

For Immediate Release

Casio Releases World's First¹ Mercury-Free High-Brightness Projectors

Innovative 'Clean and Green' Laser & LED Hybrid Light Source

TOKYO, January 7, 2010 — Casio Computer Co., Ltd., today announced the development of its next generation of high-brightness projectors, using an innovative, mercury-free laser and LED hybrid light source. Created within its 'clean & green' concept, Casio is releasing the world's first¹ mercury-free high-brightness data projectors as part of its GREEN SLIM range.

To date, high-pressure data projector lamps capable of producing 2000 or more ANSI lumens have contained environmentally harmful mercury. Laser and LED semiconductor light sources do offer promising mercury-free solutions, but because high-output sources capable of producing green light have not been feasible for mass production, they have only been applicable for small, low-lumen projectors.

In an industry first, Casio has unveiled an original mercury-free hybrid light source capable of generating high brightness by combining a laser, a phosphor and an LED. This groundbreaking innovation achieves high green light output by efficiently converting blue laser light into green light using the phosphor — a stumbling block with previous conventional semiconductor light sources. The high-brightness light of 2000 or more ANSI lumens is achieved by projecting blue laser light, green light converted from blue laser light with the phosphor, and light emitted by a red LED through a DLP[®] chip onto the screen.

Use of the laser and LED hybrid light source makes Casio's GREEN SLIM Projectors the world's first that are powerful enough (2000-2500 ANSI lumens) for projection in a brightly lit room without using a high-pressure mercury lamp. Casio's GREEN SLIM Projectors will be available in a wide range of options to meet a variety of business needs:

- **compact design with the body no bigger than an A4 piece of paper, slim (43 mm) and lightweight (2.3 kg);**
- **bright colours through upgraded colour purity;**
- **light source life of approximately 20,000 hours, nearly ten times that of high pressure mercury lamp projectors;**
- **wide-angle 2X optical zoom allowing use in venues ranging from small meeting rooms to large conference rooms;**
- **WXGA Real display at 1280 x 800 dots (16:10);**
- **USB host function for projection without a PC and capability for wireless communication with PCs (XJ-A245/A235/A145/A135);**
- **projection at maximum brightness is possible within eight seconds of power-on;**
- **no cool down needed when turning the projector off.**

¹ Source: Casio survey — as of 7 January 2010 for high-brightness data projectors with at least 2000 ANSI lumens

Casio's GREEN SLIM projectors will transform the potential of visual communication thanks to the combination of the innovative advanced laser and LED hybrid light source and advanced features. Casio will continue expanding its line-up by aggressively developing more products with the new laser & LED hybrid light source, including smaller projectors for individual use.

Main Features of Casio's GREEN SLIM Projectors

Model	Display resolution	Brightness	USB Host Function & Wireless Communication with PCs
XJ-A245	WXGA Real (1,280×800)	2500 ANSI lumens	XJ-A245 only
XJ-A240			
XJ-A235		2000 ANSI lumens	XJ-A235 only
XJ-A230			
XJ-A145	XGA Real (1,024×768)	2500 ANSI lumens	XJ-A145 only
XJ-A140			
XJ-A135		2000 ANSI lumens	XJ-A135 only
XJ-A130			

■ **Laser and LED hybrid light source that enables mercury-free, high-brightness projection**

High-brightness projection is achieved without a high-pressure mercury lamp by using blue light emitted by a blue laser, green light converted from blue laser light with a phosphor, and light emitted by a high-lumen red LED through a DLP® chip onto the screen.

■ **A4 size high-brightness projectors**

High-brightness projection is achieved at a maximum of 2500 ANSI lumens (XJ-A245/XJ-A240/XJ-A145/XJ-A140) with a laser and LED hybrid light source in a slim (43 mm) and lightweight (2.3 kg) A4-size body. These projectors can be carried together with documents without being bulky and can project clear images even in brightly lit rooms.

■ **Superior colour reproduction increases presentation impact**

The laser and LED hybrid light source greatly improves colour purity compared to high-pressure mercury lamps.

■ **Longer light source life**

Use of the laser and LED hybrid light source increases the light source life to approximately 20,000 hours — nearly 10 times that of Casio's conventional products (XJ-S58, etc.) with a high-pressure mercury lamp resulting in lower maintenance requirements and operating costs. Moreover, brightness deteriorates more slowly than with mercury lamps, so clear image quality can be maintained for a long time.

■ **Quick powering on and off — for seamless presentations**

Projection at maximum brightness is possible in a minimum of eight seconds, and no cool down is needed when turning the projector off. Limited presentation time can, therefore, be maximised by enabling a smooth presentation flow from set-up to clean-up.

■ **Wide-angle 2X optical zoom gives users freedom of projector setup**

Casio's GREEN SLIM models come with a wide-angle 2X zoom lens that provides the greatest magnification² of any data projector. They are also equipped with a feature that automatically corrects vertical distortion of the display due to projector position, enabling effective use in settings ranging from small meeting spaces to large conference rooms and classrooms.

■ **HDMI terminal**

An HDMI terminal that can transmit digital audio/video with only one cable. It enables AV devices and PCs also equipped with an HDMI terminal to connect easily to the projectors, which can then reproduce the contents with no loss of quality.

■ **Wide picture in real display (XJ-A245/A240/A235/A230)**

Able to accommodate WXGA Real display at 1280 × 800 dots (16:10) enabling wide-screen presentations.

■ **Wireless communication with PCs (XJ-A245/A235/A145/A135)**

Wireless communication (IEEE 802.11b/g) with up to four Windows[®] PCs, allowing presentations away from the projector.

■ **USB 2.0 host function enables presentations without a PC (XJ-A245/A235/A145/A135)**

These models can project presentations, spreadsheets, word-processor documents, PDF files and other data³ prepared on a PC, still images (JPEG/BMP), and moving images (AVI format: Motion JPEG) all without a PC just by using commercially available USB memory. They can also be connected directly to the Multi-Functional Camera System YC-430, which can project non-digitised information and even three-dimensional objects onto the screen.

■ **The projectors can also be fixed to the ceiling with separately sold metal ceiling-mount fittings.**

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² Source: Casio survey as of 7 January 2010

³ Requires conversion with included PC software

■ Specifications

Model		XJ-A245	XJ-A240	XJ-A235	XJ-A230	XJ-A145	XJ-A140	XJ-A135	XJ-A130
Brightness*1		2500 ANSI lumens		2000 ANSI lumens		2500 ANSI lumens		2000 ANSI lumens	
Contrast ratio		1.800 : 1							
Estimated life of light source		Up to 20,000 hours							
Keystone correction		+30° (auto) ±30° (manual)							
Focusing		Manual power focus							
Projection lens		2x optical power zoom lens							
Projection screen size		18~300-inch				15~300-inch			
Projection range	60-inch screen	1.4m~2.8m				1.7m~3.4m			
	100-inch screen	2.4m~4.8m				2.8m~5.6m			
	Minimum range	0.84m				0.84m			
Projection system		DLP® system							
Display element		WXGA 0.65-inch DLP® chip				XGA 0.55-inch DLP® chip			
		1,024,000 pixels (1,280×800)				786,432 pixels (1,024×768)			
Color reproduction		Full color (16.77 million colors)							
RGB input	Display resolution	WXGA Real (1,280×800),				XGA Real (1,024×768),			
		Compressed: Maximum UXGA (1,600×1,200)				Compressed: Maximum UXGA (1,600×1,200)			
	Input terminal	RGB mini D-Sub 15 pin×1 (Also serves as YCbCr/YPbPr input terminal.)							
Digital input	Input terminal	HDMI Type A×1 (480P~1080P)							
Video input	Signal systems	NTSC/PAL/PAL-N/PAL-M/PAL60/SECAM							
	Input terminal	Composite: AV terminal (3.5mm mini-jack) (Also serves as audio terminal.)							
		Component: Also serves as RGB mini D-Sub 15 pin.							
Audio	Input-output terminal	3.5mm mini-jack x 1 (Also serves as video input terminal.)							
	Speaker	1 W monaural							
Other terminals	USB (2.0-compliant)	Type A×1	-	Type A×1	-	Type A×1	-	Type A×1	-
	Control terminal	RS-232C x 1 (Separately-sold YK-5 serial conversion cable required for connection.)							
Wireless compatibility		IEEE 802 .11 b /g *2	-	IEEE 802 .11 b /g *2	-	IEEE 802 .11 b /g *2	-	IEEE 802 .11 b /g *2	-
Power source		AC100~240V, 50/60Hz							
Power consumption		Operating: 190W (Eco mode-on level 1) / Standby: 1W or less							
Dimensions (W×H×D)		297×43×210mm (including projections)							
Weight		2.3 kg							
Remote control		Wireless remote controller							
Security compatibility		Kensington-compatible, Power-on password							
Other functions		Direct power-on/-off, Digital zoom (2x), Rear-projection, Freeze, Pointer, Color mode, Eco mode, Blank, Ceiling mount*3							
Included accessories		Wireless remote controller / AC power cord / RGB cable /Special AV cable / Instruction manual (on CD-ROM) / Quick reference / Warranty card / Soft case							

*1 When Eco mode-off level 1

*2 A wireless module that attaches to a dedicated terminal inside the main unit is supplied.

*3 Metal ceiling-mount fittings required. Installation work charged separately.

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