Panasonic ideas for life



Brighter, Large-Screen Images Solid Reliability and System Expandability



High Brightness of 16,000 lm. **Outstanding Performance** for Large-Space Viewing.

Balancing factors required to fill large spaces with breathtaking images. Remarkable 16,000 lm brightness ensures sharp, crisp large-screen projection. Pure Color Control, which independently controls yellow brightness to improve color reproduction, attains this superb brightness with optimal coloring. The 4-Lamp Optical System maintains high reliability. And system expansion functions include horizontal/vertical lens shift and a Multi-Screen Support System. These and other features enable flexible installation for a wide variety of applications.



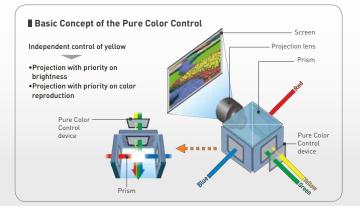
Bright, Vibrant Large-Screen Images

A Full 16,000 lm of Brightness and 2,500:1 Contrast

The 4-lamp optical system uses high-output, 380 W lamps to deliver remarkable 16,000 lm brightness. And the contrast ratio is a high 2,500:1, to ensure bright, crisp, large-screen projection.

Excellent Colors with Pure Color Control

It is inherently difficult for LCD projectors to attain both high brightness and superb color reproduction. For this reason, in addition to the three conventional LCD panels that control the light intensity for the red, blue and green primary colors, the PT-EX16K also features a Pure Color Control function that independently controls the light intensity of yellow coloring. This provides rich overall color expression while maintaining brightness.



Full 10-Bit Image Processing System

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

High Reliability for Long-Time Use

4-Lamp Optical System Enables Stable, **Extended Operation**

Even if one lamp goes out during use, the other lamps continue, so projection is not interrupted. Lamp Relay mode also allows long-time, continuous operation.

Brightness and Lamp Replacement Cycle Guideline

Lamp	Brightness (lm)	Maximum lamp replacement cycle (hours)*1						
Four lamps (Normal)	16,000	2,000						
Four lamps (Eco1, Eco2)	12,320	3,000						
Two lamps (Normal)	8,000	4,000						
Two lamps (Eco1, Eco2)	6,160	6,000						

Highly Durable Optical Engine Ensures Excellent Long-Time Image Quality

The LCD panels and polarizers inside the LCD projector's optical block tend to degrade over time. Their degradation strongly and adversely affects image quality. The inorganic LCD panels and polarizers*2 add durability to the optical block and resist time-related changes, therefore achieving a replacement cycle of up to 10,000 hours.

Adverse Dust Effects Prevented by a Long-Lasting Air Filter

The use of a large pleated air filter has made it possible to achieve a replacement cycle of up to 5,000 hours.*3 This greatly reduces maintenance hassles. The filter is also replaced from the front, so there is no need to detach the projector from its bracket in ceiling-mounted applications.

Optional Smoke Cut Filter Provides Protection from Fine Smoke Particles

The projector can be equipped with an optional Smoke Cut Filter ET-SFE16 to prevent the entry of not only dust but also fine smoke particles, such as those used for special effects at events and stage performances.



FT-SFF16

The Horizontal/Vertical Lens Shift Function and a Variety of Lenses

Both zooming and focusing can be done by remote control. The wide adjustment range of the powered horizontal/vertical lens shift function assures convenience and versatility during installation. You can also choose from a wide variety of lenses, from short or long focus zoom lenses to fixed focus lenses for rear projection. This makes it possible to install the projector in a variety of locations.

Flexible Installation

The projector can be rotated 360° vertically for flexible installation. This allows projection from directly above or below, for exciting visual possibilities in art galleries, theaters and showrooms.



Corner Keystone Correction Enables Angled Projection

All you need to do is designate four points as the corners of the projected image, and this function automatically carries out horizontal and vertical keystone correction.

Multi-Screen Support System Seamlessly Connects Multiple Screens

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

• Edge Blending

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

• Color Matching

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



Versatile Interfaces and Illuminated Terminals and Control Panel

The wide-ranging terminals include 2 sets of RGB inputs, an HDMI input, and a DVI-D input. Mounting the optional Interface Board ET-MD16SD1 also accommodates HD/SD-SDI signal input. The terminal connection area is LED illuminated, and a backlight is provided for the control panel buttons, ensuring smooth and easy operation in the dark.



Mechanical Shutter for a Total Screen Blackout

The Mechanical Shutter lets you mechanically block the light to completely blackout the screen, and prevents light leakage from the lens. When closing the shutter, the projection image gradually fades out, then gradually fades in when opening, which brings more attractive stage effects.

Easy Remote Control and Observation

A 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 when a lamp needs replacement, and indicate the overall projector status. In addition, Multi Projector Monitoring and Control Software is available for monitoring and controlling multiple Panasonic projectors from a single PC. The wired

LAN terminal is compatible with PJLink™(class1), an open protocol that is used by many manufacturers, to enable integrated control of systems that contain different brands of projectors.

Basic Concept of the Multi Projector Monitoring and Control Software



Robust Carrying Handles

An iron base plate is mounted to the bottom of the main unit. Also, robust carrying handles attached to the base plate are designed for easy carrying of the projector.



Top-Panel Lamp Replacement Simplifies Maintenance

The lamp can be reached through the top panel for easy replacement. This eliminates the need to detach the projector from its ceiling bracket and greatly simplifies maintenance.

Other Features

• Direct Power Off allows the power cord to be unplugged right after use.



- Wireless and wired remote control that allows the allocation of up to 64 IDs.
- Logo Transfer Software*4 lets you upload any startup logo you want.

Ecology-Conscious Design

- No halogenated flame retardants are used in the cabinet.
- Lead-free glass is used for the lens.
- Lamp power switching further reduces power consumption.
- RoHS compliant
- *1 The values above are maximum values when they are used in cycles of being turned on for 2 hours and off for 0.25 hours.
- When the lamps are turned on and off more frequently, the lamp replacement cycle is shortened. The usage environment affects the lamp replacement cycle
- *2 Excluding some polarizers.
- *3 With the lamp power set to Normal. The usage environment affects the duration of the filter.
- *4 Still images that can be uploaded are limited to 1,024 x 768 pixel bitmap files. Also, the application reduces the number of colors to 191.

Dimensions

650 (25-5/8)

Åп

815 (32-1/8)

Specifications

Power supp			200-240 V AC(11A), 50/60 Hz								
Power cons	<u> </u>		1,850 W (18 W with standby mode)								
	Panel si	ze	46 mm (1.8 inches) diagonal (4:3 aspect ratio)								
LCD panel	Display	method	Transparent LCD panel (× 3, R/G/B)								
LOD pariet	Pixels		786,432 (1,024 × 768) × 3, total of 2,359,296 pixels								
	Pixel co	nfiguration	Stripe								
Lens			Optional								
Lamp			380 W × 4, lamp replacement cycle (lamp power: Normal/Eco1, Eco2): 2,000 hours/3,000 hours*1								
Screen size		U)	1.02–15.24 m (40–600 inches) (2.54–15.24 m (100–600 inches) with the ET-ELS03), 4:3 aspect ratio								
Brightness*			16,000 lm (4-lamps, lamp power: Auto/Normal, Optional lens: ET-ELS03)								
Center-to-c	orner un	formity*2	90%								
Contrast*2			2,500:1 (full on/full off, 4-lamps, lamp power: Auto)								
Resolution			1,024 × 768 pixels (Input signals that exceed this resolution will be converted to 1,024 × 768 pixels.)								
	HDMI/D	VI-D	Horizontal: 26–80 kHz, vertical: 23–85 Hz, dot clock: 162 MHz or lower								
	RGB (an	alog)	f _H : 15–120 kHz, fv: 48–120 Hz, dot clock: 230 MHz or lower (Signals exceeding the dot clock rate of 165 MHz are downsampled.)								
Scanning frequency	YPBPR	YCBCR)	$ \begin{array}{ll} \mbox{fr}: 15.75 \ \mbox{kHz}, \ \mbox{fv}: 60 \ \mbox{Hz} \ \mbox{Hz} \ \mbox{fv}: 60 \ \mbox{Hz} \ \mbox{Hz} \ \mbox{Fv}: 60 \ \mbo$								
	Video/S	-Video	f _H : 15.75 kHz, f _V : 60 Hz [NTSC/NTSC4.43/PAL-M/PAL60], f _H : 15.63 kHz, f _V : 50 Hz [PAL/PAL-N/SECAM]								
Optical axis shift			With the ET-ELW06: vertical ±39% from center of screen (powered)*3 With the ET-ELW02/ELW04/ELS03/ELM01/ELT02/ELT03: vertical ±39%, horizontal ±10% from center of screen (powered With the ET-ELS02: vertical ±50%, horizontal ±10% from center of screen (powered)								
Keystone correction range		range	Vertical: Maximum ±40°, Horizontal: Maximum ±40° (with XGA signal input, for vertical/horizontal correction only, Optional lens: ET-ELS03)								
Installation			Ceiling/floor, front/rear								
	INPUT1	DVI-D IN	DVI-0 24-pin x 1 (DVI 1.0 compliant, compatible with HDCP, compatible with single link only), 480p, 576p, 720/60p, 720/50p, 1080/60i, 1080/50i, 1035/60i, 1080/24p, 1080/24psf, 1080/25p, 1080/25psf, 1080/30p, 1080/30psf, 1080/60p, 1080/50p, VGA (640 x 480)–WUXGA (1,920 x 1,200)**, compatible with non-interlaced signals only, dot clock: 25–162 MHz								
		HDMI IN	HDM119-pin x 1 [compatible with HDCP, compatible with Deep Color], 480p, 576p, 720/60p, 720/50p, 1080/60i, 1080/50i, 1035/60i, 1080/24psf, 1080/25p, 1080/25p, 1080/30p, 1080/30p, 1080/30p, 1080/50p, 1080/50								
		ANALOG IN	D-Sub HD 15-pin (female) × 1 (RGB × 1)								
	INPLIT2	RGB 5BNC IN/ VIDEO IN	BNC × 5 (RGB/YPBPR/YCBCR × 1), shared with VIDEO IN (BNC × 1) (composite video)								
Terminals		S-VIDEO IN	Mini DIN 4-pin × 1 (S-Video)								
	INPUT3		Optional interface board slot, with the ET-MD16SD1:SERIAL IN[BNC]×2 [SD-SDI signal/single link HD-SDI signal], SERIAL OUT[BNC]×1 [active through]								
	INPUT4		Optional interface board slot, with the ET-MD16SD1:SERIAL IN[BNC]×2 [SD-SDI signal/single link HD-SDI signal], SERIAL OUT[BNC]×1 [active through]								
	SERIAL	IN	D-sub 9-pin (male) × 1 for external control								
	SERIAL		D-sub 9-pin (male) × 1 for link control								
	REMOTE		M3 Jack x 1 (for wired remote control)								
	LAN		RJ-45 × 1 (for network connection, 10Base-T/100Base-TX, compliant with PJLink™ (class1))								
	USB		USB type-B (USB connector) x 1*5								
Cabinet materials			Molded plastic								
Dimensions (W × H × D)		D)	650 × 349 × 815 mm (25.6" × 13.7" × 32.1") (optional lens not included)								
Weight			Approximately 46.5 kg (102.5 lbs) (optional lens not included)								
Noise level			51 dB (lamp power: Normal/Eco2), 48 dB (lamp power: Eco1)								
Operating e	nvironme	ent	Operating temperature: 5°C – 40°C (less than 1,800 m above sea level), 5°C – 30°C (between 1,800 m and 2,700 m above sea level), operating humidity: 20%-80% (no condensation)								
Supplied accessories		5	Power cord x 1 {x 2 for PT-EX16KEJ, power cord holder/power cord cover x 1set, wireless/wired remote control unit, batteries [AAA/R03/LR03 type x 2], VGA cable x 1, software CD-ROM [Logo Transfer Software, Multi Projector Monitorin & Control Software, Real Color Manager Pro.], lens attachment x 1set, lens lock lever fixing bracket x 1set, light- shielding plate x 3set, spacer x 1set, cable tix 3								

650 (25-5/8)	815 (32-1/8)							
Optional a	6 ET-ELW02 ET-ELW03 4 ET-ELS02 ET-ELS03 4 ET-ELT02 ET-ELT03 0 ET-ELT02 ET-ELT03 1 ET-ELT02 ET-ELT03 0 Smoke cut filter unit ET-SFE16 Smoke ET-SFE16 ET-SFE16 0 ET-SFE16 ET-SFE16 0 ET-SFE16 ET-SFE16 0 ET-KE168 ET-KE168							
Zoom lens		Fixed-focus lens						
ET-ELW06	ET-ELW02	ET-ELW03						
ET-ELW04	ET-ELS02	ET-ELS03						
ET-ELM01	ET-ELT02	ET-ELT03						
Interface board for HD/SD-SDI input ET-MD16SD1	unit	smoke cut filter for the ET-SFE16						
Ceiling mount bracket for high ceilings*6 ET-PKE16H	bracket for low ceilings*6	assembly						
Replacement lamp unit ET-LAE16	Replacement filter unit ET-RFE16							

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*1 The values given for the recommended lamp replacement cycles are maximum. *2 Measurement, measuring conditions, and method of notation all comply with ISO 2118 international standards. *3 The ET-ELWO6 is equipped with only vertical optical axis shift. *4 Compliant with VESA CVT-RB. *5 This port is for use by service personnel only. The USB interface may not operate with all USB compatible equipment. *6 This product is used together with an optional bracket assembly (sold separately). . separately

Projection distance



Lower edge of projected image

Diagonal image size Throw ratio		Projection distance (L)															Height from the edge of screen to center of lens (H)			
	ET-ELW06		ET-ELW02		ET-ELW04		ET-ELS02		ET-ELS03		ET-ELM01		ET-ELT02		ET-ELT03		ET-ELW03	ET-ELW06 / ELW02 / ELW04 / ELS03 /	ET-ELS02	ET-ELW03
	1.2 - 1.5:1		1.4 - 1.8:1		1.5 - 2.0:1		2.0 - 2.6:1		2.6 - 3.5:1		3.5 - 4.5:1		4.4 - 6.2:1		6.3 - 9.0:1		0.8:1			
(4:3 aspect ratio)	min.(wide)	max.(tele)	min.(wide)	max.(tele)	min.(wide)	max.(tele)	min.(wide)	max.(tele)	min.(wide)	max.(tele)	min.(wide)	max.(tele)	min.(wide)	max.(tele)	min.(wide)	max.(tele)	fixed	ELM01 / ELT02 /ELT03		fixed
1.02 [40"]	0.91 (3.0)	1.17 (3.8)	1.07 (3.5)	1.42 [4.7]	1.15 (3.8)	1.56 (5.1)	1.48 [4.9]	1.99 (6.5)	-	-	2.87 (9.4)	3.69 (12.1)	3.75 (12.3)	5.11 (16.8)	5.27 (17.3)	7.58 (24.9)	0.60 (2.0)	0.07-0.55(0.2-1.8)	0-0.61(0-2.0)	0.31 (1.0)
1.27 [50"]	1.16 (3.8)	1.49 [4.9]	1.36 (4.5)	1.80 (5.9)	1.47 [4.8]	1.98 (6.5)	1.90 (6.2)	2.53 (8.3)	-	-	3.56 (11.7)	4.58 (15.0)	4.63 (15.2)	6.35 (20.8)	6.50 (21.3)	9.38 (30.8)	0.77 (2.5)	0.09-0.68(0.3-2.2)	0-0.77(0-2.5)	0.39 [1.3]
1.52 [60"]	1.40 (4.6)	1.81 (5.9)	1.65 (5.4)	2.18 [7.2]	1.79 (5.9)	2.40 (7.9)	2.32 (7.6)	3.08 (10.1)	-	-	4.26 [14.0]	5.48 (18.0)	5.51 (18.1)	7.58 (24.9)	7.73 (25.4)	11.19 (36.7)	0.94 (3.1)	0.11-0.82(0.4-2.7)	0-0.92(0-3.0)	0.46 [1.5]
1.78 [70"]	1.65 (5.4)	2.12 (7.0)	1.94 (6.4)	2.56 [8.4]	2.12 (7.0)	2.82 (9.3)	2.74 (9.0)	3.63 (11.9)	-	-	4.95 [16.2]	6.38 (20.9)	6.39 (21.0)	8.82 (28.9)	8.96 (29.4)	13.00 (42.7)	1.10 (3.6)	0.12-0.95(0.4-3.1)	0-1.07(0-3.5)	0.54 (1.8)
2.03 [80"]	1.89 (6.2)	2.44 (8.0)	2.23 [7.3]	2.93 (9.6)	2.44 (8.0)	3.24 (10.6)	3.16 (10.4)	4.18 (13.7)	-	-	5.65 (18.5)	7.28 (23.9)	7.27 (23.9)	10.05 (33.0)	10.19 (33.4)	14.80 (48.6)	1.27 [4.2]	0.14-1.09(0.5-3.6)	0-1.22(0-4.0)	0.61 (2.0)
2.29 [90"]	2.13 (7.0)	2.76 [9.1]	2.52 [8.3]	3.31 (10.9)	2.76 (9.1)	3.66 (12.0)	3.58 (11.7)	4.72 (15.5)	-	-	6.34 (20.8)	8.18 (26.8)	8.14 (26.7)	11.28 (37.0)	11.42 (37.5)	16.61 (54.5)	1.44 [4.7]	0.16-1.23(0.5-4.0)	0-1.38(0-4.5)	0.69 [2.3]
2.54 [100"]	2.38 (7.8)	3.08 (10.1)	2.81 [9.2]	3.69 (12.1)	3.08 (10.1)	4.08 (13.4)	4.00 (13.1)	5.27 (17.3)	5.22 (17.1)	7.10 (23.3)	7.04 (23.1)	9.08 (29.8)	9.02 (29.6)	12.52 [41.1]	12.65 (41.5)	18.42 (60.4)	1.60 (5.2)	0.17 - 1.36 (0.6 - 4.5)	0-1.53(0-5.0)	0.77 (2.5)
3.05 [120"]	2.87 [9.4]	3.71 (12.2)	3.39 (11.1)	4.44 (14.6)	3.72 [12.2]	4.92 (16.1)	4.85 (15.9)	6.36 (20.9)	6.30 (20.7)	8.56 (28.1)	8.42 (27.6)	10.88 (35.7)	10.78 (35.4)	14.99 [49.2]	15.11 (49.6)	22.03 (72.3)	1.94 [6.4]	0.21-1.63 (0.7-5.3)	0-1.83(0-6.0)	0.92 (3.0)
3.81 [150"]	3.60 (11.8)	4.66 [15.3]	4.26 (14.0)	5.57 (18.3)	4.69 [15.4]	6.18 (20.3)	6.11 (20.0)	8.00 (26.2)	7.92 (26.0)	10.73 (35.2)	10.51 (34.5)	13.57 [44.5]	13.42 (44.0)	18.69 (61.3)	18.80 (61.7)	27.45 (90.1)	2.44 [8.0]	0.26-2.04(0.9-6.7)	0-2.29(0-7.5)	1.15 (3.8)
5.08 [200"]	4.82 (15.8)	6.25 (20.5)	5.71 (18.7)	7.46 (24.5)	6.29 (20.6)	8.28 (27.2)	8.21 (26.9)	10.74 (35.2)	10.61 (34.8)	14.36 [47.1]	13.98 [45.9]	18.07 (59.3)	17.82 (58.5)	24.86 (81.6)	24.94 (81.8)	36.49(119.7)	3.27(10.7)	0.34-2.72(1.1-8.9)	0 - 3.05 (0 - 10.0)	1.53 (5.0)
6.35 [250"]	6.04 (19.8)	7.83 (25.7)	7.16 (23.5)	9.35 (30.7)	7.90 (25.9)	10.38 (34.1)	10.32 (33.9)	13.47 [44.2]	13.31 (43.7)	18.00 (59.1)	17.45 (57.3)	22.56 (74.0)	22.22 (72.9)	31.03(101.8)	31.09(102.0)	45.52(149.3)	4.10(13.5)	0.42 - 3.40 (1.4 - 11.2)	0-3.81(0-12.5)	1.91 (6.3)
7.62 [300"]	7.26 (23.8)	9.42 (30.9)	8.61 (28.2)	11.23 (36.8)	9.51 (31.2)	12.48 (40.9)	12.42 (40.7)	16.21 (53.2)	16.00 (52.5)	21.63 (71.0)	20.92 (68.6)	27.05 (88.7)	26.62 (87.3)	37.20(122.0)	37.24(122.2)	54.55(179.0)	4.94[16.2]	0.51-4.07 (1.7-13.4)	0-4.58(0-15.0)	2.29 [7.5]
10.16 [400"]	9.69 (31.8)	12.59 [41.3]	11.51 (37.8)	15.00 (49.2)	12.72 [41.7]	16.68 (54.7)	16.63 (54.6)	21.68 (71.1)	21.39 (70.2)	28.89 (94.8)	27.87 [91.4]	36.04[118.2]	35.42[116.2]	49.54(162.5)	49.53(162.5)	72.62[238.3]	6.60(21.7)	0.68-5.43(2.2-17.8)	0-6.10(0-20.0)	3.05 (10.0)
12.70 [500"]	12.13 (39.8)	15.76 (51.7)	14.41 [47.3]	18.78 (61.6)	15.94 (52.3)	20.88 (68.5)	20.84 (68.4)	27.15 (89.1)	26.79 (87.9)	36.15(118.6)	34.81(114.2)	45.03[147.7]	44.22[145.1]	61.88(203.0)	61.83(202.9)	90.69(297.5)	8.27 [27.1]	0.84-6.79 (2.8-22.3)	0-7.62(0-25.0)	3.81 (12.5)
15.24 [600"]	14.57 (47.8)	18.93 (62.1)	17.30 (56.8)	22.55 (74.0)	19.15 (62.8)	25.07 (82.3)	25.05 (82.2)	32.61(107.0)	32.18(105.6)	43.41[142.4]	41.76(137.0)	54.01(177.2)	53.02(174.0)	74.22(243.5)	74.12(243.2)	108.76(356.8)	9.94[32.6]	1.01-8.14 (3.3-26.7)	0-9.15(0-30.0)	4.58 [15.0]

Caution

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

NOTE ON USE

- This product must not be used in residential areas.
 This product may cause interference if used in residential areas. Such use must be avoided unless the user takes
 special measures to reduce electromagnetic emissions to prevent interference to the reception of radio and television
 broadcasts.
 The projector uses a high-voltage mercury lamp under high internal pressure. This lamp may break, emitting a popping
 sound, or fail to illuminate, due to impact or extended use.
 The high-wattage lamp becomes very hot during operation. Please observe the following precautions:
 Never place objects on top of the projector while it is in operation. Make sure there is an unobstructed space of 1,000
 mm [39-3/8 in] or more around the projector's exhaust openings.
 If stacking projector units, care must be taken to

provide the recommended space between units. These space requirements also apply to installation where only one projector unit is operating at one time and the other unit is used as a backup. If the projector is placed in a box or enclosure, the temperature of the air surrounding the projector's intake and exhaust openings are not blocked. Ensure there is sufficient ventilation to prevent hot air from the exhaust openings being recirculated into the intake opening. 5 The tamp replacement cycle duration becomes shorter if the projector's is operated repeatedly for short periods. In the tamp replacement cycle varies greatly depending on individual tamp characteristics and usage conditions. The brightness of the tamp will gradually decrease with use. 6 Due to natural characteristics of lamps, screen brightness may fluctuate. This is not an indication of faulty lamp performance.

Panasonic

Weights and dimensions shown are approximate. Specifications and appearance are subject to change without notice. Product availability differs depending on region and country. This product may be subject to export control regulations. The projection distances and throw ratios given in this brochure are for use only as guidelines. For more detailed information, please consult the dealer from whom you are purchasing the product. The PL/ink trademark is an application trademark in Japan, the United States, and other countries and regions or registered trademarks. All other trademarks are the property of their respective trademark owners. Projection images simulated.

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http://panasonic.net/avc/projector

For more information about Panasonic projectors

All information included here is valid as of August 2011.