

# Panasonic

ideas for life

PT-D12000U  
3-chip DLP™ Projector



The Dynamic Viewing Power of  
12,000-Lumen Brightness.





## A 3-chip DLP™ Projector with High Reliability and Excellent System Expandability



High brightness:  
**12,000 lumens**

High image quality:  
**SXGA+**  
1,400 x 1,050 pixels

The PT-D12000U boasts Panasonic's innovative 4-lamp optical system, with its 12,000-lumen brightness and outstanding reliability. It also incorporates Panasonic's Detail Clarity Processor to give images extremely realistic textures, as well as the DLP™ system, which is resistant to image degradation over time. With the PT-D12000U, Panasonic has brought together a host of technologies to create a projector that delivers big in features, image performance and reliability.

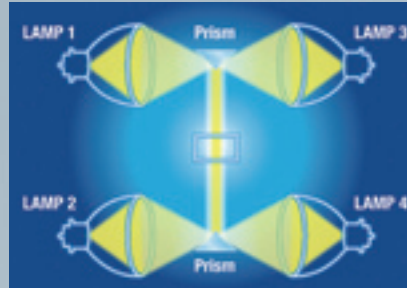




## Incredible Brightness & High Picture Quality

### New AC Lamp and Multi-Lamp System

Panasonic's innovative 4-lamp optical system uses newly developed 300-watt AC lamps to deliver remarkable 12,000-lumen brightness. The 4-lamp system means superb reliability too – the projector keeps working even if one lamp goes out. A full 24 hours of continuous operation is possible in Lamp Relay mode.



### Lamp replacement cycle and brightness guidelines

Lamp mode	Light output (lumens)	Lamp replacement cycle (hours)
Four lamps	12,000	2,000
Three lamps	9,000	2,600
Two lamps	6,000	4,000
One lamp	3,000	8,000

\* The values above are maximum values when all 4 lamps are replaced simultaneously, and when they are used in cycles of being turned on for 3.5 hours and off for 0.5 hour. When the lamps are turned on and off more frequently, the lamp replacement cycle is shortened. (It is recommended that the mechanical shutter be used to turn images off for a short period.)

### Detail Clarity Processor

Exclusive to Panasonic, this new image-processing circuit analyzes the video signal frequency range for each scene by extracting data on the distribution of high, mid, and low-frequency components, and brings out fine details accordingly. The resulting images have a more natural, three dimensional appearance with crisp, clear detail.



Conventional sharpness control: Sharpness is applied uniformly, which can cause a halo or ring effect.

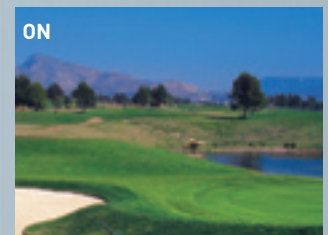
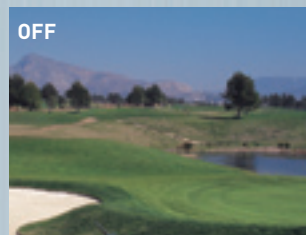


Detail Clarity Processor: Signal frequency is extracted realtime and necessary sharpness is applied at varying degrees for natural, life-like images.

\* Images are simulated.

### System Daylight View

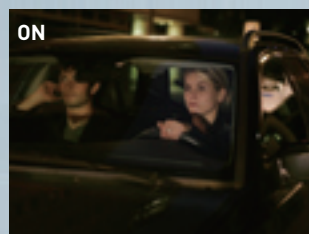
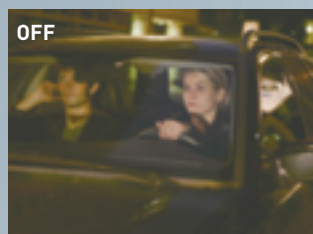
Screen visibility is lower when a projector is used during daylight hours or in a room with lights on. Panasonic's System Daylight View circuit compensates for these brighter environments, so that images are crisp, clear and easy to see no matter what the conditions are.



\* Images are simulated.

### Dynamic Iris

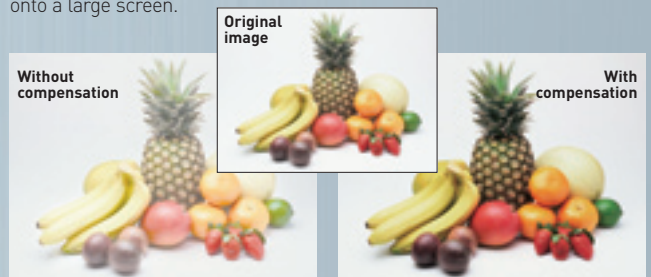
Panasonic's Dynamic Iris uses a scene-linking aperture mechanism to achieve a remarkable 5,000:1 contrast without lowering the 12,000-lumen brightness. It helps reproduce deeper, richer blacks and gives images more detailed textures.



\* Images are simulated.

### 3D Color Management System

Some people like to view large-screen images from relatively close up to get the maximum viewing impact. But at close range, the colors perceived by the human eye tend to differ slightly from the original colors. The 3D Color Management System solves this problem by enabling fine adjustment of colors so they appear faithful to the originals when projected onto a large screen.



\* Images are simulated.

### Full 10-Bit Processing

Use of a full 10-bit picture processing system helps achieve smooth tonal expression. Complexions and other flesh tones look natural and true-to-life, with accurate gradation.

### Dual Link HD-SDI Signal Support (Optional)

Just add an ET-MD100SD4 expansion board and the projector supports Dual Link HD-SDI signals. HD-SDI signals use two cables to achieve twice the color resolution of the conventional single link system.



ET-MD100SD4

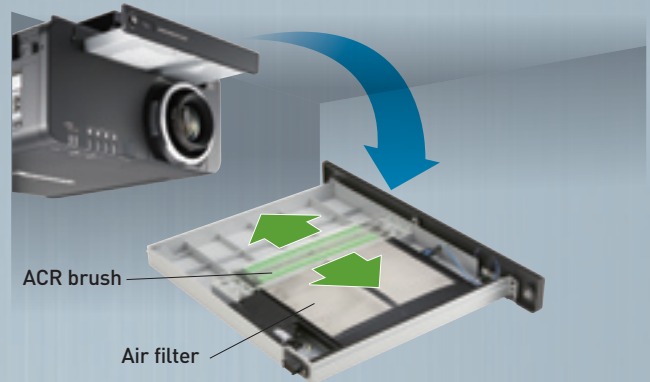


# A Host of Functions to Assure Stable, Long-Time Operation

## High Reliability & Stability

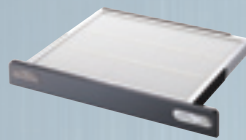
### Auto Cleaning Robot

Panasonic's Auto Cleaning Robot automatically cleans the air filter to help keep the projector running smoothly. When the projector is switched on,\*1 the robot uses a brush to clear away any dust adhering to the filter, helping to prevent clogs that can impair operation or cause malfunctions. The projector can be used for around 2,000 hours before the filter needs to be cleaned, making it a good choice for installation in tight spaces or for ceiling-mounted applications. Also, the Micro-Cut Air Filter traps particles as small as 10 microns.\*2 This greatly reduces the amount of dust entering the projector, helping maintain high brightness and stable operation.



### Smoke Cut Filter

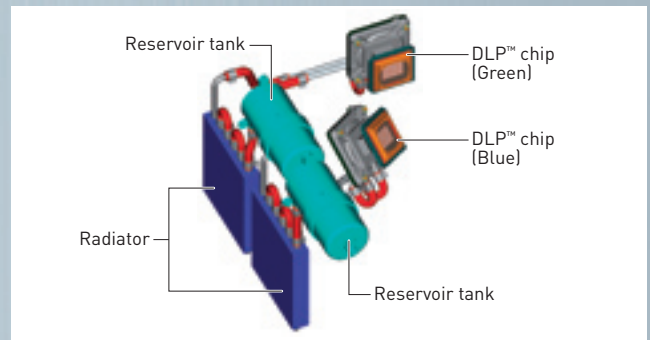
The optional ET-SFD100 Smoke Cut Filter can be mounted in place of the Auto Cleaning Robot's tray. This optional smoke filter must be used when using the projector at events where smoke or fog is dispersed.



\*1 Cleaning time can be set by a timer from 00:00 to 23:50 in 10-minute intervals, or controlled manually. The cleaning process is done only once per 24 hours. When the set time is reached, the cleaning process will begin if the projector is on or in cooling mode.  
\*2 Such as lint particles and pollen.

### Liquid Cooling System

This advanced system uses a pump to circulate a cooling liquid behind the DLP™ chips to absorb heat. This Panasonic's technology is made possible by the reflective nature of the DLP™ system, which enables an airtight chip structure that minimizes image-quality loss due to dust adherence. In addition, it allows operation within a wide ambient temperature range of 32°F (0°C) to 113°F (45°C)\*3 and reduces operating noise to 43 dB.\*4



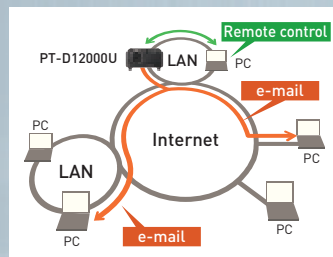
\*3 The operating temperature range is 32°F (0°C) to 104°F (40°C) when used in High-Altitude mode (4,593 feet [1,400 m] to 8,858 feet [2,700 m]). Also, if the ambient temperature exceeds 104°F (40°C) (95°F [35°C] in High-Altitude mode) when using all four lamps, the light output may be reduced approximately 30% to protect the projector.

\*4 Average value at time products are shipped from the factory, in accordance with JIS X 6911:2003 data projector specifications. Measurement methods and conditions are based on Article 2 of JIS X 6911:2003 data projector specifications.

### Network Function

#### Web Browser Control

The PT-D12000U can be easily operated remotely over a LAN network, because it is all done using the computer's familiar web browser. Furthermore, the projector sends an e-mail message to notify the operator when an error has occurred, or a lamp needs to be replaced.



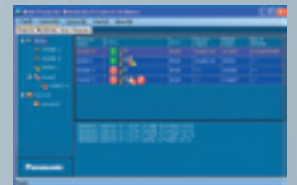
#### PJLink™ Compatibility

The LAN terminals support PJLink™ class 1 connection. Control with the same specifications is also possible when used in a multi-projector system with projectors of another brand.



#### Multi Projector Monitoring & Control Software

Panasonic's original "Multi Projector Monitoring & Control"\* freeware allows the user to control and monitor multiple projectors at the same time via LAN. When a problem occurs, an alarm message is sent to the monitoring/controlling PC.



\* Available in June 2008. Please consult a sales representative if necessary.

### Lamp LED Indicator and Self-Diagnosis Function

The projector body is equipped with a temperature alarm LED and a burnt-lamp alarm LED (for lamps 1 to 4). In the PT-D12000U, the LEDs are visible from both front and top, so you can see it easily even if the unit is hung from the ceiling. Information on the error is also given in the on-screen display. A self-diagnosis function is also provided. Error codes displayed on the 3-digit, 7-segment LED on the side of the projector tell the operator what the problem is.



### Small Size and 120-VAC Convenience

Despite its 12,000-lumen power, the projector is compact, weighs only 77.1 lbs (35 kg) and runs on ordinary 120-VAC power. This makes it easy to add to existing facilities and suitable for use at concerts, performances, and other events.



## Adapts to a Variety of Environments

# Excellent System Functions

### Geometric Adjustment

This function enables adjustment of images for projection onto spherical, cylindrical and other specially shaped screens. You can make the adjustment easily using just the remote control, with no external equipment needed. Used together with the multi-screen support system, the Geometric Adjustment expands your application possibilities, letting you create a wide range of image effects at concerts, performances and other special events.

Image showing various Geometric Adjustments



### Lens Shift

The optical axis can be adjusted both vertically and horizontally by a remote control, giving you greater setup ease and flexibility.

### A Wide Selection of Lenses

Choose from a wide lineup of lenses for your system, including short-throw, long-throw zoom and fixed-throw lenses for rear projection use. The additional lenses make it easy to adapt your projector to the installation site. The lens cover opens completely for easier mounting.



### Flexible Mounting Angle

Flexible mounting allows a 360° vertical rotation range\*. Dramatic showroom displays can be achieved by projecting directly downward or upward.

\* A special fixture must be attached to the lamp unit when the projector is placed at an angle within ±45° (downward) of the vertical.

\* The horizontal range is ±15°.



### Universal Design

#### Easy Lamp Replacement

Removing a single screw is all it takes to open the rear cover. This makes it easy to replace a lamp while the projector is still in the mounting bracket – a big advantage in tight ceiling-mounted installations.



#### Remote Control with Blind Touch Operation

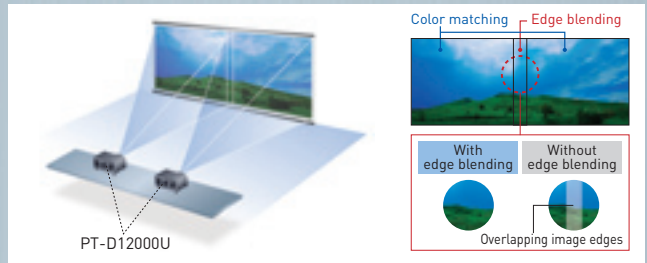
Contoured surfaces let you operate the control keys by touch. Connection terminals and controls are illuminated by LEDs, and the remote control is fully backlit for sure, easy operation in the dark. The wireless remote control has a range of 98.4 feet (30 m), so you can control the projector from a good distance.



#### 4 Direction Grip

Grooves on all four sides of the projector's bottom let you get a firm, comfortable grip on the unit so that it can be moved safely.

### Built-in Multi-screen Support System



#### • Edge blending

The edges of adjacent screens can be blended and their luminance controlled. For example, the adjoining edges in a 2-screen system can be blended to create a smooth, seamless image.

#### • Color matching

When several units are used together, this function corrects for slight variations in the color reproduction range of individual projectors. The PC software assures easy, accurate control. Independent, 7-axis adjustment (red, green, blue, yellow, magenta, cyan, white) ensures high precision colors and minimizes color variations.

#### • Multi-screen processor

The PT-D12000U can project large, multi-screen images without any additional equipment. Up to 100 units (10 x 10) can be edge-blended at a time.

\* Image uniformity over the entire screen may be adversely affected by the type of screen used or the lamp mode selected. Also, due to differences in the manner in which the lamp brightness decreases with time, some fluctuation may appear in overall screen brightness. When this occurs, the unit must be readjusted, which is a service that is offered for a fee.

For details, please contact the store where you purchased the product, or a sales representative.

### Multiple Terminal Including DVI-D and LAN Slot

The PT-D12000U comes equipped with DVI-D and LAN (Pj-Link™) slots. It also features an array of terminals, including two RGB inputs and D-sub HD 15-pin, a 5-BNC connector, serial in/out, S-video input, two remote inputs, and one remote out. In addition to offering DVI-D control, the PT-D12000U is HDCP\*-compliant and thus meets a broad range of projection needs.



\* High-Bandwidth Digital Content Protection

### Other Features

- Mechanical lens shutter
- Picture in picture (The picture in picture function cannot be used with some input signals and selected inputs.)
- Anti-theft features with chain opening
- ID assignment for up to 64 units
- Built-in test pattern
- Selectable 9-language on-screen menu (English, German, French, Spanish, Italian, Russian, Japanese, Chinese, Korean)

### Optional accessories

Lens	Input signal board	Frame
Zoom lens ET-D75LE6 (1.0-1.2:1) ET-D75LE1 (1.5-2.0:1) ET-D75LE2 (2.0-3.0:1) ET-D75LE3 (3.0-5.0:1) ET-D75LE4 (5.0-8.0:1) ET-D75LE8 (7.9-15.0:1)	SD-SDI input signal board ET-MD77SD1	ET-PFD100
Fixed focus lens ET-D75LE5 (0.8:1)	HD/SD-SDI input signal board ET-MD77SD3	Carrying handle ET-HAD100
	Dual link HD/HD-SDI input signal board ET-MD100SD4	
	DVI-D input signal board ET-MD77DV	Ceiling mount bracket High-ceiling mount bracket ET-PKD100H Low-ceiling mount bracket ET-PKD100S
Lamp Replacement lamp unit ET-LAD12K ET-LAD12KF (four pack)	Smoke Cut Filter ET-SFD100	

## Specifications

Power supply	120-240 V AC 16-9A, 50Hz/60Hz
Power consumption	1,600-1,500 W (10-15 W in standby mode with fan stopped)
DLP™ chip	0.95" diagonal (4.3 aspect ratio)
Display method	DLP™ chip x 3 (R, G, B), DLP™ projection system
Pixels	1,470,000 (1,400 x 1,050 x 3, total of 4,410,000 pixels)
Lens	Optional powered zoom/focus lenses
Lamp	300 W UHM lamp x 4 (four lamp system)
Screen size	70 - 600 inches, 4:3 aspect ratio
Brightness*	70-300 lumens, 4:3 aspect ratio with the ET-D75LE6
Contrast ratio**	12,000 (lenses four-lamp operation mode)
Resolution	5,000:1 full on/full off, in Dynamic iris 3 mode
RGB input scanning frequency	1,400 x 1,050 pixels (1,920 x 1,200 pixels compatible, compression mode) fr 15-100 kHz, fv 24-120 Hz Dot clock 20-162 MHz
Component signal	480i, 480p, 576i, 576p, 720/60p, 720/50p, 1035/60i, 1080/25p, 1080/24p, 1080/24sf, 1080/30p, 1080/60i, 1080/50i, 1080/50p, 1080/60p
Video signal	fr 15.75/15.63 kHz, fv 50/60Hz (NTSC/NTSC4.43 PAL, PAL 60, PAL-N, PAL-M, SECAM)
Lens shift	Vertical: ±50% (±40% with the ET-D75LE6) (powered) Horizontal: ±30% (±20% with the ET-D75LE6) (powered)
Keystone correction range	Vertical: ±40° (±22° with the ET-D75LE6), ±28° with the ET-D75LE6) Using Geometric Adjustment: Vertical ±10°, Horizontal ±15°
Terminals	DVI-D 24-pin x 1, DVI I 1.0 compliant, compatible with HDCP single link 480p, 576p, 1080/60i, 1080/50i, 1080/24p, 1080/24sf, 1080/25p, 1080/30p, 1080/60p, 1080/50p, 720/60p, 720/50p VGA (640 x 480) - WUXGA* (1,920 x 1,200), compatible with non-interlaced signals only, Dot clock: 25-162 MHz
	RGB1/Y/Pb/Pi IN BNC x 5
	RGB2 IN D-sub HD 15-pin x 1
	VIDEO IN BNC x 1, 1.0 Vp-p
	VIDEO OUT BNC x 1, 1.0 Vp-p
	S-VIDEO IN Mini DIN 4-pin x 1
	LAN RJ-45 (10 Base-T/100 Base-TX) x 1 compatible with P.JLink™
	SERIAL IN D-sub 9-pin female x 2 (RS232C x 1, RS422 x 1)
	SERIAL OUT D-sub 9-pin male x 1 (RS422 x 1)
	REMOTE 1 IN M3 jack x1 for wired remote control
	REMOTE 1 OUT M3 jack x1 for link control
	REMOTE 2 IN D-sub 9-pin female x 1 for external control (parallel)
Optional board slot	With ET-MD77SD1 installed* SERIAL IN: BNC x 1, SD-SDI signal (Y/C/C: 4:2:2 10-bit); SMPTE 259M compliant: 480i, 576i SERIAL OUT: BNC x 1, active through
	With ET-MD77SD3 installed** SERIAL IN: BNC x 1, SD-SDI signal (Y/C/C: 4:2:2 10-bit); SMPTE 259M compliant: 480i, 576i Single-link HD-SDI signal (Y/C/C: 4:2:2 10-bit); SMPTE 292M compliant: 720/50p, 720/60p, 1035/60i, 1080/50i, 1080/60i, 1080/25p, 1080/24p, 1080/24sf, 1080/30p SERIAL OUT: BNC x 1, active through
	With ET-MD100SD4 installed SERIAL IN: BNC x 1, SD-SDI signal (Y/C/C: 4:2:2 10-bit); SMPTE 259M compliant: 480i, 576i Link-ALink-B HD-SDI signal (Y/C/C: 4:2:2 10-bit); SMPTE 292M compliant: 720/50p, 720/60p, 1080/50i, 1080/60i, 1080/25p, 1080/24p, 1080/24sf, 1080/30p Dual-link HD-SDI signal (RGB 4:4:4 12-bit/10-bit); SMPTE 372M compliant: 1920 x 1080/50i, 1920 x 1080/60i, 1920 x 1080/25p, 1920 x 1080/24p, 1920 x 1080/24sf, 1920 x 1080/30p Dual-link HD-SDI signal (X'Y'Z': 4:4:4 12-bit); 2048 x 1080/24p, 2048 x 1080/24sf

Optional board slot	With ET-MD77DV installed	Specifications are the same as those for the DVI-D IN terminal on the main unit.
Installation		Front/rear, ceiling/floor
Power cord length		9.9' (3.0 m)
Dimensions (W x H x D)		22-3/4" x 12-19/32" x 25-5/16" (578 x 320 x 643 mm) (without lens)
Weight**		Approx. 77.1 lbs (35 kg) without lens
Operating temperature		32 - 113 °F (0 - 45 °C)*
Operating humidity		10-80% (no condensation)
Supplied accessories		Power cord, Wireless/wired remote control unit, Batteries for remote control (AA type x 2), Eye bolt x4, Wire rope

- \* Measurement, measuring conditions, and method of notation all comply with ISO 21118 international standards.  
 \*\* Only when using VESA CVT-RB/Reduced Blanking signals.  
 \* The LAN terminal on each board, when mounted, cannot be used because the LAN terminal on the main unit has priority.  
 \*\* Average value. May differ depending on models.  
 \* The operating temperature range is 32°F (0°C) to 104°F (40°C) when used in High-Altitude mode (4,593 feet (1,400 m) to 8,858 feet (2,700 m)). Also, if the ambient temperature exceeds 104°F (40°C) (95°F (35°C) in High-Altitude mode) when using all four lamps, the light output may be reduced approximately 30% to protect the projector.

## Ecological-conscious design

Panasonic works from every angle to minimize environmental impact in the product design, production and delivery processes, and in the performance of the product during its life cycle. The PT-D12000U reflects the following ecological considerations.

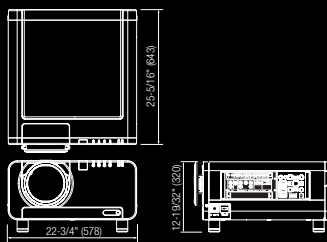
- Lead-free solder is used to mount components to the printed circuit boards.
- Lamp power switching further reduces power consumption.
- Auto Power Save activates standby mode when no signal is input.

## Made in Japan

PT-D12000U projector is carefully manufactured at the Panasonic factory in Japan under strict quality control. This is another very important advantage of Panasonic projectors.

## Dimensions

unit: inch [mm]



## Shape of the plug receptacle

• 125 V AC, 20 A



• 250 V AC, 15 A



## Projection distance

Diagonal image size (aspect ratio: 4:3)	Throw distance												
	ET-D75LE6 1.0-1.2:1		ET-D75LE1 1.5-2.0:1		ET-D75LE2 2.0-3.0:1		ET-D75LE3 3.0-5.0:1		ET-D75LE4 5.0-8.0:1		ET-D75LE8 7.9-15.0:1		ET-D75LE5 0.8:1 fixed
	min.	max.	min.	max.	min.	max.	min.	max.	min.	max.	min.	max.	
70"	1,393 mm 4.6'	1,662 mm 5.4'	2,072 mm 6.9'	2,768 mm 9.0'	2,801 mm 9.2'	4,215 mm 13.8'	4,226 mm 13.9'	7,094 mm 23.2'	7,101 mm 23.3'	11,374 mm 37.3'	11,091 mm 36.4'	21,142 mm 69.3'	1,022 mm 3.3'
100"	2,014 mm 6.7'	2,406 mm 7.8'	2,992 mm 9.9'	3,998 mm 13.1'	4,035 mm 13.3'	6,067 mm 19.9'	6,077 mm 20.0'	10,187 mm 33.4'	10,193 mm 33.5'	16,292 mm 53.4'	16,009 mm 52.6'	30,358 mm 99.5'	1,496 mm 4.9'
150"	3,049 mm 10.0'	3,646 mm 11.9'	4,526 mm 14.8'	6,047 mm 19.8'	6,093 mm 19.9'	9,153 mm 30.0'	9,164 mm 30.2'	15,341 mm 50.3'	15,348 mm 50.3'	24,488 mm 80.3'	24,207 mm 79.4'	45,717 mm 149.9'	2,286 mm 7.5'
200"	4,084 mm 13.5'	4,886 mm 16.0'	6,060 mm 19.9'	8,096 mm 26.5'	8,150 mm 26.8'	12,240 mm 40.1'	12,250 mm 40.2'	20,496 mm 67.2'	20,502 mm 67.3'	32,685 mm 107.2'	32,404 mm 106.3'	61,076 mm 200.3'	3,076 mm 10.0'
300"	6,154 mm 20.2'	7,366 mm 24.1'	9,128 mm 30.0'	12,194 mm 40.0'	12,265 mm 40.3'	18,413 mm 60.3'	18,423 mm 60.5'	30,805 mm 101.0'	30,811 mm 101.1'	49,078 mm 160.9'	48,799 mm 160.1'	91,794 mm 301.0'	4,656 mm 15.2'
400"	8,224 mm 27.0'	9,846 mm 32.2'	12,196 mm 40.1'	16,292 mm 53.4'	16,380 mm 53.8'	24,586 mm 80.6'	24,596 mm 80.7'	41,114 mm 134.8'	41,120 mm 134.9'	65,471 mm 214.7'	65,194 mm 213.9'	122,512 mm 401.8'	—
600"	12,364 mm 40.6'	14,806 mm 48.5'	18,332 mm 60.2'	24,488 mm 80.3'	24,610 mm 80.8'	36,932 mm 121.1'	36,942 mm 121.2'	61,732 mm 202.4'	61,738 mm 202.6'	98,257 mm 322.2'	97,984 mm 321.4'	183,948 mm 603.3'	—

## NOTES ON USE

- 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.
- The projector uses a high-voltage mercury lamp that contains high internal pressure. This lamp may break, emitting a large sound, or fail to illuminate, due to impact or extended use.
- The projector uses of high-wattage lamp that becomes very hot during operation. Please observe the following precautions.
  - Never place objects on top of the projector while it is operation.
  - Make sure there is an unobstructed space of 500 mm or more around the projector's exhaust openings.
  - Do not stack projector units directly on top of one another for the purpose of multiple (stacked) projection. When stacking projector units, be sure to provide the amount of space indicated between them. 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, temperature of the air surrounding the projector must be between 0°C and 35°C. Also make sure the projector's intake and exhaust openings are not blocked. Take particular care to ensure that hot air from the exhaust openings is not sucked into the intake.
- If the projector is to be operated continuously 24 hours a day, use the multi-lamp optical system's alternating lamp operation (lamp changer) function. The projector can be operated continuously 24 hours a day in four-lamp operation mode, but it will automatically operate with three lamps for 8 hours of the 24 hours.
- The lamp replacement cycle duration becomes shorter if the projector is operated repeatedly for short periods.
  - The length of time that it takes for the lamp to break or fail to illuminate varies greatly depending on individual lamp characteristics and usage conditions.
  - The brightness of the lamp will gradually decrease with use.
- Because the ET-D75LE5 is a fixed short-throw lens, the lens shift function cannot be used with it.
- Due to natural characteristics of lamps, screen brightness may vary (flicker). This is not an indication of faulty lamp performance.

# Panasonic®

For more information about Panasonic projectors  
<http://panasonic.net/avc/projector>



JQA-0443



Factories of Systems Business Group have received ISO14001:2004 - the Environmental Management System certification. (Except for 3rd party's peripherals.)

Weights and dimensions shown are approximate. Specifications are subject to change without notice. This product may be subject to export regulations. VGA and XGA are trademarks of International Business Machines Corporation. All other trademarks are the property of their respective trademark owners. Projection images simulated. DLP, DLP logo and DLP Medallion logo are trademarks or registered trademarks of Texas Instruments. The P.JLink trademark is an application trademark in Japan, the United States, and other countries and regions or registered trademarks. © 2010 Panasonic Corporation All rights reserved.

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