



## 98-inch Class 4K UHD LCD Display TH-98LQ70LU

### Product specification (design and specification subject to change without notice)

#### ■ DISPLAY PANEL

|                                       |                                |
|---------------------------------------|--------------------------------|
| Screen Size (Diagonal)                | 97.5-inch (2476.9 mm)          |
| Panel Type                            | IPS / Direct-LED               |
| Aspect Ratio                          | 16:9                           |
| Effective Display Area (W x H)        | 85.0" x 47.8" (2159 x 1214 mm) |
| Number of Pixels (H x V)              | 3840 x 2160 pixels             |
| Brightness                            | 500 cd/m <sup>2</sup>          |
| Contrast Ratio                        | 1300:1                         |
| Dynamic Contrast Ratio                | 500000:1                       |
| Response Time                         | 8 ms (G to G)                  |
| Viewing Angle (Horizontal / Vertical) | 178° / 178°                    |
| Panel Life Time                       | approx. 50000 hours (typ)*     |

\* When the panel lifetime is at 50% of the brightness under the condition of 25 degrees Celsius (+/- 2 degrees Celsius).  
Panel lifetime may be shortened due to usage environment.

#### ■ CONNECTION TERMINAL

|                |                                                                                                                                                                     |
|----------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| HDMI IN        | HDMI TYPE A Connector x 4<br>HDMI 1 * <sup>1</sup> / HDMI 2 * <sup>1</sup> (Up to 4K@50/60 Hz)<br>HDMI 3 * <sup>1</sup> / HDMI 4 * <sup>2</sup> (Up to 2K@50/60 Hz) |
| DisplayPort IN | DisplayPort x 1 (DP1.2a) * <sup>2</sup>                                                                                                                             |
| DVI-D IN       | DVI-D 24 Pin x 1 * <sup>3</sup>                                                                                                                                     |
| AUDIO IN (L/R) | Stereo mini jack (M3) x 1 set (shared with PC IN)                                                                                                                   |
| PC IN          | Mini D-sub 15Pin x 1 (Female) * <sup>4</sup>                                                                                                                        |
| AUDIO IN (L/R) | Stereo mini jack (M3) x 1 set (shared with DVI-D IN)                                                                                                                |
| Function Slot  | SLOT NX x 2 * <sup>5</sup> (Vacant)                                                                                                                                 |

\*<sup>1</sup> : HDCP1.4 supported, Embedded audio supported

\*<sup>2</sup> : HDCP1.3 supported, Embedded audio supported

\*<sup>3</sup> : Compliance with DVI Revision 1.0, HDCP1.1 supported

\*<sup>4</sup> : RGB / YPbPr switcable

\*<sup>5</sup> : Option 3G-SDI terminal board TY-TBN03G: (w/ active through)

#### ■ CONTROL

|              |                                      |
|--------------|--------------------------------------|
| SERIAL IN    | D-sub 9pin x 1 * <sup>1</sup>        |
| LAN          | RJ45 x 1 100BASE-TX * <sup>2</sup>   |
| DIGITAL LINK | RJ45 x 1 100BASE-TX (shard with LAN) |

\*<sup>1</sup> : RS-232C compatible

\*<sup>2</sup> : PLink compatible (shared with DIGITAL LINK)

#### ■ AUDIO

|                  |                             |
|------------------|-----------------------------|
| AUDIO OUT        | Stereo mini jack (M3) x 1   |
| Built in Speaker | 20 W [10 W + 10 W] (10%THD) |

#### ■ ELECTRICAL

|                                    |                            |
|------------------------------------|----------------------------|
| Power Requirements                 | 110 - 127 V AC, 50 / 60 Hz |
| Power Consumption                  | 650 W (666 VA)<br>2218 BTU |
| On Mode Average Power Consumption* | 485 W                      |
| Power Off Condition                | 0.3 W                      |
| Stand-by Condition                 | 0.5 W                      |
| Network Stand-by Mode              | 3 W                        |

\*Based on IEC 62087 Ed.2 measurement method

#### ■ MECHANICAL

|                               |                                                |
|-------------------------------|------------------------------------------------|
| Dimensions (W x H x D)        | 87.9" x 50.7" x 4.5" (2233 x 1288 x 113 mm)    |
| Carton Dimensions (W x H x D) | 94.8" x 59.9" x 18.2" (2406 x 1520 x 460 mm)   |
| Weight                        | approx. 231.5 lbs (105 kg)                     |
| Gross Weight                  | approx. 287 lbs (130 kg)                       |
| Cabinet Material / Color      | Metal / Black                                  |
| Protection Glass              | No                                             |
| Mount Screw Holes             | Diameter: M16, Valid screw depth: 1.1" (26 mm) |
| Eyebolt Screw Holes           | Diameter: M12, Valid screw depth: 1" (25 mm)   |

#### ■ INSTALLATION

|               |                                                                     |
|---------------|---------------------------------------------------------------------|
| Orientation   | Landscape / Portrait                                                |
| Tilting Angle | 10 degrees with landscape setting / 5 degrees with portrait setting |

\*Please contact your sales representative with regard to the tilt angle before installation.

#### ■ ENVIRONMENTAL

|                       |             |                                                                                             |
|-----------------------|-------------|---------------------------------------------------------------------------------------------|
| Operating Environment | Temperature | : 32°F to 104°F (0°C to 40°C) * <sup>1</sup><br>: 32°F to 95°F (0°C to 35°C) * <sup>2</sup> |
|                       | Humidity    | : 20% to 80% (No condensation)                                                              |
|                       | Altitude    | : 0 to 7874 feet (0 to 2400 m) * <sup>3</sup>                                               |
| Storage Environment   | Temperature | : -4°F to 140°F (-20°C to 60°C)                                                             |
|                       | Humidity    | : 20% to 80% (No condensation)                                                              |

\*<sup>1</sup> : for up to 4593 ft (1400 m) altitude \*<sup>2</sup> : for between 4593 ft (1400 m) and 7874 ft (2400 m) altitude

\*<sup>3</sup> : When using the unit where it is 4593 ft (1400 m) and higher and below 7874 ft (2400 m) above sea level, make sure [High altitude mode] is set to [ON].

|          |              |
|----------|--------------|
| UPC Code | 885170259393 |
|----------|--------------|

**MAIN FEATURE**

|                                   |          |
|-----------------------------------|----------|
| Automatic Picture Position        | Yes      |
| 4 Input Multi Display (up to FHD) | Yes      |
| Screen Saver                      | Yes      |
| PC Power Management               | Yes      |
| HDMI Power Management             | Yes      |
| DVI-D Power Management            | Yes      |
| ECO Mode                          | Yes      |
| Button Lock                       | Yes      |
| Remote-control Lock               | Yes      |
| Power-on Screen Delay             | Yes      |
| Input Search                      | Yes      |
| Local Dimming                     | Yes      |
| Operating Time*                   | 24 h/day |

\*In case of running for a long time, the moving image is recommended to be displayed. If you display a still picture for an extended period, the image retention might remain on the screen. However, image retention can gradually disappear by displaying a movie images.

**OPTIONAL ACCESSORIES**

|                         |                |
|-------------------------|----------------|
| 3G-SDI Terminal Board   | TY-TBN03G*1    |
| Pedestal                | TY-ST103PF9    |
| Wall-hanging Bracket    | TY-WK103PV9    |
| Celling-hanging Bracket | TY-CE103PS10*2 |
| Digital Interface Box   | ET-YFB100G     |

\*1 2 boards (total 3G-SDI x 4) required for 4K@50/60 Hz,  
1 board (total 3G-SDI x 2) required for up to 4K@25/30 Hz  
\*2 Tilt angle limited to 10 degree maximum

**STANDARD (CERTIFICATIONS)**

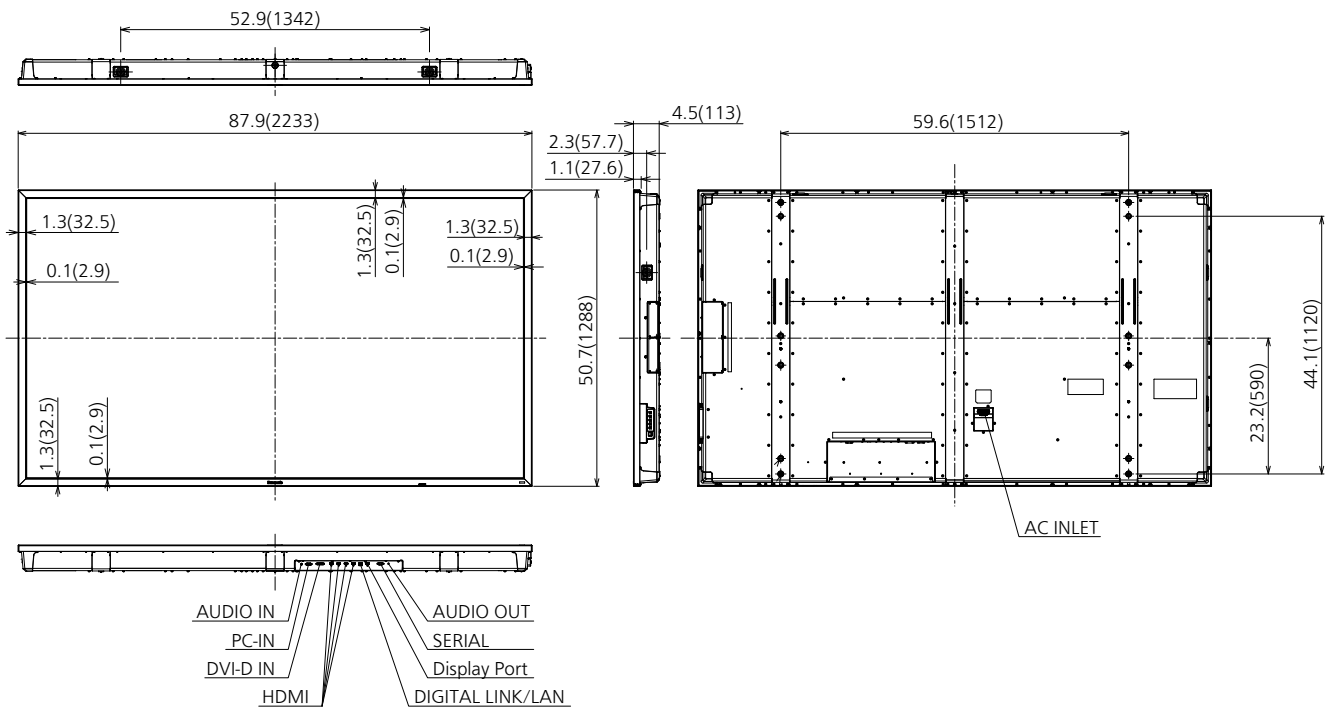
|                       |                                  |
|-----------------------|----------------------------------|
| Safety Regulations    | UL60065, CAN/CSA22.2 No 60065:03 |
| Radiation Regulations | FCC Part15 Class B, ICES-003     |

**INCLUDED ACCESSORIES**

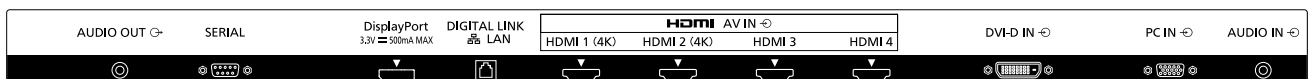
AC power cord (Approx. 118" (3 m)), Operating Instructions (Book), (CD-ROM), Remote Control Transmitter, Batteries x 2, Clamper, Eyebolt cap, Eyebolt, Panasonic badge, Panasonic badge attachment plate, Allen wrench

**DIMENSIONS**

Cautions: This drawing is not a scale  
Units : inches (mm)



**CONNECTION TERMINAL**



\* Specifications and appearance are subject to change without notice.

## List of correspondence signals

Following signal timing is preset to this unit.

These preset signals are written on EDID of the each input terminal.(Except for \*6)

In many cases, it is possible to receive the signals other than below with this unit's multi scan function.  
(Except for 4K signal)

✓ : Preset signal

| Signal name                 | H-Freq.<br>(kHz) | V-Freq.<br>(Hz) | Dot clock<br>frequency<br>(MHz) | PC IN | HDMI 1<br>HDMI 2 | HDMI 3<br>HDMI 4<br>DVI-D IN | DIGITAL<br>LINK | Display<br>Port |
|-----------------------------|------------------|-----------------|---------------------------------|-------|------------------|------------------------------|-----------------|-----------------|
| 525 (480) / 60i             | 15.73            | 59.94           | 13.5                            | ✓     |                  |                              |                 |                 |
| 625 (576) / 50i             | 15.63            | 50.00           | 13.5                            | ✓     |                  |                              |                 |                 |
| 525 (480) / 60i*2           | 15.75            | 60.00           | 27.0                            |       | ✓                | ✓                            | ✓               |                 |
| 625 (576) / 50i             | 15.63            | 50.00           | 27.0                            |       | ✓                | ✓                            | ✓               |                 |
| 525 (480) / 60p*2           | 31.50            | 60.00           | 27.0                            | ✓     | ✓                | ✓                            | ✓               |                 |
| 625 (576) / 50p             | 31.25            | 50.00           | 27.0                            | ✓     | ✓                | ✓                            | ✓               |                 |
| 750 (720) / 60p*2           | 45.00            | 60.00           | 74.25                           | ✓     | ✓                | ✓                            | ✓               | ✓               |
| 750 (720) / 50p             | 37.50            | 50.00           | 74.25                           | ✓     | ✓                | ✓                            | ✓               | ✓               |
| 1125 (1080) / 60i*1*2       | 33.75            | 60.00           | 74.25                           | ✓     | ✓                | ✓                            | ✓               |                 |
| 1125 (1080) / 50i*1         | 28.13            | 50.00           | 74.25                           | ✓     | ✓                | ✓                            | ✓               |                 |
| 1125 (1080) / 24p*1*2       | 27.00            | 24.00           | 74.25                           | ✓     | ✓                | ✓                            | ✓               |                 |
| 1125 (1080) / 25p*1         | 28.13            | 25.00           | 74.25                           | ✓     | ✓                | ✓                            | ✓               |                 |
| 1125 (1080) / 30p*1*2       | 33.75            | 30.00           | 74.25                           | ✓     | ✓                | ✓                            | ✓               |                 |
| 1125 (1080) / 60p*1*2       | 67.50            | 60.00           | 148.5                           | ✓     | ✓                | ✓                            | ✓               | ✓               |
| 1125 (1080) / 50p*1         | 56.25            | 50.00           | 148.5                           | ✓     | ✓                | ✓                            | ✓               | ✓               |
| 640 × 480                   | 31.47            | 59.94           | 25.18                           | ✓     | ✓                | ✓                            | ✓               | ✓               |
| 800 × 600                   | 37.88            | 60.32           | 40.00                           | ✓     | ✓                | ✓                            | ✓               | ✓               |
| 1024 × 768                  | 48.36            | 60.00           | 65.00                           | ✓     | ✓                | ✓                            | ✓               | ✓               |
| 1280 × 768                  | 47.70            | 60.00           | 80.14                           | ✓     | ✓*6              | ✓                            | ✓               | ✓               |
| 1366 × 768                  | 48.39            | 60.04           | 86.71                           | ✓     | ✓*6              | ✓                            | ✓               | ✓               |
| 1280 × 1024                 | 63.98            | 60.02           | 108.0                           | ✓     | ✓                | ✓                            | ✓               | ✓               |
| 1600 × 900                  | 60.00            | 60.00           | 108.0                           | ✓     | ✓                | ✓                            | ✓               | ✓               |
| 1920 × 1080                 | 67.50            | 60.00           | 148.5                           | ✓     | ✓                | ✓                            | ✓               | ✓               |
| 1920 × 1200                 | 74.04            | 59.95           | 154.0                           | ✓     | ✓                | ✓                            | ✓               | ✓               |
| <b>4K signal</b>            |                  |                 |                                 |       |                  |                              |                 |                 |
| 3840 / 24p*2                | 54.00            | 24.00           | 297.0                           |       | ✓                |                              | ✓               | ✓               |
| 3840 / 25p                  | 56.25            | 25.00           | 297.0                           |       | ✓                |                              | ✓               | ✓               |
| 3840 / 30p*2                | 67.50            | 30.00           | 297.0                           |       | ✓                |                              | ✓               | ✓               |
| 4096 / 24p*2                | 54.00            | 24.00           | 297.0                           |       | ✓                |                              | ✓               |                 |
| 3840 / 50p                  | 112.5            | 50.00           | 594.0                           |       | ✓                |                              | ✓*4             | ✓*5             |
| 3840 / 60p*2                | 135.0            | 60.00           | 594.0                           |       | ✓                |                              | ✓*4             | ✓*5             |
| 4096 / 50p                  | 112.5            | 50.00           | 594.0                           |       | ✓                |                              | ✓*4             |                 |
| 4096 / 60p*2                | 135.0            | 60.00           | 594.0                           |       | ✓                |                              | ✓*4             |                 |
| <b>4K (Dual Link)signal</b> |                  |                 |                                 |       |                  |                              |                 |                 |
| 3840 / 50p                  | 112.5            | 50.00           | 297.0                           |       | ✓*3              |                              |                 |                 |
| 3840 / 60p*2                | 135.0            | 60.00           | 297.0                           |       | ✓*3              |                              |                 |                 |
| 4096 / 50p                  | 112.5            | 50.00           | 297.0                           |       | ✓*3*6            |                              |                 |                 |
| 4096 / 60p*2                | 135.0            | 60.00           | 297.0                           |       | ✓*3*6            |                              |                 |                 |

\*1: Based on SMPTE 274M standard.

\*2: Compatible with frame frequency 1/1.001

\*3: The format supports Dual Link.

\*4: Supported in YCBCR 4:2:0 format

\*5: Supported with MST (Multi Stream Transport) only

\*6: Not written on EDID

In some cases, these signals may not be displayed when setting Resolution on your PC.

### Note

- Signals without above specification may not be displayed properly.
- For the signals when 3G-SDI Terminal Board with Audio is installed, refer to the manual included with it.