Projection Calculation

with screen aspect ratio of 16:9

Screen size			Hd(cm)	Projection distance	
Diagonal	W:width (cm)	H:height (cm)		Lw: Min.	Lt: Max.
40	89	50	17	1.4	1.7
60	133	75	25	2.2	2.6
70	155	87	29	2.5	3.1
80	177	100	33	2.9	3.5
90	199	112	38	3.3	4.0
100	221	125	42	3.6	4.4
110	244	137	46	4.0	4.9
120	266	149	50	4.4	5.3
150	332	187	63	5.5	6.6
275	609	342	115	10.1	–

with screen aspect ratio of 4:3 (Projection image is 16:9)

Screen size(4:3 aspect ratio)			Projected image size(16:9 aspect ratio)			D(cm)	Hd(cm)	Projection distance	
Diagonal	W:width (cm)	H:height (cm)	Diagonal (type designation)	W:width (cm)	H:height (cm)			Lw: Min.	Lt: Max.
40	81	61	37	81	46	8	15	1.3	1.6
60	122	91	55	122	69	11	23	2.0	2.4
70	142	107	64	142	80	13	27	2.3	2.8
80	163	122	73	163	91	15	31	2.7	3.2
90	183	137	83	183	103	17	35	3.0	3.6
100	203	152	92	203	114	19	38	3.3	4.0
110	224	168	101	224	126	21	42	3.7	4.5
120	244	183	110	244	137	23	46	4.0	4.9
150	305	229	138	305	171	29	58	5.0	6.1
300	610	457	275	610	343	57	115	10.1	–

with screen aspect ratio of 4:3 (Projection image is 15:9)

Screen size(4:3 aspect ratio)			Projected image size(WXGA15:9 aspect ratio)			D(cm)	Hd(cm)	Projection distance	
Diagonal	W:width (cm)	H:height (cm)	Diagonal (type designation)	W:width (cm)	H:height (cm)			Lw: Min.	Lt: Max.
40	81	61	37	81	49	6	14	1.3	1.6
60	122	91	56	122	73	9	21	2.0	2.4
70	142	107	65	142	85	11	24	2.3	2.8
80	163	122	75	163	98	12	28	2.7	3.2
90	183	137	84	183	110	14	31	3.0	3.6
100	203	152	93	203	122	15	35	3.3	4.0
110	224	168	103	224	134	17	38	3.7	4.5
120	244	183	112	244	146	18	42	4.0	4.9
150	305	229	140	305	183	23	52	5.0	6.1
300	610	457	280	610	366	46	104	10.1	–

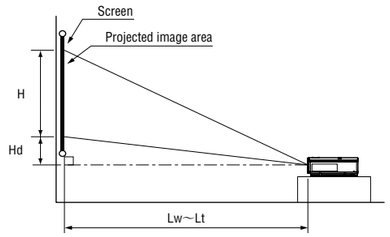
Model			HC3100
Projection system			DLP™ system
Panel specs	Panel size		0.65 DMD, aspect ratio 15:9
	Number of pixels		1280×768(DarkChip3™)
	Drive system		DMD reflection system
	Array		Stripe pattern
Optical specs	Lens	Zoom/focus operation	Manual operation
		f (mm)	23～27.6
	Light source lamp		200W
	Optical system		Time-division color separation/composition system
Color wheel spec			RGB RGB, 4-speed/5-speed (the choices)
Picture size (inches)			40～275
Images	Brightness (lm)		1000
	Contrast ratio		4500:1 (full on/full off)
	Resolution	PC input	VGA(640×480) -SXGA(1280×1024) (compressed)
	Scanning frequency	Horizontal (kHz)	15～80
		Vertical (Hz)	50～85
Input signal system	Video		NTSC, NTSC4.43, PAL (including PAL-M,N), SECAM, PAL-60, HDTV (480i/p, 576i/p, 1081i, 720p)
	PC		PC/AT compatible machines, MAC, PC98
Input	Video	Analog RGB	Mini D-SUB15 pin 1 terminal
		HDMI	HDMI terminal 1 terminal
		Composite	RCA terminal 1 terminal
		S	S terminal 1 terminal
		Component	RCA terminal 1 RCA terminal (Component can be also input to D-SUB)
	Serial/RS-232C standard		1 terminal (8 pins)
Functions	Function/other	Gamma mode	3 patterns + 2 users
	Trapezoidal distortion correction	Vertical keystone	±40 steps (1 step = approx. 1 time)
		Horizontal keystone	±25 steps (1 step = approx. 1 time)
	Power supply voltage		AC100-240V 50/60Hz
	Power consumption (W)		280 (8W at standby)
	Weight (kg)		2.9
	Main unit dimentions	Width (mm)	310
		Depth (mm)	245
		Height (mm)	100
	Fan noise		25dBA(Lamp Low Mode)
Other	Supplied accessories		Power source cord (2.9m), remote control unit, AA-size batteries (×2), RGB signal cable, user's manual, RS-232C cable, lens cap (attached to main unit), intake filter

Note: For HC3100 zoom function, Zoom1/Zoom2 operates only on 480p and 576p, and does not function on 480i and 576i.

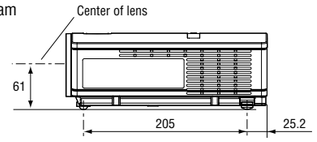
Projection Installation

Floor mounted

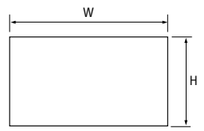
Unit (mm)



Dimensional diagram

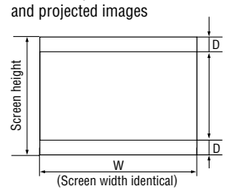


Relationship between 16:9 screen and projected images



Relationship between 4:3 screen and projected images

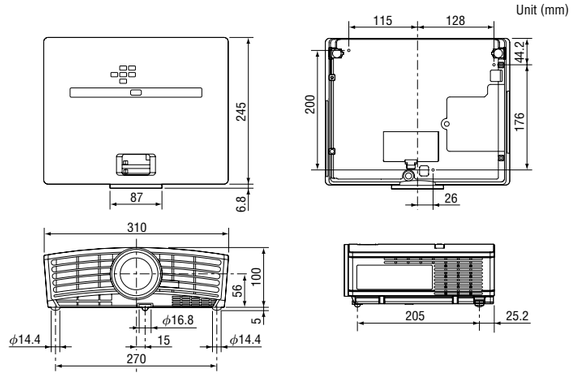
Unit (mm)



Rear terminals

External size diagram

Unit (mm)



Options

VLT-HC910LP

MITSUBISHI ELECTRIC CORPORATION
HEAD OFFICE : TOKYO BLDG., 2-7-3, MARUNOUCHI, CHIYODA-KU, TOKYO 100-8310, JAPAN

To find out more about HC3100 and our projectors, visit us at

Global.MitsubishiElectric.com/projectors/

L-188-6-C7392-A KY-0608 Printed in Japan(MDOC)

New publication, effective Aug. 2006.
Specifications subject to change without notice.

Changes for the Better

MITSUBISHI ELECTRIC

MITSUBISHI HOME THEATER PROJECTOR

Brilliance, in jet black

PICTURE BY DLP™ A TEXAS INSTRUMENTS TECHNOLOGY

HC3100

Dark and black shades, reproduced in richer depth and texture.

Contrast that generates subtle gradation, immaculately woven of light and shadow.

High-definition quality, fostering a sense of texture in screen-projected images.

Visual beauty, defined by the capacity to reproduce rich black tones.

Adoption of a new DMD to radically curb diffuse reflection of light,

and a newly developed panel driver for handsome gradation.

The result is native contrast* of 4500:1 for rich image expressing powers.

Definition coming across real, and fine in detail.

The reproduction capacity, and the devotion to black images,

transforms rooms into lavish theater space.

* Contrast with the panel unit.

HDMI™
HIGH DEFINITION MULTIMEDIA INTERFACE

PICTURE BY DLP™ A TEXAS INSTRUMENTS TECHNOLOGY

Contrast ratio 4500:1

HOME THEATER PROJECTOR

HC3100

Illuminated remote control unit

Rich image reproduction, accentuating dark and black images

High contrast, at 4500:1

Complementing the new DarkChip3™, high-detail all-glass lens and newly developed panel drive blend to realize profuse gradation expression, weighted to exquisite dark and black images.

2000:1

4500:1

DarkChip3™

The new DMD (DarkChip3™ process) uses smaller mirror concavity diameter to enhance effective aperture rate, along with changes in the mirror lower wiring that achieve impressive reductions in diffuse reflection. The result is contrast far more crisp and clear.

Newly developed color wheel to reproduce natural tones (RGB RGB)

Adopts standard light D65 color temperature

The key to reproducing visual sources in more truthful color tones. Equipped with a color wheel that reproduces the color temperature considered to comprise standard light - D65 (6,500 degrees).

Color wheel speed in four- and five-speed settings

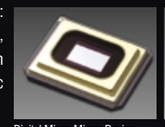
Choose the preferred speed setting -5-speed when color-breaking noise is a concern, or 4-speed when the stress is on gradation.

New color wheel

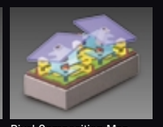
Key to crisp, clear images, and high resolution

Mounted with the cutting edge 0.65-type WXGA panel

Compatible with three resolution modes: 1280×720 (HD), Real XGA 1024×768, and WXGA 1280×768 (15:9). Resolution levels are adjustable to fit the specific hardware of choice.



Digital Micro-Mirror Device



Pixel Composition Map

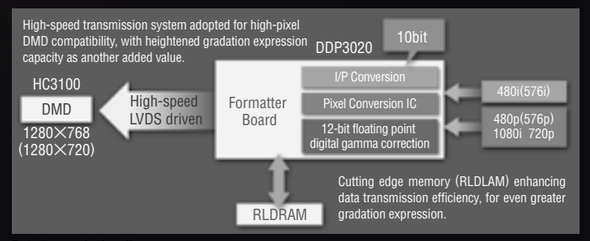
Reproducing fine-detail gradation, to challenge the high-end realm

Equipped with full 10-bit panel driver (DDP3020)

Formatter board mounted with integrated full 10-bit processing I/P conversion/scaler and 12-bit floating point digital gamma correction equivalent to 20-bits* Generates some 4 times the gradation of conventional 8-bit models, portraying subtle dark area gradation in smooth and flowing images. * In the conventional fixed format.

High-speed LVDS (Low-Voltage Differential Signal) drive

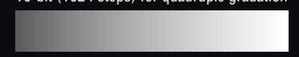
Loaded with high-speed memory (RLDRAM) to raise data transmission efficiency, in tandem with high-speed LVDS drive. The result is high-caliber gradation expression, posing a challenge to the high-end model range.



Data transmission flow

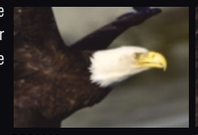
8bit(256steps)

10-bit (1024 steps) for quadruple gradation

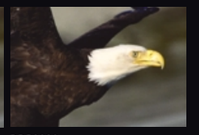


The 10-bit I/P conversion circuit zaps pesky jaggies for good

Mounted with full 10-bit processing I/P conversion circuits that forge dramatic improvements in noise. Impressive cuts in diagonal jaggies, for smooth and striking image reproduction.



DDP2000



DDP3020

Evolving the optical engine to new heights

Motor-driven iris lens with 2-level switching

Engineered with motor-driven variable lens aperture, for optical contrast adjustments that ensure optimal incident light supply to the DMD chip. The 2-level remote control switching further simplifies this user-friendly formula.

Fully open iris (3000:1)

Stopped down iris (5000:1)

<Selective use of high-brightness/high-definition modes, tailored to the images being screened>

Standard mode + iris full aperture (1000lm)

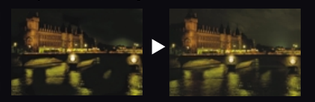
Enhanced viewing even in comparatively bright rooms – dynamic images for sporting events and other TV entertainment.

Low-mode iris + lens aperture (400lm)

Reproduction of enhanced black gradation targeting the high-end model realm, for dynamic movie viewing that stresses the value of dark, black images.

User gamma correction

Complementing the three modes of Sports, Video and Cinema, for movie viewing this projector zeroes in on the demands for "higher black level reproduction," "brighter medium contrast" and "toned down highlights" unachievable with conventional brightness functions. The key to success is independent operation of black, medium, and white gradation, ensuring subtle picture change and adjustment.



5-Stage Adjustment

BrilliantColor™

Equipped with a new color processing algorithm and system leveler color signal quality improvement processing, for bright and sparkling reproduction of the dominant neutral color images in video and natural landscapes. The 3-stage adjustment function further enhances this breakthrough.

Image position and shutter function, for cinema enjoyment at the optimum position

The shutter function eliminates unwanted vertical image domains (floating dark spots, etc.) on cinemascope screens, while the image position function moves the screen up and down. Ensures the optimum environment for each and every movie viewing.

<Squeeze cinemascope screen examples>

Upward Position Movement

Downward Position Movement

Over-scan volume adjustment

This feature adjusts the over-scan rate of images contained in DVD and other media from 90% to 100%, moving at 1% increments (when connected to HDMI).

Trigger terminal

Equipped with a screen trigger that links the projector power source switch and motor-driven screen up/down function. Commence screenings at the touch of a finger.

All-direction trapezoidal distortion adjustment

Digital trapezoidal distortion adjustment enables ±40 step vertical and ±25 step horizontal screen distortion adjustment.