

## COLOUR DISPLAY UNIT CDU 1448G/LO01

Manufactured by LITE-ON, this monitor is identified as DSM 50-148 on the front and rear of the case and in the Progetto di Gestione; the homologation label on the rear of the monitor bears the writing **CDU 1448G/LO01**.

### CHARACTERISTICS

VGA-compatible, analog, power saving, ergonomic, multiscan monitor.

- Diagonal screen size: 14"  
Horizontal size: 247 ± 7 mm  
Vertical size: 185 ± 5 mm
- Input voltage: 90-132 / 180-264 V (universal power supply)  
Line voltage frequency: 50 - 60 Hz ± 3 Hz  
Degaussing: At power on
- Input signals:  
Video: Red, Green, Blue, Hsync, Vsync  
Signal: Depends on the video controller (Eg: voltage steps)  
Level: 0 - 700 mV  
Polarity: Positive
- External adjustments: Brightness - Contrast - Horizontal amplitude -  
Vertical amplitude - Horizontal shift -  
Vertical shift
- Preset timings:

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VIDEO MODE	STANDARD VGA			ERGO VGA	SUPER VGA			XGA	VGA+
<b>HORIZONTAL RESOLUTION (DOTS)</b>	640			640	800	800	800	1024	1024
<b>FREQUENCY (KHz)</b>	31.469			37.86	35.156	37.879	48.077	35.524	48.363
<b>VERTICAL RESOLUTION (LINES)</b>	350	400	480	480	600	600	600	768	768
<b>FREQUENCY (Hz)</b>	70.08	70.08	59.95	72.8	56.25	60.316	72.18	87	60
<b>V/H POLARITY</b>	-/+	+/-	-/-	-/-	+/+	+/+	+/+	+/+	-/-
<b>PIXEL RATE (MHz)</b>	25,175	25,175	25,175	31,5	36	40	50	44,9	65
<b>INTERLACED</b>	NO	NO	NO	NO	NO	NO	NO	YES	NO

- Power Saving

VIDEO MODE	HORIZ. SYNC	VERT. SYNC	VIDEO	POWER. SAV.	CONSUMP.
On	Present	Present	Active	No	< 80 W
Stand-by	Absent	Present	Darkened	Minimum	< 15 W
Suspended	Present	Absent	Darkened	Sunstantial	< 15 W
Off	Absent	Absent	Darkened	Maximum	< 8 W

## DISASSEMBLY PROCEDURES

The disassembly procedures for the **CDU 1448G/LO01 (DSM 50-148)** monitor are the same as those explained in Chapter 31 for the **CDU1438SE/LO01 (DSM 28-039PS)**.

## VIDEO ADJUSTMENTS

This monitor has two types of adjustments:

- External adjustments performed by the user.
- Internal adjustments performed by the field engineering service.

## EXTERNAL CONTROLS AND ADJUSTMENTS PERFORMED BY THE USER

These adjustments are the same as those explained in Chapter 31 for the **CDU1438SE/LO01 (DSM 28-039PS)**.

## INTERNAL ADJUSTMENTS PERFORMED BY THE FIELD ENGINEERING SERVICE

The location and function of the trimmers and adjustment potentiometers are identical to those indicated in Chapter 31 for the **CDU1438SE/LO01 (DSM 28-039PS)**.

## B+ VOLTAGE ADJUSTMENTS

- This adjustment is identical to the one explained in Chapter 31 for the **CDU1438SE/LO01 (DSM 28-039PS)**.

## SYNCHRONISM ADJUSTMENTS

- Power on the monitor to activate the transmission of sync signals to the main board.
- Short circuit pins 1 and 2 of P002 to disable the Power Saving function.
- On the main board, attach a frequency meter to the anode of diode D410 and adjust trimmer R408 until a  $31.25 \text{ KHz} \pm 100 \text{ Hz}$  horizontal frequency is obtained.

**NOTE:** Once the adjustment is made remove the short circuit from pins 1 and 2 of P002.

## PICTURE SIZE ADJUSTMENTS

- This adjustment is the same as the one explained in Chapter 31 for the **CDU1438SE/LO01 (DSM 28-039PS)**.

## VERTICAL LINEARITY ADJUSTMENTS

- This adjustment is the same as the one explained in Chapter 31 for the **CDU1438SE/LO01 (DSM 28-039PS)**.

## SCREEN WHITE BALANCE ADJUSTMENTS

**NOTE:** A **brightness detector** and **color analyzer** are required in order to correctly perform these adjustments.

- Display a cross hatch pattern in the 640x480 (60 Hz) video mode.
- Adjust the pin cushion distortion using trimmers R352 and R373 on the main board.
- Display a white screen page (700 mV) in the 640x480 (60 Hz) video mode.
- Adjust the brightness and contrast external controls to their maximum setting and adjust the potentiometer of grid G2 until obtaining a 1 FL. luminance.
- Adjust trimmer R940 on the video amplifier board to its center position.
- Adjust trimmer R970 on the video amplifier board until obtaining a chromaticity coordinate of  $Y = 0.280$ .
- Adjust trimmer R910 on the video amplifier board until obtaining a chromaticity coordinate of  $X = 0.290$ .
- Adjust potentiometer of grid G2 to obtain a 0.5 FL luminance.
- Display a 50x50 mm white pattern in the 640x480 (60 Hz) video mode.

- Adjust the contrast external control to its maximum setting and the external brightness control until a click sounds.
- Adjust trimmer R532 on the video amplifier board until obtaining a 50 FL luminance.
- Adjust the contrast external control until obtaining a 8 FL luminance.
- Adjust trimmer R562 on the video amplifier board until obtaining a chromaticity coordinate of  $Y = 0.280$ .
- Adjust trimmer R502 on the video amplifier board until obtaining a chromaticity coordinate of  $X = 0.290$ .

**FOCUS ADJUSTMENTS**

- This adjustment is identical to the one explained in Chapter 31 for the **CDU1438SE/LO01 (DSM 28-039PS)**.