MITSUBISHI ELECTRIC

MITSUBISHI LCD DISPLAY

Leading the Evolution of
High-Definition Digital Signage

A Broad Lineup Engineered to Deliver the Ultimate in Visual Expression for Digital Signage and Commercial Applications

Mitsubishi LDT Series LCD Monitors

Photographs are simulated images.

32

42

46

52

65L

65P

Mitsubishi Electric's LDT series monitors are designed specifically for Public Information Displays & Digital Signage applications. They are available in screen sizes from 32" – 65" with a host of functions, advantages and benefits which can ultimately provide enormous cost savings over the project life-cycle. Benefits are realized in the phases of system design, deployment & installation, operations & monitoring and long-term maintenance & reliability.

# Powerful features and functionality complimented by stunning image quality.

High Reliability - Engineered specifically for Industrial/Commercial Public Display Applications

Specifically engineered for Public Information Displays and Digital Signage applications. Mitsubishi LDT series monitors employ long-life components and specially selected panel specifications for commercial usage.

High Grade Panel equipped

The native resolution of 1920x1080 (FHD) employed in 46"/52"/65" models, 1366×768 (WXGA) in 32"/42" models, enable to display precise high-definition images both for Video and PC signals.

*For LDT461V/521V/651L/P
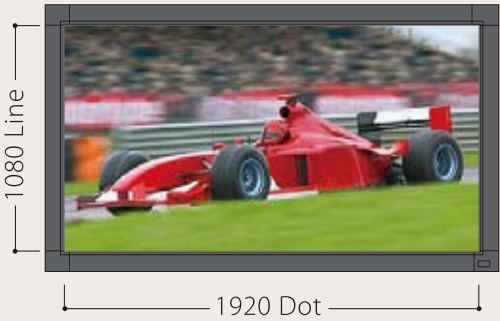
LDT series also features fast 6ms* response time for reproducing clear moving-pictures. High contrast and high brightness ensures clear and crisp picture quality.

*Gray to Gray LDT421V2 : 9ms

Conventional   LDT series

Simulated Image

Industrial Form Factor with black, 4-sided symmetrical bezel design

Ensures that over time, as units are added or replaced in a given location, the appearance will remain uniform and unobtrusive. Also, the appearance when mounted in portrait position remains symmetrical. All control keys such as power, input selection and picture controls are all neatly concealed under the monitor, not to be visible from the front.

Flexible Landscape & Portrait positioning

Engineered for heat dissipation and long-term reliability in both Landscape (horizontal) and Portrait (vertical) positions.

*65" separates in 2 versions.

Multiple Commercial Input & Output Interfaces/Connectors

Reduced installation costs, connection and input flexibility with future-proofing are assured for a wide variety of signal types. These include: Multiple PC Inputs with D-Sub 15, DVI-D or HDMI, and 5BNC and an output for looping several monitors. For standard video, BNC Video Inputs with Composite, Component and Y/C connections as well as an output for looping several monitors. Audio connectors are also included, as are speaker terminals for direct connection to external speakers.

42" LDT421V2 Input Panels

Flexible Input Signal Support

• Support for a wide variety of PC signals including VGA, SVGA, XGA, WXGA, SXGA, UXGA, and WUXGA for 46" and larger.
• Support for a wide variety of Video signals including NTSC, PAL, SECAM, 480p, 720p, 1080i, and 1080p for 46" and larger.
• Support for Audio with both PC and Video signals.

Auto Adjust & Auto Set-up

Automatically adjusts the screen position, phase and clock when the input signal timing is changed. In addition, Auto Set-up* quickly adjusts more items such as screen size, white & black levels with a single touch via the IR remote control.   * Only for LDT321V/421V2/461V

Remote Management & Diagnostics via bi-lateral RS232 communications

Users can create their own user interface loaded on a controlling PC to remotely control or adjust monitors. 42" and larger models can also be daisy chained to save on cabling costs as illustrated below. Daisy chained monitors can be controlled or adjusted all at once. Using an unique ID number, each monitor up to 25 in a daisy-chain can also be controlled individually.

For 42" and 46" models, daisy chain capability also allows control of all daisy chained monitors simultaneously with the IR remote from a single master monitor location saving time on-site.

In addition, critical monitor health status such as input signal, cooling fan* and internal temperature can also be verified remotely. (The cooling fan will start automatically when the internal temperature rises beyond a certain limit.) Remote asset management is also available to verify model and serial number.

*Only for LDT321V/421V2/461V

Programmable Scheduling Function

The Monitor's operating schedule can be programmed for up to 7 different scheduled time intervals by time, day of week and input port. This can allow for content from a different input to be scheduled on certain monitors within the same installation and also to extend the monitor's life and save power by turning it off during those hours or days that it is not required.

Power Save Function for both PC and Video signals

The monitor can be set to automatically go into power management mode when either the PC signal (RGB sync) or video input signal is lost. This saves both power and the need to individually turn off each monitor when not in use such as during the time when a location is closed.

*LDT521V/651L/P: For PC signal only

Multiple Screen-Saver Functions

To reduce image persistence and maximize panel life in demanding signage applications, the LDT series employs 4 different levels of screen saver functions, each of which can be set to meet the requirements of each application.
• An optimized gamma curve mode;
• Setting of the cooling fans to run continuously rather than automatically when the internal temperature reaches a specific level;
• A reduced brightness mode to limit the maximum brightness
• A Motion mode that shifts the image in 4 directions slightly at user selectable time intervals.

*LDT521V/651L/P: Only Motion mode available

Tiling Capability with Frame Compensation

This allows for high impact signage with the ability to combine up to 25 monitors* (up to 5High x 5Wide) to create a single large image (i.e. Video Wall) with compensation for the width of the monitor bezels in order to accurately display the content as a single image.

*LDT321V/421V2 max 16 screens (4 x 4)

Multi-screen display of 5 x 5 = 25 screens at maximum

FRAME COMP function not applied.   FRAME COMP function applied.
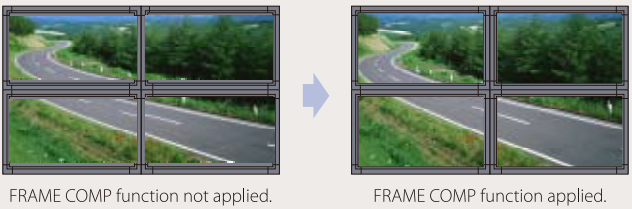
Long Cable Compensation

Long runs in the RGB signal cable may cause loss in image quality. For this reason, the LDT461V includes a long cable compensation feature which can be turned on during installation and is adjustable for various signal cable distances.

"Long Cable Compensation"
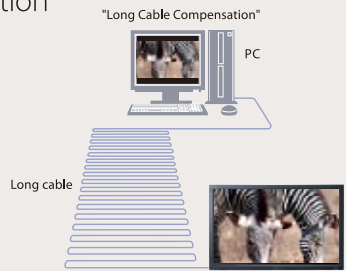
*Applicable only for analog RGB (D-SUB/BNC)
*Compensation level depends on the quality of signal source and cable.

Wide Range Color Temperature Adjustment

This allows for display color temperatures to be adjusted from 3,000K up to 10,000K. This wide range is especially important for industries such as broadcast, retail food and others where color accuracy and flesh tones are critical.

* Not available on LDT321V

PiP & PoP

Picture-in-Picture and Picture-out-Picture are available to display content in a window from Video Input source when the main image is from a PC Input source and vice versa. 46" and larger models with their higher 1920 x 1080 native resolution can also display these 2 input sources in a side-by-side mode, ideal in broadcast and video conferencing applications.

PiP   PoP   Side by Side
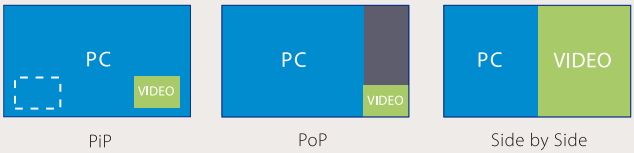
Power-on Delay

For installations employing numerous monitors, the power-on delay functions allow for setting each monitor to power up between 1-50 seconds after the power is applied. This allows the monitors to power up sequentially, avoiding in-rush current problems and reduces the overall electrical load requirements when using the same power supply.
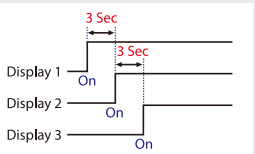
Side Border Color Select

When 4:3 screen is displayed, side border color can be selected from Black, Gray and White.
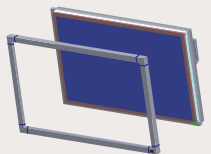
* Only for LDT321V/421V2/461V

IR Remote Lock
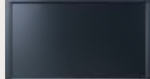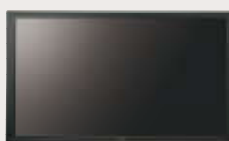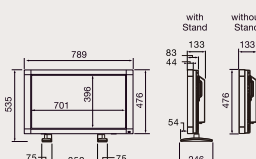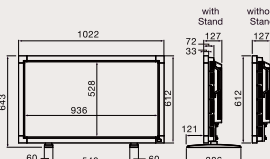
The remote control receiver can be turned off so that no changes can be made to the display settings or selected inputs by unauthorized personnel.

Removable Bezel

The popular 42" and 46" models have an easily removable front bezel design so that customers can change to other color bezel. (Silver color bezel is available as an option.)

Full Lineup of Mitsubishi LDT Series Monitors

Resolution	WXGA		Full HD			
Size	32	42	46	52	65	65
Model	LDT321V	LDT421V2	LDT461V	LDT521V	LDT651L	LDT651P
Dimension	Unit: mm	Unit: mm	Unit: mm	Unit: mm	Unit: mm	Unit: mm

Specifications

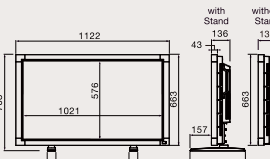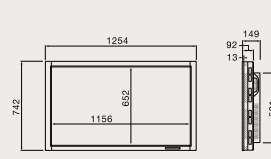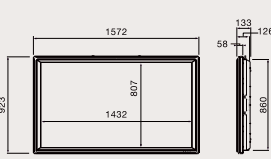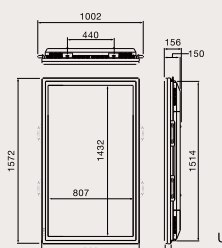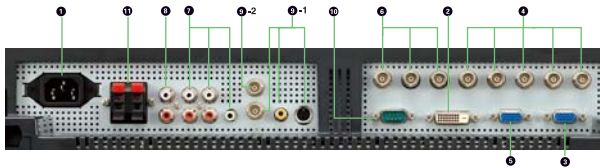|			LDT321V	LDT421V2	LDT461V	LDT521V	LDT651L	LDT651P
			Landscape/Portrait	Landscape/Portrait	Landscape/Portrait	Landscape/Portrait	Landscape	Portrait
LCD module	Diagonal		31.51" (800mm)	42.02" (1067mm)	45.99" (1168mm)	52.04" (1322mm)	64.53" (1639mm)	64.53" (1639mm)
	Pixel pitch		0.511mm	0.681mm	0.530mm	0.600mm	0.744mm	0.744mm
	Resolution		1366 x 768 (WXGA)	1366 x 768 (WXGA)	1920 x 1080 (FHD)	1920 x 1080 (FHD)	1920 x 1080 (FHD)	1080 x 1920 (FHD)
	Colour		16.7 Million	16.7 Million	16.7 Million	16.7 Million	16.7 Million	16.7 Million
	Brightness (typ.)		500cd/m²	500cd/m²	500cd/m²	450cd/m²	420cd/m²	450cd/m²
	Contrast ratio		1200 : 1	Max 1600 : 1 with CRO✳	1500 : 1	1800 : 1	2000 : 1	2000 : 1
	Viewing angle (CR≧10)		Up and Down 176°, Left and Right 176°	Up and Down 178°, Left and Right 178°	Up and Down 176°, Left and Right 176°	Up and Down 176°, Left and Right 176°	Up and Down 176°, Left and Right 176°	Up and Down 176°, Left and Right 176°
	Response time		6ms (Gray to Gray)	9ms (Gray to Gray)	6ms (Gray to Gray)	6ms (Gray to Gray)	6ms (Gray to Gray)	6ms (Gray to Gray)
Viewable size			698mm x 392mm / 27.5" x 15.4"	930mm x 523mm / 36.6" x 20.6"	1018mm x 573mm / 40.1" x 22.5"	1152mm x 648mm / 45.4" x 25.5"	1428mm x 804mm / 56.2" x 31.7"	804mm x 1428mm / 31.7" x 56.2"
Power management			VESA DPM				VESA DPM / DVI DMPM	
Plug and play			VESA DDC2B, DDC/CI				VESA DDC2B	
Auto adjustment			Yes (Position / Phase / Clock)				Yes (Position / Phase / Clock)	
OSD user function			Brightness, Contrast, Black level, Zoom, PIP, Screen saver, Side border colour, Gamma selection, Black level expansion, Heat status, Power-on delay, schedule, Tiling, etc.			Brightness, Contrast, Black level, PIP, Screen motion, Power-on delay, Enlarge, etc.		
Input / Output signal	PC Input / Output	Input connector (Analog)	BNC (R, G, B, H, V) , Mini D-sub 15 pin			BNC (R, G, B, H, V) (PC/AV common) , Mini D-sub 15 pin		
		(Digital)	DVI-D (PC/AV common)	HDMI (PC/AV common)	HDMI (PC/AV common) x2	DVI-D (PC/AV common), HDMI (PC/AV common)		DVI-D (PC/AV common)
		Output connector		Mini D-sub 15 pin		DVI-D (PC/AV common)		
		Horizontal frequency	31.5 - 91.1kHz	15.625 / 15.734, 31.5 - 91.1kHz	15.625 / 15.734, 31.5 - 91.1kHz	Analog: 31.0 - 81.1kHz, Digital: 31.0 - 80.0kHz		
		Vertical frequency		50.0 / 58.0 - 85.0Hz		Analog: 56 - 76.2Hz, Digital: 60 - 75Hz		
		Video signal		Analog: Analog RGB, Digital: TMDS (with HDCP)		Analog: Analog RGB, Digital: TMDS (with HDCP)		
		Sync signal	Separate (TTL)	Separate (TTL), Sync on Green	Separate (TTL), Composite (0.3V) , Sync on Green	Separate (TTL), Composite (TTL), Sync on Green		
		Supported resolution	640x480, 800x600, 1024x768, 1280x768, 1360x768, 1280x1024, 1600x1200 (Compressed/Simplified)		640x480, 800x600, 1024x768, 1280x768, 1360x768, 1280x1024, 1600x1200 (Compressed/Simplified), 1920x1080, 1920x1200 (Compressed/Simplified)	640x480, 800x600, 1024x768, 1280x768, 1360x768, 1280x1024, 1600x1200 (Compressed/Simplified), 1920x1080, 1920x1200 (Compressed/Simplified)		
	AV Input / Output	Input connector (Analog)	Composite <BNC/RCA>, Separate (Y/C) <S-TERMINAL>, Component (Y/Pb/Pr) <BNC>			Composite <BNC>, Separate (Y/C) <S-TERMINAL>, Component (Y/Pb/Pr) <BNC> (PC/AV common)		Composite <BNC>, Component (Y/Pb/Pr) <BNC> (PC/AV common)
		(Digital)	DVI-D (PC/AV common)	HDMI (PC/AV common)	HDMI (PC/AV common) x 2	HDMI (PC/AV common)		DVI-D (PC/AV common)
		Output connector	Composite <BNC>	Composite <BNC>	Composite <BNC>	—		—
		Supported resolution	Composite/Separate: NTSC, PAL, SECAM, 4.43NTSC, PAL60 Component/Digital: 480i, 480p, 720p, 1080i, 1080p (LDT461V)			Composite/Separate: NTSC, PAL, SECAM, 4.43NTSC, PAL60 Component: 480i, 480p, 720p, 1080i, 1080p Digital: 480i, 480p, 720p, 1080i, 1080p		Composite/Separate: NTSC, PAL, SECAM, 4.43NTSC, PAL60 Component: 480i, 480p, 720p, 1080i Digital: 480i, 480p, 720p, 1080i, 1080p
	AUDIO Input / Output	Input connector (Analog)	RCA pin-jack L/R x 2, Stereo mini jack			RCA pin-jack L/R, Stereo mini jack		
		(Digital)	—	HDMI (HD: digital audio)	HDMI (HD: digital audio) x 2	HDMI (digital audio)		—
		Output connector	RCA pin-jack L/R			RCA pin-jack L/R		
	Speaker / Audio Output		External speaker jack, 7W + 7W (8 ohm)			External speaker jack, 7W + 7W (6 ohm)		
	Control Input / Output	Input connector	RS-232C <Mini D-sub 9 pin>			RS-232C <Mini D-sub 9 pin>, LAN <Rj45>		
		Output connector	—	RS-232C <Mini D-sub 9 pin>	RS-232C <Mini D-sub 9 pin>	RS-232C <Mini D-sub 9 pin>		RS-232C <Mini D-sub 9 pin>
Power Supply	Input voltage		AC100 - 240V, 50/60Hz			AC100 - 240V, 50/60Hz		
	Power consumption		160W (140W without speaker)	230W (210W without speaker)	285W (265W without speaker)	275W	480W	560W
	Power consumption at power saving		Active Off < 5W (Mechanical Power SW Off : 0W)			Active Off < 12W	Active Off < 14W	Active Off < 10W
Operational Environment	Temperature		5 to 40°C / 41 to 104°F (Landscape Mode), 5 to 35°C / 41 to 95°F (Portrait Mode)			0 to 40°C / 32 to 104°F		
	Humidity		20 - 80% (without condensation)			20 - 80% (without condensation)		
Dimension (WxHxD)	Net with stand		789mmx535mmx246mm / 31.1"x21.1"x9.7"	1022mmx643mmx386mm / 40.2"x25.3"x15.2"	1122mmx703mmx405mm / 44.2"x27.7"x15.9"			
	Net without stand		789mmx476mmx133mm / 31.1"x18.7"x5.2"	1022mmx612mmx127mm / 40.2"x24.1"x5.0"	1122mmx663mmx136mm / 44.2"x26.1"x5.4"	1254mmx742mmx149mm / 49.4"x29.2"x5.9"	1572mmx923mmx126mm / 61.9"x36.3"x5.0"	923mmx1572mmx150mm / 36.3"x61.9"x5.9"
	Gross		930mmx645mmx324mm / 36.7"x25.4"x12.8"	1180mmx759mmx290mm / 46.5"x29.8"x11.4"	1285mmx885mmx275mm / 50.6"x38.8"x10.8"	1390mmx880mmx385mm / 54.7"x34.6"x15.2"	1720mmx1190mmx575mm / 67.7"x46.9"x22.6"	1170mmx1740mmx575mm / 46.1"x68.6"x22.6"
Weight	Net with stand		Approximately 17.5kg / 38.6lbs	Approximately 27.4kg / 60.3lbs	Approximately 34.6kg / 76.1lbs			
	Net without stand		Approximately 16.2kg / 35.7lbs	Approximately 26.0kg / 57.2lbs	Approximately 33.0kg / 72.6lbs	Approximately 39kg / 86lbs	Approximately 62kg / 137lbs	Approximately 66kg / 145lbs
	Gross		Approximately 23.5kg / 51.8lbs	Approximately 33.5kg / 73.7lbs	Approximately 43.0kg / 94.6lbs	Approximately 47kg / 104lbs	Approximately 90kg / 198lbs	Approximately 91kg / 201lbs
Wall mounting interface			12 holes (100mm / 3.9" pitches M6 screw)			4 or 6 holes (200 x 200mm M6 screw)	4 holes (440 x 650 mm, M10 screw)	
Complied regulatory and guidelines			UL60950-1/C-UL/CE Marking/TUV-GS/BSMI/PSB/GOST-R/FCC-B/DOC-B/C-Tick/RoHS/US Mercury/ CCC only for Chinese model		UL60950-1/C-UL/CE Marking/TUV-GS/BSMI/PSB/GOST-R/FCC-A/DOC-A /C-Tick/RoHS/ US Mercury/CCC only for Chinese model	UL60950-1/C-UL/CE Marking/GOST-R/FCC-A/DOC-A /C-Tick/RoHS/US Mercury		
Accessories			Power cord, VGA (Mini D-sub 15 pin) cable, User's manual, Wireless remote controller, Battery, Clamper, Screw for clamper, Screw for main switch cover, Main switch cover, Cable holder, Band, Screw for stand, Stand x 1pair			Power cord, User's manual, Wireless remote controller, Battery, CD-Rom 2 Stand hole protection cover		

Functions & Features

	LDT321V	LDT421V2	LDT461V	LDT521V	LDT651L	LDT651P
Colour temperature	5000K/6500K/9300K/User	2600-10000K (100k step)	2600-10000K (100k step)	3000-10000K (500k step)	3000-10000K (500k step)	3000-10000K (500k step)
Digital zoom	✔ (Custom zoom)	✔ (Custom zoom)	✔ (Custom zoom)	✔ (No custom zoom)	✔ (No custom zoom)	✔ (No custom zoom)
Tiling and frame comp	Max. 4 x 4	Max. 4 x 4	2 x 2, 3 x 3, 4 x 4, 5 x 5	2 x 2, 3 x 3, 4 x 4, 5 x 5	2 x 2, 3 x 3, 4 x 4, 5 x 5	2 x 2, 3 x 3, 4 x 4, 5 x 5
PiP/PoP	PiP, PoP	PiP, PoP	PiP, PoP, Side by Side	PiP, PoP, Side by Side	PiP, PoP, Side by Side	PiP, PoP, Side by Side
Scheduling	✔	✔	✔	✔	✔	✔
Screen saver (Motion)	✔	✔	✔	✔	✔	✔
Side border colour	OFF (Black)/50% (Gray)/100% (White)	OFF (Black)/50% (Gray)/100% (White)	OFF (Black)/50% (Gray)/100% (White)	—	—	—
Power-on delay	✔	✔	✔	✔	✔	✔
Long cable compensation	—	—	✔ (Manual peaking control)	—	—	—
Monitor control (RS232C)	✔ (In)	✔ (In/Out)	✔(In/Out)	✔ (In/Out)	✔(In/Out)	✔(In/Out)
Monitor control (LAN <Rj45>)	—	—	—	✔	✔	—
Self diagnostics	✔	✔	✔	✔	✔	✔

✱ CRO: Contrast Ratio Optimizer

Connector Terminal

LDT321V

❶ AC IN Connector
❷ RGB 1 IN (DVI-D)
❸ RGB 2 IN (mini D-Sub 15 pin)
❹ RGB 3 IN [R, G, B, H, V] (BNC)
❺ RGB OUT (mini D-Sub 15 pin)
❻ DVD/HD IN (BNC)
❼ AUDIO IN 1, 2, 3
❽ AUDIO OUT
❾ VIDEO IN/OUT
❿ External Control (mini D-Sub 9 pin)
⓫ External Speaker Terminal

LDT421V2

LDT461V

❶ External Speaker Terminal
❷ AC IN Connector
❸ LDT461V: RGB 1/RGB 2 IN (HDMI 1/HDMI 2)
   LDT421V2: RGB 2 IN (HDMI)
❹ LDT461V: RGB 3 IN (mini D-Sub 15 pin)
   LDT421V2: RGB 2 IN (mini D-Sub 15 pin)
❺ LDT461V: RGB 4 IN [R, G, B, H, V] (BNC)
   LDT421V2: RGB 3 IN [R, G, B, H, V] (BNC)
❻ RGB OUT (mini D-Sub 15 pin)
❼ DVD/HD IN [Y, Pb/Cb, Pr/Cr] (BNC)
❽ AUDIO IN 1, 2, 3
❾ AUDIO OUT
❿ External Control (mini D-Sub 9 pin)
⓫ VIDEO IN/OUT

LDT521V
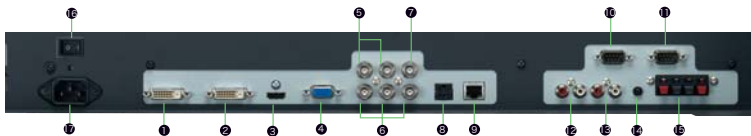
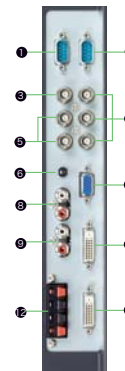**LDT651L**
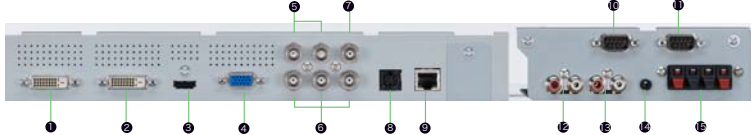
❶ PC/AV Output Terminal (DVI-D)
❷ PC1 Input Terminal (DVI-D)
   AV1 Input Terminal (DVI-D)
❸ PC2 Input Terminal (HDMI)
   AV2 Input Terminal (HDMI)
❹ PC3 Input Terminal (mini D-Sub 15 pin)
❺ PC4 Input Terminals (BNC)
❻ AV3 Input Terminals (BNC)
❼ AV5 Input Terminal (BNC)
❽ AV4 Input Terminal (S)
❾ LAN Terminal
❿ RS-232C Output Terminal (D-Sub 9 pin)
⓫ RS-232C Input Terminal (D-Sub 9 pin)
⓬ PC/AV Audio Output Terminals
⓭ AV Audio Input Terminals
⓮ PC Audio Input Terminal
⓯ External Speaker Terminals
⓰ Main Power Switch
⓱ AC Input Terminal

LDT651P

❶ RS-232C Output Terminal (D-Sub 9 pin)
❷ RS-232C Input Terminal (D-Sub 9 pin)
❸ AV3 Input Terminal (BNC)
❹ AV2 Input Terminals (BNC)
❺ PC3 Input Terminals (BNC)
❻ PC Audio Input Terminal
❼ PC2 Input Terminal (mini D-Sub 15 pin)
❽ AV Audio Input Terminals
❾ PC/AV Audio Output Terminals
❿ PC1 Input Terminal (DVI-D)
   AV1 Input Terminal (DVI-D)
⓫ PC/AV Output Terminal (DVI-D)
⓬ External Speaker Terminals

Optional Stereo Speakers

SP-321V
for LDT321V

SP-421V
for LDT421V2

SP-461V
for LDT461V

Optional Bezel

OB-421V-SL
OB-461V-SL

Silver color bezel is available for
LDT421V2 and 461V as an option.

MITSUBISHI ELECTRIC EUROPE (BENELUX Office)

Nijverheidsweg 23A, 3641 RP Mijdrecht - The Netherlands
Tel: +31 (0)297-282461 Fax: +31 (0)297-283936 - www.MitsubishiElectric.nl