXGA input) Horizontal: ±35° (maximum value of WXGA input)	Vertical: ±40° (±30° when using AUTO) (maximum value of XGA input) Horizontal: ±30° (maximum value of XGA input)					
nstallation		Ceiling/floor, front/rear						
Ferminals	HDMI IN	HDMI 19-pin x 2 (compatible with HDCP, Deep Color), audio signal: linear PCM (sampling frequencies: 48 kHz, 44.1 kHz, 32 kHz)						
	COMPUTER 1 IN	D-sub HD 15-pin (female) x 1 (RGB/YPBPR/YCeCR)						
COMPUTER 2 IN / MONITOR OUT		D-sub HD 15-pin (female) x 1 (RGB), (input/output selectable using on-screen menu)						
	VIDEO IN	Pin jack x 1 (Composite VIDEO)						
	AUDIO IN 1	M3 x 1 (L-R x 1)						
	AUDIO IN 2	M3 x 1 (L-R x 1) for audio input or for microphone connection (variable)						
	AUDIO IN 3	Pin jack x 2 (L, R x 1)						
	AUDIO OUT	M3 x 1 (L-R x 1) for output (variable)						
	LAN	RJ-45 x 1 (for network connection, 10BASE-T/100BASE-TX, compliant with PJLink <sup>™</sup> )						
	SERIAL IN	D-sub 9-pin (female) x 1 for external control (RS-232C compliant)						
	USB-Type A	Memory Viewer / Wireless Module (DC 5 V, max 500 mA)						
	USB-Type B	For USB Display						
Power supply		AC 100–240 V, 50 Hz/60 Hz						
Power consur	nption	100-240 V: 320 W (0.5 W when Standby mode set to ECO* <sup>2</sup> , 1.6 W when Standby mode set to Network, 9.5 W when Standby mode set to NORMAL)						
Built-in speak	ker	4.0 cm ( $1.9/16^{\circ}$ ) round shape x 1, output power: 10.0 W (monaural)						
Operating noi:	Se*1	37 dB (lamp power: NORMAL), 29 dB (lamp power: ECO)						
Cabinet materials		Molded plastic						
Dimensions (\	W x H x D)	352 x 98*3 x 279.4*4 mm (13 27/32" x 3 27/32"*3 x 11"*4)						
Weight*5		Approx. 3.3 kg (7.3 lbs)	Approx. 3.3 kg (7.3 lbs)					
Operating env	vironment	Operating temperature: 0–40 °C [32–104 °F] (less than 1,400 m [4,593 ft] above sea High Altitude Mode: 1); 0–30 °C [32–86 °F] (2,000 m [6,562 ft] to 2,400 m [7,874 ft]	I level, High Altitude Mode: OFF); 0-30 °C [32-86 °F] (1,400 m [4,593 ft] to 2,000 m [6,562 ft					
		Operating humidity: 20-80 % (no condensation)						
Applicable sof	ftware	Multi Monitoring & Control Software, Logo Transfer Software, Presenter Light for Windo	ows. Wireless Projector Apps for iOS / Android™					

\*1 Measurement, measuring conditions, and method of notation all comply with ISO 21118 international standards. \*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 With legs retracted to minimum. \*4 Including protruding parts. \*5 Average value. May differ depending on the actual unit.

#### Optional Accessories

High-Ceiling Mount Bracket ET-PKL100H

Low-Ceiling Mount Bracket ET-PKL100S

Replacement Lamp Unit ET-LAV300 Replacement Filter Unit ET-RFV300 Wireless Module ET-WML100

D-sub/S-VIDEO Conversion Cable ET-ADSV

Early Warning Software ET-SWA100 Series

Bracket Assembly ET-PKV400B



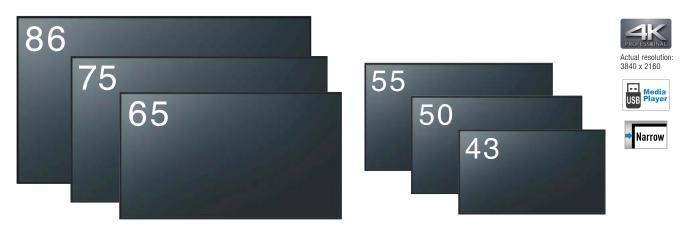


# EQ1 Series

4K LCD Displays

Available from Autumn 2018 Availability varies depending on model

## Self-Contained EQ1 Series Displays Deliver High-Impact Images at 4K Resolution with Unbeatable Cost-to-Performance and Reliability



	EQ1 Series									
	TH-86EQ1	TH-75EQ1	TH-65EQ1	TH-55EQ1	TH-50EQ1	TH-43EQ1				
Screen Size	86-inch	75-inch	65-inch	55-inch	50-inch	43-inch				
Brightness	350 cd/m <sup>2</sup>									
Contrast	1400:1	1200:1	4000:1							
LCD Panel	IPS		VA							
Resolution	4K (3840 x 2160)									

## Stylish Design with Excellent Visibility

- 4K Ultra HD panels express texture and detail for clear and natural images
- Efficient high-visibility panel with 350 cd/m<sup>2</sup> brightness
- IPS panel\* delivers clear off-axis visibility and accurate color reproduction
- Reliable and cost-effective visual communication solution for retail, public spaces, showrooms, meeting rooms, and classrooms
- Narrow bezel-width of 15.2 mm (L/R) maximizes screen area relative to display size for high-impact signage (TH-86EQ1)
- Slim 61 mm depth enables non-intrusive wall-mounting in showrooms and retail spaces (TH-43EQ1)

## Intuitive and Flexible Signage

- Content Management Software for automated signage playback with scheduling function
- Built-in USB media player enables 4K video and still-image playback via USB without Set-top Box (STB) or PC
- USB media player features synchronized playback on multiple displays via USB and LAN
- USB cloning function allows settings to be copied and shared between displays
- Free Multi Monitoring & Control Software to monitor and control up to 2,048 devices over LAN from a single PC
- Optional ET-SWA100 Series Early Warning Software to monitor device status, operation history, and send alerts if abnormalities are detected

### Wide Connectivity for Professional Use

- Supports 4K/60p video input signals via a 2 x HDMI<sup>®</sup> (HDCP 2.2, CEC capability)
- Supports DVI-D, PC In, Video In, and USB inputs
- Supports professional interfaces (LAN, RS-232C) for external control
- IR (Infrared) In/Out function for simultaneous control of multiple displays in daisy-chain configuration
- 5 V/2 A charging USB terminals to power media streaming devices
- Supports LAN control with AMX or Crestron Connected<sup>™</sup> compatibility
- 10 W + 10 W built-in speakers

Model		TH-86EQ1	TH-75EQ1	TH-65EQ1	TH-55EQ1	TH-50EQ1	TH-43EQ1			
Screen size (diagonal)		86-inch (2175 mm)	75-inch (1893 mm)	65-inch (1639 mm)	55-inch (1388 mm)	50-inch (1258 mm)	43-inch (1080 mm)			
Aspect ratio		16:9								
Panel type		IPS Panel/E-LED		VA Panel/D-LED	A Panel/D-LED					
Effective display area (W x H)		1895 x 1065 mm (74.6″ x 41.9″)	1649 x 927 mm (64.9" x 36.5")	1428 x 803 mm (56.2" x 31.6")	1209 x 680 mm (47.6" x 26.7")	1095 x 616 mm (43.1" x 24.2")	941 x 529 mm (37.0" x 20.8")			
Resolution		3840 x 2160								
Brightness (typ.)		350 cd/m <sup>2</sup>								
Contrast ratio		1400:1	1200:1	4000:1						
Response time		8 ms (6 to 6)								
Viewing angle (CR≥10)		178 °								
Terminals	VIDEO In	4-pole Mini Jack (M3) x 1								
	HDMI In	HDMI TYPE-A Connector x 2								
	DVI-D In/Audio In (L/R)	DVI-D 24-pin x 1/ Stereo Mini Jack (M3) x 1 (Shared with PC In)								
	PC In/Audio In (L/R)	Mini D-sub 15-pin x 1/ Stereo Mini Jack (M3) x 1 (Shared with DVI-D In)								
	USB	USB Connector (TYPE A) x 1, DC 5 V/2 A (USB 3.0 supported)								
	Serial	D-sub 9-pin x 1, RS-232C Compatible								
	LAN	RJ45 x 1, 10 BASE-T / 100 BASE-TX / 1000 BASE-T (TBD), Compatible with PJLink™								
	IR In/Out	Mini Jack (M3) x 1 / x 1								
Built-in speaker		20 W [10 W + 10 W]								
Power requirements		110-127 V AC, 50/60 Hz, 220-240 V AC, 50/60 Hz								
Power consumption		TBD								
Power off condition		Approx. 0.3 W								
Standby condition		Approx. 0.5 W								
Dimensions (W x H x D)		1928 x 1099 x 76 mm (75.9″ x 43.3″ x 3.0″)	1681 x 959 x 77 mm (66.2" x 37.8" x 3.1")	1459 x 835 x 82 mm (57.5″ x 32.9″ x 3.3″)	1239 x 712 x 62 mm (48.8″ x 28.1″ x 2.5″)	1123 x 647 x 68 mm (44.3" x 25.5" x 2.7")	969 x 560 x 61 mm (38.2" x 22.1" x 2.4")			
Bezel width		15.2 mm (all) (0.60")	14.8 mm (all) (0.59")	13.9 mm (T/R/L) (0.55"), 14.9 mm (B) (0.59")	12.6 mm (T/R/L) (0.50"), 14.5 mm (B) (0.58")	11.9 mm (T/R/L) (0.47"), 14.4 mm (B) (0.57")	11.9 mm (T/R/L) (0.47") 14.9 mm (B) (0.59")			
Weight		64 kg (141.1 lbs.)	55 kg (121.3 lbs.)	24 kg (53.0 lbs.)	16 kg (35.3 lbs.)	13 kg (28.7 lbs.)	8.7 kg (19.2 lbs.)			
Wall-hanging pitch		600 x 400 mm (23.6" x 15.7") 400 x 400 mm (15.7" x 15.7")								
Operating env	vironment	TBD		·						
Applicable softw	vare	Multi Monitoring & Control	Software, Content Managemer	nt Software						

**Optional Accessories** 

Pedestal TY-ST75PE9 (for 75") TY-ST55PE9 (for 65") TY-ST43PE8 (for 55", 50", 43")

Early Warning Software ET-SWA100 Series

Auto Display Adjustment Upgrade Kit TY-VUK10

# **MEMO**



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Panasonic System Communications Company Europe, a Division of Panasonic Marketing Europe GmbH, Hagenauer Straße 43, 65203 Wiesbaden, Germany.

All information included here is valid as of February 2018. ISE2018PRE1 Printed in Japan.