



**PROPRIETARY NOTE**

THIS SPECIFICATION IS THE PROPERTY OF BOE DT AND SHALL NOT BE REPRODUCED OR COPIED WITHOUT THE WRITTEN PERMISSION OF BOE DT AND MUST BE RETURNED TO BOE DT UPON ITS REQUEST

**TITLE:**

**HV550WU2-202 Preliminary Product Specification**

BEIJING BOE DISPLAY TECHNOLOGY

SPEC. NUMBER  
S8XX-XXXX

PRODUCT GROUP  
TFT LCD

REV.  
0

ISSUE DATE  
2013.05.03

PAGE  
1 of 25



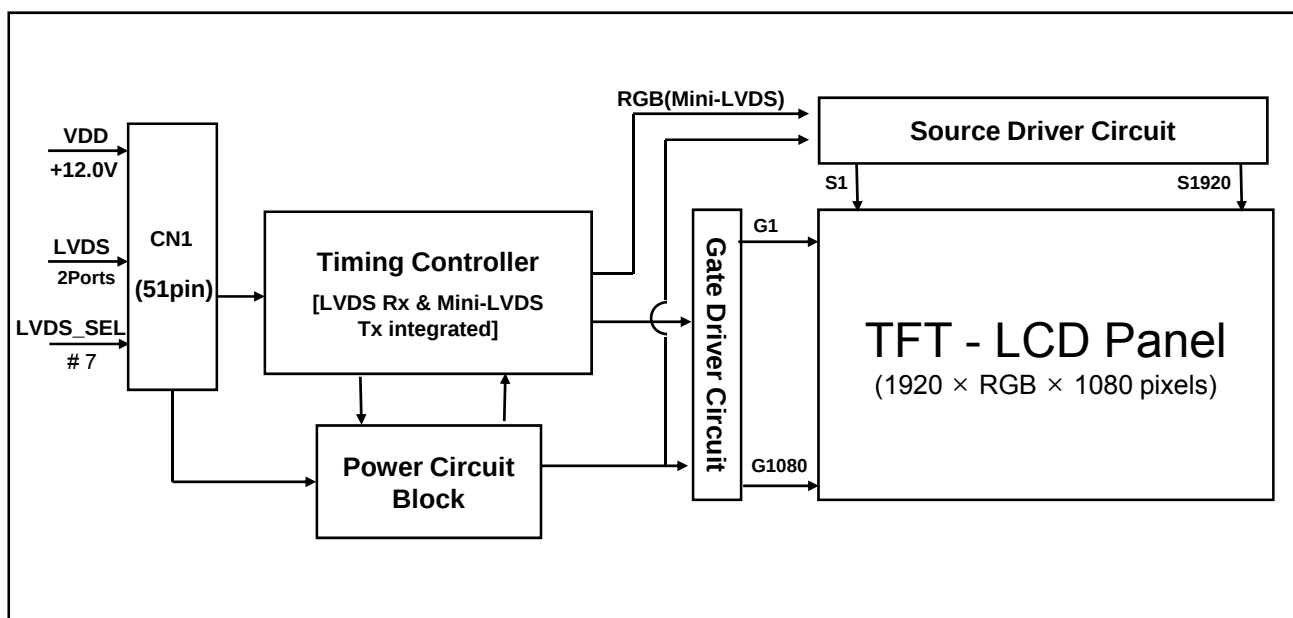
|  京东方<br>BOE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | PRODUCT GROUP                                                  | REV  | ISSUE DATE      |    |      |      |  |                   |   |  |          |   |   |                     |   |  |                  |  |  |              |  |  |                  |  |  |                           |  |   |                          |   |   |                           |   |  |                    |  |   |                      |   |  |                                 |  |  |                    |  |   |                              |    |  |                       |  |  |                            |  |  |                                                                |  |  |                    |  |   |                        |    |   |                            |    |   |             |    |   |                       |    |    |                     |    |    |                    |    |    |          |    |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------|------|-----------------|----|------|------|--|-------------------|---|--|----------|---|---|---------------------|---|--|------------------|--|--|--------------|--|--|------------------|--|--|---------------------------|--|---|--------------------------|---|---|---------------------------|---|--|--------------------|--|---|----------------------|---|--|---------------------------------|--|--|--------------------|--|---|------------------------------|----|--|-----------------------|--|--|----------------------------|--|--|----------------------------------------------------------------|--|--|--------------------|--|---|------------------------|----|---|----------------------------|----|---|-------------|----|---|-----------------------|----|----|---------------------|----|----|--------------------|----|----|----------|----|
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | TFT LCD                                                        | 0    | 2013.05.03      |    |      |      |  |                   |   |  |          |   |   |                     |   |  |                  |  |  |              |  |  |                  |  |  |                           |  |   |                          |   |   |                           |   |  |                    |  |   |                      |   |  |                                 |  |  |                    |  |   |                              |    |  |                       |  |  |                            |  |  |                                                                |  |  |                    |  |   |                        |    |   |                            |    |   |             |    |   |                       |    |    |                     |    |    |                    |    |    |          |    |
| <div>Contents</div> <table><tr><th>No</th><th>ITEM</th><th>Page</th></tr><tr><td></td><td>REVISIONS HISTORY</td><td>2</td></tr><tr><td></td><td>CONTENTS</td><td>3</td></tr><tr><td>1</td><td>GENERAL DESCRIPTION</td><td>4</td></tr><tr><td></td><td>1.1 Introduction</td><td></td></tr><tr><td></td><td>1.2 Features</td><td></td></tr><tr><td></td><td>1.3 Applications</td><td></td></tr><tr><td></td><td>1.4 General Specification</td><td></td></tr><tr><td>2</td><td>ABSOLUTE MAXIMUM RATINGS</td><td>6</td></tr><tr><td>3</td><td>ELECTRICAL SPECIFICATIONS</td><td>7</td></tr><tr><td></td><td>3.1 TFT LCD Module</td><td></td></tr><tr><td>4</td><td>INTERFACE CONNECTION</td><td>8</td></tr><tr><td></td><td>4.1 Module Input Signal &amp; Power</td><td></td></tr><tr><td></td><td>4.2 LVDS Interface</td><td></td></tr><tr><td>5</td><td>SIGNAL TIMING SPECIFICATIONS</td><td>11</td></tr><tr><td></td><td>5.1 Timing Parameters</td><td></td></tr><tr><td></td><td>5.2 Signal Timing Waveform</td><td></td></tr><tr><td></td><td>5.3 Input Signals, Basic Display Colors &amp; Cray Scale Of Colors</td><td></td></tr><tr><td></td><td>5.4 Power Sequence</td><td></td></tr><tr><td>6</td><td>OPTICAL SPECIFICATIONS</td><td>15</td></tr><tr><td>7</td><td>MECHANICAL CHARACTERISTICS</td><td>18</td></tr><tr><td>8</td><td>RELIABILITY</td><td>29</td></tr><tr><td>9</td><td>PRODUCT SERIAL NUMBER</td><td>20</td></tr><tr><td>10</td><td>PACKING INFORMATION</td><td>21</td></tr><tr><td>11</td><td>HANDING &amp; CAUTIONS</td><td>23</td></tr><tr><td>12</td><td>APPENDIX</td><td>24</td></tr></table> |                                                                |      |                 | No | ITEM | Page |  | REVISIONS HISTORY | 2 |  | CONTENTS | 3 | 1 | GENERAL DESCRIPTION | 4 |  | 1.1 Introduction |  |  | 1.2 Features |  |  | 1.3 Applications |  |  | 1.4 General Specification |  | 2 | ABSOLUTE MAXIMUM RATINGS | 6 | 3 | ELECTRICAL SPECIFICATIONS | 7 |  | 3.1 TFT LCD Module |  | 4 | INTERFACE CONNECTION | 8 |  | 4.1 Module Input Signal & Power |  |  | 4.2 LVDS Interface |  | 5 | SIGNAL TIMING SPECIFICATIONS | 11 |  | 5.1 Timing Parameters |  |  | 5.2 Signal Timing Waveform |  |  | 5.3 Input Signals, Basic Display Colors & Cray Scale Of Colors |  |  | 5.4 Power Sequence |  | 6 | OPTICAL SPECIFICATIONS | 15 | 7 | MECHANICAL CHARACTERISTICS | 18 | 8 | RELIABILITY | 29 | 9 | PRODUCT SERIAL NUMBER | 20 | 10 | PACKING INFORMATION | 21 | 11 | HANDING & CAUTIONS | 23 | 12 | APPENDIX | 24 |
| No                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | ITEM                                                           | Page |                 |    |      |      |  |                   |   |  |          |   |   |                     |   |  |                  |  |  |              |  |  |                  |  |  |                           |  |   |                          |   |   |                           |   |  |                    |  |   |                      |   |  |                                 |  |  |                    |  |   |                              |    |  |                       |  |  |                            |  |  |                                                                |  |  |                    |  |   |                        |    |   |                            |    |   |             |    |   |                       |    |    |                     |    |    |                    |    |    |          |    |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | REVISIONS HISTORY                                              | 2    |                 |    |      |      |  |                   |   |  |          |   |   |                     |   |  |                  |  |  |              |  |  |                  |  |  |                           |  |   |                          |   |   |                           |   |  |                    |  |   |                      |   |  |                                 |  |  |                    |  |   |                              |    |  |                       |  |  |                            |  |  |                                                                |  |  |                    |  |   |                        |    |   |                            |    |   |             |    |   |                       |    |    |                     |    |    |                    |    |    |          |    |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | CONTENTS                                                       | 3    |                 |    |      |      |  |                   |   |  |          |   |   |                     |   |  |                  |  |  |              |  |  |                  |  |  |                           |  |   |                          |   |   |                           |   |  |                    |  |   |                      |   |  |                                 |  |  |                    |  |   |                              |    |  |                       |  |  |                            |  |  |                                                                |  |  |                    |  |   |                        |    |   |                            |    |   |             |    |   |                       |    |    |                     |    |    |                    |    |    |          |    |
| 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | GENERAL DESCRIPTION                                            | 4    |                 |    |      |      |  |                   |   |  |          |   |   |                     |   |  |                  |  |  |              |  |  |                  |  |  |                           |  |   |                          |   |   |                           |   |  |                    |  |   |                      |   |  |                                 |  |  |                    |  |   |                              |    |  |                       |  |  |                            |  |  |                                                                |  |  |                    |  |   |                        |    |   |                            |    |   |             |    |   |                       |    |    |                     |    |    |                    |    |    |          |    |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 1.1 Introduction                                               |      |                 |    |      |      |  |                   |   |  |          |   |   |                     |   |  |                  |  |  |              |  |  |                  |  |  |                           |  |   |                          |   |   |                           |   |  |                    |  |   |                      |   |  |                                 |  |  |                    |  |   |                              |    |  |                       |  |  |                            |  |  |                                                                |  |  |                    |  |   |                        |    |   |                            |    |   |             |    |   |                       |    |    |                     |    |    |                    |    |    |          |    |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 1.2 Features                                                   |      |                 |    |      |      |  |                   |   |  |          |   |   |                     |   |  |                  |  |  |              |  |  |                  |  |  |                           |  |   |                          |   |   |                           |   |  |                    |  |   |                      |   |  |                                 |  |  |                    |  |   |                              |    |  |                       |  |  |                            |  |  |                                                                |  |  |                    |  |   |                        |    |   |                            |    |   |             |    |   |                       |    |    |                     |    |    |                    |    |    |          |    |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 1.3 Applications                                               |      |                 |    |      |      |  |                   |   |  |          |   |   |                     |   |  |                  |  |  |              |  |  |                  |  |  |                           |  |   |                          |   |   |                           |   |  |                    |  |   |                      |   |  |                                 |  |  |                    |  |   |                              |    |  |                       |  |  |                            |  |  |                                                                |  |  |                    |  |   |                        |    |   |                            |    |   |             |    |   |                       |    |    |                     |    |    |                    |    |    |          |    |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 1.4 General Specification                                      |      |                 |    |      |      |  |                   |   |  |          |   |   |                     |   |  |                  |  |  |              |  |  |                  |  |  |                           |  |   |                          |   |   |                           |   |  |                    |  |   |                      |   |  |                                 |  |  |                    |  |   |                              |    |  |                       |  |  |                            |  |  |                                                                |  |  |                    |  |   |                        |    |   |                            |    |   |             |    |   |                       |    |    |                     |    |    |                    |    |    |          |    |
| 2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | ABSOLUTE MAXIMUM RATINGS                                       | 6    |                 |    |      |      |  |                   |   |  |          |   |   |                     |   |  |                  |  |  |              |  |  |                  |  |  |                           |  |   |                          |   |   |                           |   |  |                    |  |   |                      |   |  |                                 |  |  |                    |  |   |                              |    |  |                       |  |  |                            |  |  |                                                                |  |  |                    |  |   |                        |    |   |                            |    |   |             |    |   |                       |    |    |                     |    |    |                    |    |    |          |    |
| 3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | ELECTRICAL SPECIFICATIONS                                      | 7    |                 |    |      |      |  |                   |   |  |          |   |   |                     |   |  |                  |  |  |              |  |  |                  |  |  |                           |  |   |                          |   |   |                           |   |  |                    |  |   |                      |   |  |                                 |  |  |                    |  |   |                              |    |  |                       |  |  |                            |  |  |                                                                |  |  |                    |  |   |                        |    |   |                            |    |   |             |    |   |                       |    |    |                     |    |    |                    |    |    |          |    |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 3.1 TFT LCD Module                                             |      |                 |    |      |      |  |                   |   |  |          |   |   |                     |   |  |                  |  |  |              |  |  |                  |  |  |                           |  |   |                          |   |   |                           |   |  |                    |  |   |                      |   |  |                                 |  |  |                    |  |   |                              |    |  |                       |  |  |                            |  |  |                                                                |  |  |                    |  |   |                        |    |   |                            |    |   |             |    |   |                       |    |    |                     |    |    |                    |    |    |          |    |
| 4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | INTERFACE CONNECTION                                           | 8    |                 |    |      |      |  |                   |   |  |          |   |   |                     |   |  |                  |  |  |              |  |  |                  |  |  |                           |  |   |                          |   |   |                           |   |  |                    |  |   |                      |   |  |                                 |  |  |                    |  |   |                              |    |  |                       |  |  |                            |  |  |                                                                |  |  |                    |  |   |                        |    |   |                            |    |   |             |    |   |                       |    |    |                     |    |    |                    |    |    |          |    |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 4.1 Module Input Signal & Power                                |      |                 |    |      |      |  |                   |   |  |          |   |   |                     |   |  |                  |  |  |              |  |  |                  |  |  |                           |  |   |                          |   |   |                           |   |  |                    |  |   |                      |   |  |                                 |  |  |                    |  |   |                              |    |  |                       |  |  |                            |  |  |                                                                |  |  |                    |  |   |                        |    |   |                            |    |   |             |    |   |                       |    |    |                     |    |    |                    |    |    |          |    |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 4.2 LVDS Interface                                             |      |                 |    |      |      |  |                   |   |  |          |   |   |                     |   |  |                  |  |  |              |  |  |                  |  |  |                           |  |   |                          |   |   |                           |   |  |                    |  |   |                      |   |  |                                 |  |  |                    |  |   |                              |    |  |                       |  |  |                            |  |  |                                                                |  |  |                    |  |   |                        |    |   |                            |    |   |             |    |   |                       |    |    |                     |    |    |                    |    |    |          |    |
| 5                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | SIGNAL TIMING SPECIFICATIONS                                   | 11   |                 |    |      |      |  |                   |   |  |          |   |   |                     |   |  |                  |  |  |              |  |  |                  |  |  |                           |  |   |                          |   |   |                           |   |  |                    |  |   |                      |   |  |                                 |  |  |                    |  |   |                              |    |  |                       |  |  |                            |  |  |                                                                |  |  |                    |  |   |                        |    |   |                            |    |   |             |    |   |                       |    |    |                     |    |    |                    |    |    |          |    |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 5.1 Timing Parameters                                          |      |                 |    |      |      |  |                   |   |  |          |   |   |                     |   |  |                  |  |  |              |  |  |                  |  |  |                           |  |   |                          |   |   |                           |   |  |                    |  |   |                      |   |  |                                 |  |  |                    |  |   |                              |    |  |                       |  |  |                            |  |  |                                                                |  |  |                    |  |   |                        |    |   |                            |    |   |             |    |   |                       |    |    |                     |    |    |                    |    |    |          |    |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 5.2 Signal Timing Waveform                                     |      |                 |    |      |      |  |                   |   |  |          |   |   |                     |   |  |                  |  |  |              |  |  |                  |  |  |                           |  |   |                          |   |   |                           |   |  |                    |  |   |                      |   |  |                                 |  |  |                    |  |   |                              |    |  |                       |  |  |                            |  |  |                                                                |  |  |                    |  |   |                        |    |   |                            |    |   |             |    |   |                       |    |    |                     |    |    |                    |    |    |          |    |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 5.3 Input Signals, Basic Display Colors & Cray Scale Of Colors |      |                 |    |      |      |  |                   |   |  |          |   |   |                     |   |  |                  |  |  |              |  |  |                  |  |  |                           |  |   |                          |   |   |                           |   |  |                    |  |   |                      |   |  |                                 |  |  |                    |  |   |                              |    |  |                       |  |  |                            |  |  |                                                                |  |  |                    |  |   |                        |    |   |                            |    |   |             |    |   |                       |    |    |                     |    |    |                    |    |    |          |    |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 5.4 Power Sequence                                             |      |                 |    |      |      |  |                   |   |  |          |   |   |                     |   |  |                  |  |  |              |  |  |                  |  |  |                           |  |   |                          |   |   |                           |   |  |                    |  |   |                      |   |  |                                 |  |  |                    |  |   |                              |    |  |                       |  |  |                            |  |  |                                                                |  |  |                    |  |   |                        |    |   |                            |    |   |             |    |   |                       |    |    |                     |    |    |                    |    |    |          |    |
| 6                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | OPTICAL SPECIFICATIONS                                         | 15   |                 |    |      |      |  |                   |   |  |          |   |   |                     |   |  |                  |  |  |              |  |  |                  |  |  |                           |  |   |                          |   |   |                           |   |  |                    |  |   |                      |   |  |                                 |  |  |                    |  |   |                              |    |  |                       |  |  |                            |  |  |                                                                |  |  |                    |  |   |                        |    |   |                            |    |   |             |    |   |                       |    |    |                     |    |    |                    |    |    |          |    |
| 7                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | MECHANICAL CHARACTERISTICS                                     | 18   |                 |    |      |      |  |                   |   |  |          |   |   |                     |   |  |                  |  |  |              |  |  |                  |  |  |                           |  |   |                          |   |   |                           |   |  |                    |  |   |                      |   |  |                                 |  |  |                    |  |   |                              |    |  |                       |  |  |                            |  |  |                                                                |  |  |                    |  |   |                        |    |   |                            |    |   |             |    |   |                       |    |    |                     |    |    |                    |    |    |          |    |
| 8                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | RELIABILITY                                                    | 29   |                 |    |      |      |  |                   |   |  |          |   |   |                     |   |  |                  |  |  |              |  |  |                  |  |  |                           |  |   |                          |   |   |                           |   |  |                    |  |   |                      |   |  |                                 |  |  |                    |  |   |                              |    |  |                       |  |  |                            |  |  |                                                                |  |  |                    |  |   |                        |    |   |                            |    |   |             |    |   |                       |    |    |                     |    |    |                    |    |    |          |    |
| 9                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | PRODUCT SERIAL NUMBER                                          | 20   |                 |    |      |      |  |                   |   |  |          |   |   |                     |   |  |                  |  |  |              |  |  |                  |  |  |                           |  |   |                          |   |   |                           |   |  |                    |  |   |                      |   |  |                                 |  |  |                    |  |   |                              |    |  |                       |  |  |                            |  |  |                                                                |  |  |                    |  |   |                        |    |   |                            |    |   |             |    |   |                       |    |    |                     |    |    |                    |    |    |          |    |
| 10                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | PACKING INFORMATION                                            | 21   |                 |    |      |      |  |                   |   |  |          |   |   |                     |   |  |                  |  |  |              |  |  |                  |  |  |                           |  |   |                          |   |   |                           |   |  |                    |  |   |                      |   |  |                                 |  |  |                    |  |   |                              |    |  |                       |  |  |                            |  |  |                                                                |  |  |                    |  |   |                        |    |   |                            |    |   |             |    |   |                       |    |    |                     |    |    |                    |    |    |          |    |
| 11                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | HANDING & CAUTIONS                                             | 23   |                 |    |      |      |  |                   |   |  |          |   |   |                     |   |  |                  |  |  |              |  |  |                  |  |  |                           |  |   |                          |   |   |                           |   |  |                    |  |   |                      |   |  |                                 |  |  |                    |  |   |                              |    |  |                       |  |  |                            |  |  |                                                                |  |  |                    |  |   |                        |    |   |                            |    |   |             |    |   |                       |    |    |                     |    |    |                    |    |    |          |    |
| 12                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | APPENDIX                                                       | 24   |                 |    |      |      |  |                   |   |  |          |   |   |                     |   |  |                  |  |  |              |  |  |                  |  |  |                           |  |   |                          |   |   |                           |   |  |                    |  |   |                      |   |  |                                 |  |  |                    |  |   |                              |    |  |                       |  |  |                            |  |  |                                                                |  |  |                    |  |   |                        |    |   |                            |    |   |             |    |   |                       |    |    |                     |    |    |                    |    |    |          |    |
| SPEC. NUMBER<br>S8XX-XXXX                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | SPEC. TITLE<br>HV550WU2-202 Preliminary Product Specification  |      | PAGE<br>3 of 25 |    |      |      |  |                   |   |  |          |   |   |                     |   |  |                  |  |  |              |  |  |                  |  |  |                           |  |   |                          |   |   |                           |   |  |                    |  |   |                      |   |  |                                 |  |  |                    |  |   |                              |    |  |                       |  |  |                            |  |  |                                                                |  |  |                    |  |   |                        |    |   |                            |    |   |             |    |   |                       |    |    |                     |    |    |                    |    |    |          |    |



## 1.0 GENERAL DESCRIPTION

### 1.1 Introduction

HV550WU2-202 is a color active matrix TFT LCD open cell using amorphous silicon TFT's (Thin Film Transistors) as an active switching devices. This module has a 54.6inch diagonally measured active area with WUXGA resolutions (1920 horizontal by 1080 vertical pixel array). Each pixel is divided into RED, GREEN, BLUE dots which are arranged in vertical stripe and this module can display 16.7M colors. The TFT-LCD panel used for this module is adapted for a low reflection and higher color type.



### 1.2 Features

- LVDS interface with 2 pixel / clock
- High-speed response
- Low color shift image quality
- 8-bit color depth, display 16.7M colors
- High luminance and contrast ratio, low reflection and wide viewing angle
- DE (Data Enable) only mode
- ADS technology is applied for high display quality
- RoHS compliant

|  <b>京东方</b><br><b>BOE</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | PRODUCT GROUP                                                             | REV    | ISSUE DATE                   |           |               |      |        |             |                      |    |       |                  |                   |        |  |             |                 |    |       |                   |                            |  |       |                |                   |        |  |              |                                   |  |  |                         |            |   |                              |                   |            |      |  |                   |                                                                           |  |  |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------|--------|------------------------------|-----------|---------------|------|--------|-------------|----------------------|----|-------|------------------|-------------------|--------|--|-------------|-----------------|----|-------|-------------------|----------------------------|--|-------|----------------|-------------------|--------|--|--------------|-----------------------------------|--|--|-------------------------|------------|---|------------------------------|-------------------|------------|------|--|-------------------|---------------------------------------------------------------------------|--|--|
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | TFT LCD                                                                   | 0      | 2013.05.03                   |           |               |      |        |             |                      |    |       |                  |                   |        |  |             |                 |    |       |                   |                            |  |       |                |                   |        |  |              |                                   |  |  |                         |            |   |                              |                   |            |      |  |                   |                                                                           |  |  |
| <p>1.3 Application</p> <ul style="list-style-type: none"> <li>● Home Alone Multimedia TFT-LCD TV</li> <li>● Display Terminals for Control System</li> <li>● Full High Definition TV(FHD TV)</li> <li>● AV application Products</li> </ul> <p>1.4 General Specification</p> <p>&lt; Table 1. General Specifications &gt;</p> <table> <tr> <th>Parameter</th><th>Specification</th><th>Unit</th><th>Remark</th></tr> <tr> <td>Active area</td><td>1209.6(H) × 680.4(V)</td><td>mm</td><td>Array</td></tr> <tr> <td>Number of pixels</td><td>1920(H) × 1080(V)</td><td>pixels</td><td></td></tr> <tr> <td>Pixel pitch</td><td>630(H) × 630(V)</td><td>μm</td><td>Array</td></tr> <tr> <td>Pixel arrangement</td><td>Pixels RGB Vertical stripe</td><td></td><td>Array</td></tr> <tr> <td>Display colors</td><td>16.7M(8bits-true)</td><td>colors</td><td></td></tr> <tr> <td>Display mode</td><td>Transmission mode, Normally Black</td><td></td><td></td></tr> <tr> <td>Open Cell Transmittance</td><td>6.5 (typ.)</td><td>%</td><td>At center point with BOE BLU</td></tr> <tr> <td>Power Consumption</td><td>9.0W(typ.)</td><td>Watt</td><td></td></tr> <tr> <td>Surface Treatment</td><td>Haze 1%, 2H, Anti-glare treatment (FPR)<br/>Haze 0%, 2H, (Front Polarizer)</td><td></td><td></td></tr> </table> |                                                                           |        |                              | Parameter | Specification | Unit | Remark | Active area | 1209.6(H) × 680.4(V) | mm | Array | Number of pixels | 1920(H) × 1080(V) | pixels |  | Pixel pitch | 630(H) × 630(V) | μm | Array | Pixel arrangement | Pixels RGB Vertical stripe |  | Array | Display colors | 16.7M(8bits-true) | colors |  | Display mode | Transmission mode, Normally Black |  |  | Open Cell Transmittance | 6.5 (typ.) | % | At center point with BOE BLU | Power Consumption | 9.0W(typ.) | Watt |  | Surface Treatment | Haze 1%, 2H, Anti-glare treatment (FPR)<br>Haze 0%, 2H, (Front Polarizer) |  |  |
| Parameter                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Specification                                                             | Unit   | Remark                       |           |               |      |        |             |                      |    |       |                  |                   |        |  |             |                 |    |       |                   |                            |  |       |                |                   |        |  |              |                                   |  |  |                         |            |   |                              |                   |            |      |  |                   |                                                                           |  |  |
| Active area                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 1209.6(H) × 680.4(V)                                                      | mm     | Array                        |           |               |      |        |             |                      |    |       |                  |                   |        |  |             |                 |    |       |                   |                            |  |       |                |                   |        |  |              |                                   |  |  |                         |            |   |                              |                   |            |      |  |                   |                                                                           |  |  |
| Number of pixels                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 1920(H) × 1080(V)                                                         | pixels |                              |           |               |      |        |             |                      |    |       |                  |                   |        |  |             |                 |    |       |                   |                            |  |       |                |                   |        |  |              |                                   |  |  |                         |            |   |                              |                   |            |      |  |                   |                                                                           |  |  |
| Pixel pitch                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 630(H) × 630(V)                                                           | μm     | Array                        |           |               |      |        |             |                      |    |       |                  |                   |        |  |             |                 |    |       |                   |                            |  |       |                |                   |        |  |              |                                   |  |  |                         |            |   |                              |                   |            |      |  |                   |                                                                           |  |  |
| Pixel arrangement                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Pixels RGB Vertical stripe                                                |        | Array                        |           |               |      |        |             |                      |    |       |                  |                   |        |  |             |                 |    |       |                   |                            |  |       |                |                   |        |  |              |                                   |  |  |                         |            |   |                              |                   |            |      |  |                   |                                                                           |  |  |
| Display colors                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 16.7M(8bits-true)                                                         | colors |                              |           |               |      |        |             |                      |    |       |                  |                   |        |  |             |                 |    |       |                   |                            |  |       |                |                   |        |  |              |                                   |  |  |                         |            |   |                              |                   |            |      |  |                   |                                                                           |  |  |
| Display mode                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Transmission mode, Normally Black                                         |        |                              |           |               |      |        |             |                      |    |       |                  |                   |        |  |             |                 |    |       |                   |                            |  |       |                |                   |        |  |              |                                   |  |  |                         |            |   |                              |                   |            |      |  |                   |                                                                           |  |  |
| Open Cell Transmittance                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 6.5 (typ.)                                                                | %      | At center point with BOE BLU |           |               |      |        |             |                      |    |       |                  |                   |        |  |             |                 |    |       |                   |                            |  |       |                |                   |        |  |              |                                   |  |  |                         |            |   |                              |                   |            |      |  |                   |                                                                           |  |  |
| Power Consumption                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 9.0W(typ.)                                                                | Watt   |                              |           |               |      |        |             |                      |    |       |                  |                   |        |  |             |                 |    |       |                   |                            |  |       |                |                   |        |  |              |                                   |  |  |                         |            |   |                              |                   |            |      |  |                   |                                                                           |  |  |
| Surface Treatment                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Haze 1%, 2H, Anti-glare treatment (FPR)<br>Haze 0%, 2H, (Front Polarizer) |        |                              |           |               |      |        |             |                      |    |       |                  |                   |        |  |             |                 |    |       |                   |                            |  |       |                |                   |        |  |              |                                   |  |  |                         |            |   |                              |                   |            |      |  |                   |                                                                           |  |  |
| SPEC. NUMBER<br>S8XX-XXXX                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | SPEC. TITLE<br>HV550WU2-202 Preliminary Product Specification             |        | PAGE<br>5 of 25              |           |               |      |        |             |                      |    |       |                  |                   |        |  |             |                 |    |       |                   |                            |  |       |                |                   |        |  |              |                                   |  |  |                         |            |   |                              |                   |            |      |  |                   |                                                                           |  |  |



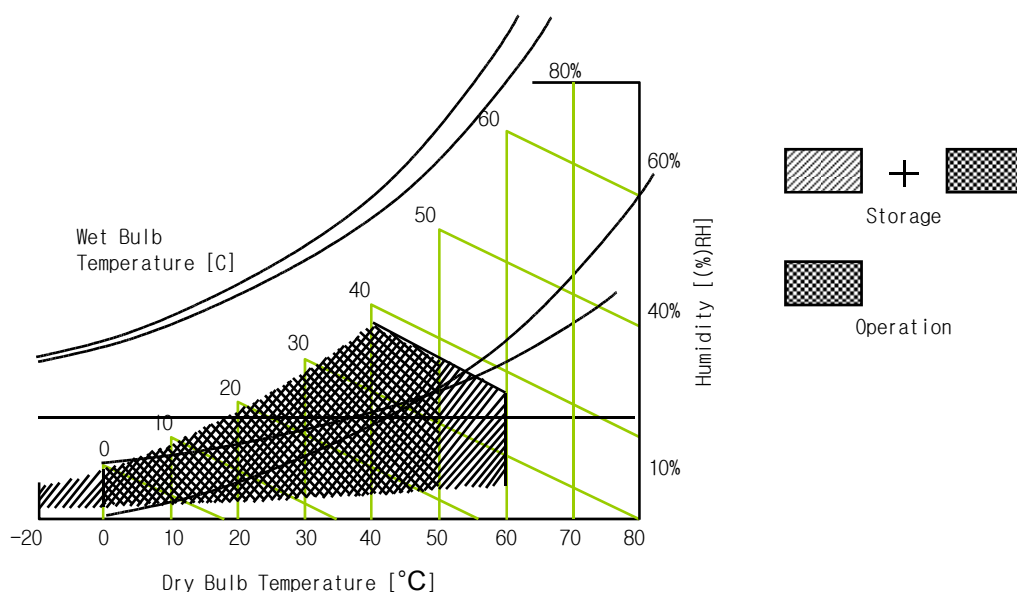
## 2.0 ABSOLUTE MAXIMUM RATINGS

The followings are maximum values which, if exceed, may cause faulty operation or damage to the unit. The operational and non-operational maximum voltage and current values are listed in Table 2.

< Table 2. LCD Open Cell Electrical Specifications > [VSS=GND=0V]

| Parameter                  |            | Symbol           | Min.    | Max. | Unit | Remark     |
|----------------------------|------------|------------------|---------|------|------|------------|
| Power Supply Voltage       | LCD Module | VDD              | VSS-0.3 | 13.5 | V    | Ta = 25 °C |
| Operating Temperature      |            | T <sub>OP</sub>  | 0       | +50  | °C   | Note 1     |
|                            |            | T <sub>SUR</sub> | 0       | +60  | °C   |            |
| Storage Temperature        |            | T <sub>ST</sub>  | -20     | +60  | °C   |            |
| Operating Ambient Humidity |            | Hop              | 10      | 80   | %RH  |            |
| Storage Humidity           |            | Hst              | 10      | 80   | %RH  |            |

Note 1 : Temperature and relative humidity range are shown in the figure below.  
Wet bulb temperature should be 39 °C max. and no condensation of water.





京东方  
BOE

## PRODUCT GROUP

TFT LCD

REV

0

ISSUE DATE

2013.05.03

### 3.0 ELECTRICAL SPECIFICATIONS

#### 3.1 TFT LCD Open Cell

< Table 3. LCD Open Cell Electrical Specifications >

[Ta =25±2 °C]

| Parameter                   |                                           | Symbol | Values |     |      | Unit | Remark |
|-----------------------------|-------------------------------------------|--------|--------|-----|------|------|--------|
|                             |                                           |        | Min    | Typ | Max  |      |        |
| Power Supply Input Voltage  |                                           | VDD    | 10.8   | 12  | 13.2 | Vdc  |        |
| Power Supply Ripple Voltage |                                           | VRP    |        |     | 300  | mV   |        |
| Power Supply Current        |                                           | IDD    |        | 700 |      | mA   | Note 1 |
| Power Consumption           |                                           | PDD    |        | 9.0 |      | Watt |        |
| Rush current                |                                           | IRUSH  |        | 4   |      | A    | Note 2 |
| LVDS Interface              | Differential Input High Threshold Voltage | VLVTH  | +100   |     | +300 | mV   |        |
|                             | Differential Input Low Threshold Voltage  | VLVTL  | -300   |     | -100 | mV   |        |
|                             | Common Input Voltage                      | VLVC   | 1.0    | 1.2 | 1.4  | V    |        |
| CMOS Interface              | Input High Threshold Voltage              | VIH    | 2.7    | -   | 3.3  | V    |        |
|                             | Input Low Threshold Voltage               | VIL    | 0      | -   | 0.6  | V    |        |

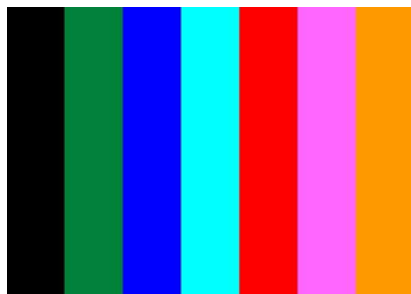
Note 1 : The supply voltage is measured and specified at the interface connector of LCM.

The current draw and power consumption specified is for VDD=12.0V,

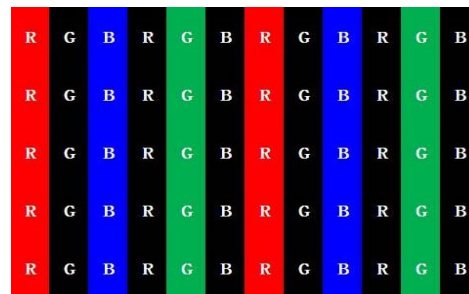
Frame rate  $f_v=60\text{Hz}$  and Clock frequency = 75.4MHz.

Test Pattern of power supply current

a) Typ : Color Test (L0/L255)



b) Max : Vertical Subline (L0/L255)



Note 2 : The duration of rush current is about 2ms and rising time of Power Input is 1ms(min)

SPEC. NUMBER  
S8XX-XXXX

SPEC. TITLE  
HV550WU2-202 Preliminary Product Specification

PAGE  
7 of 25

|                                                                                                      |                      |     |            |
|------------------------------------------------------------------------------------------------------|----------------------|-----|------------|
|  <b>京东方<br/>BOE</b> | <b>PRODUCT GROUP</b> | REV | ISSUE DATE |
|                                                                                                      | <b>TFT LCD</b>       | 0   | 2013.05.03 |

## 4.0 INTERFACE CONNECTION

### 4.1 Open Cell Input Signal & Power

- Connector : FW05010-51(Manufactured by FOOSUNG) or Equivalent.

< Table 5. Open Cell Input Connector Pin Configuration >

| Pin No | Symbol     | Description                                              | Pin No | Symbol     | Description                                               |
|--------|------------|----------------------------------------------------------|--------|------------|-----------------------------------------------------------|
| 1      | NC         | No Connection                                            | 26     | 2D/3D      | 2D/3D Signal Select                                       |
| 2      | SDA        | I <sup>2</sup> C Data                                    | 27     | L/R        | Left Right Eye Frame Sync.                                |
| 3      | SCL        | I <sup>2</sup> C Clock                                   | 28     | CH2[0]-    | Second pixel negative LVDS differential data input. Pair0 |
| 4      | WP         | nWR(PGAMA data write protect)                            | 29     | CH2[0]+    | Second pixel positive LVDS differential data input. Pair0 |
| 5      | NC         |                                                          | 30     | CH2[1]-    | "                                                         |
| 6      | NC         |                                                          | 31     | CH2[1]+    | "                                                         |
| 7      | SELLVDS    | High or Openh: NS<br>Low: JEIDA                          | 32     | CH2[2]-    | "                                                         |
| 8      | NC         |                                                          | 33     | CH2[2]+    | "                                                         |
| 9      | NC         |                                                          | 34     | GND        |                                                           |
| 10     | NC         |                                                          | 35     | CH2CLK-    | First pixel negative LVDS clock                           |
| 11     | GND        |                                                          | 36     | CH2CLK+    | First pixel positive LVDS clock                           |
| 12     | CH1[0]-    | First pixel negative LVDS differential data input. Pair0 | 37     | GND        |                                                           |
| 13     | CH1[0]+    | First pixel positive LVDS differential data input. Pair0 | 38     | CH2[3]-    | "                                                         |
| 14     | CH1[1]-    | "                                                        | 39     | CH2[3]+    | "                                                         |
| 15     | CH1[1]+    | "                                                        | 40     | CH2[4]-/NC | Second pixel negative LVDS differential data input. Pair0 |
| 16     | CH1[2]-    | "                                                        | 41     | CH2[4]+/NC | Second pixel positive LVDS differential data input. Pair0 |
| 17     | CH1[2]+    | "                                                        | 42     | NC         |                                                           |
| 18     | GND        |                                                          | 43     | NC         |                                                           |
| 19     | CH1CLK-    | First pixel negative LVDS clock                          | 44     | GND        | Ground                                                    |
| 20     | CH1CLK+    | First pixel positive LVDS clock                          | 45     | GND        | "                                                         |
| 21     | GND        |                                                          | 46     | GND        | "                                                         |
| 22     | CH1[3]-    |                                                          | 47     | NC         | "                                                         |
| 23     | CH1[3]+    |                                                          | 48     | VCC        | Input Voltage                                             |
| 24     | CH1[4]-/NC | First pixel negative LVDS differential data input. Pair0 | 49     | VCC        | "                                                         |
| 25     | CH1[4]+/NC | First pixel positive LVDS differential data input. Pair0 | 50     | VCC        | "                                                         |
|        |            |                                                          | 51     | VCC        | "                                                         |

|                           |                                                               |                 |
|---------------------------|---------------------------------------------------------------|-----------------|
| SPEC. NUMBER<br>S8XX-XXXX | SPEC. TITLE<br>HV550WU2-202 Preliminary Product Specification | PAGE<br>8 of 25 |
|---------------------------|---------------------------------------------------------------|-----------------|

|                                                                                                      |               |     |            |
|------------------------------------------------------------------------------------------------------|---------------|-----|------------|
|  <b>京东方<br/>BOE</b> | PRODUCT GROUP | REV | ISSUE DATE |
|                                                                                                      | TFT LCD       | 0   | 2013.05.03 |

## 4.0 INTERFACE CONNECTION

### 4.1 Open Cell Input Signal & Power

Notes : 1. NC(Not Connected) : This pins are only used for BOE internal operations.

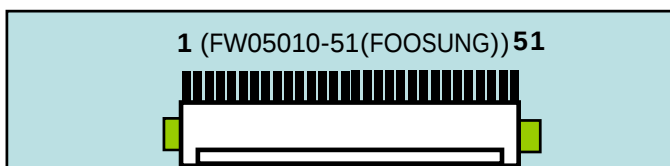
2. Input Level of LVDS signal is based on the IEA 664 Standard.

3. LVDS\_SEL : This pin is used for selecting LVDS signal data format.

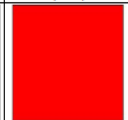
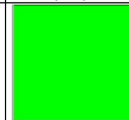
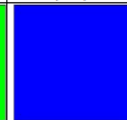
If this Pin : High (3.3V) or Open (NC) → Normal NS LVDS format

Otherwise : Low (GND) → JEIDA LVDS format

#### Rear view of LCM



#### BIST Pattern

| PT1: White<br>(2 sec)                                                             | PT2: Black<br>(2 sec)                                                              | PT3: Red<br>(2 sec)                                                                 | PT4: Green<br>(2 sec)                                                               | PT5: Blue<br>(2 sec)                                                                |
|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
|  |  |  |  |  |

|                           |                                                               |                 |
|---------------------------|---------------------------------------------------------------|-----------------|
| SPEC. NUMBER<br>S8XX-XXXX | SPEC. TITLE<br>HV550WU2-202 Preliminary Product Specification | PAGE<br>9 of 25 |
|---------------------------|---------------------------------------------------------------|-----------------|



## 4.2 LVDS Interface

- LVDS Receiver : Timing Controller (LVDS Rx merged) / LVDS Data : Pixel Data

< Table 6. Open Cell Input Connector Pin Configuration >

| Channel No. | Data No. | 8-bit LVDS Type |       |
|-------------|----------|-----------------|-------|
|             |          | NS              | JEIDA |
| 0           | Bit-0    | R0              | R2    |
|             | Bit-1    | R1              | R3    |
|             | Bit-2    | R2              | R4    |
|             | Bit-3    | R3              | R5    |
|             | Bit-4    | R4              | R6    |
|             | Bit-5    | R5              | R7    |
|             | Bit-6    | G0              | G2    |
| 1           | Bit-0    | G1              | G3    |
|             | Bit-1    | G2              | G4    |
|             | Bit-2    | G3              | G5    |
|             | Bit-3    | G4              | G6    |
|             | Bit-4    | G5              | G7    |
|             | Bit-5    | B0              | B2    |
|             | Bit-6    | B1              | B3    |
| 2           | Bit-0    | B2              | B4    |
|             | Bit-1    | B3              | B5    |
|             | Bit-2    | B4              | B6    |
|             | Bit-3    | B5              | B7    |
|             | Bit-4    | HS              | HS    |
|             | Bit-5    | VS              | VS    |
|             | Bit-6    | DE              | DE    |
| 3           | Bit-0    | R6              | R0    |
|             | Bit-1    | R7              | R1    |
|             | Bit-2    | G6              | G0    |
|             | Bit-3    | G7              | G1    |
|             | Bit-4    | B6              | B0    |
|             | Bit-5    | B7              | B1    |
|             | Bit-6    | -               |       |



## 5.0 SIGNAL TIMING SPECIFICATION

### 5.1 Timing Parameters (DE only mode)

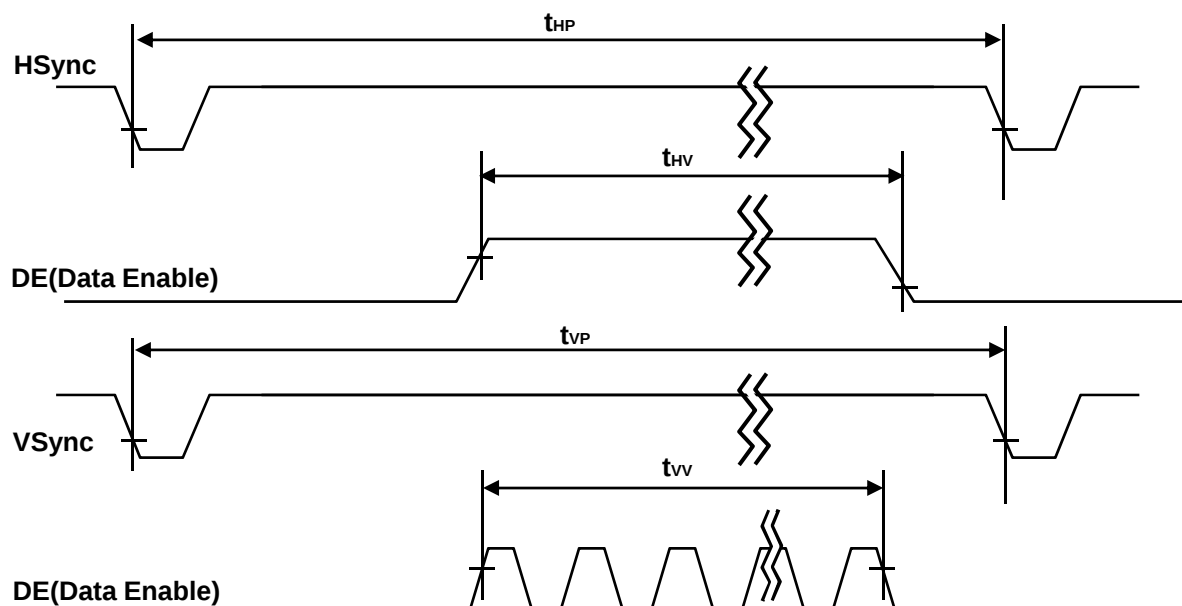
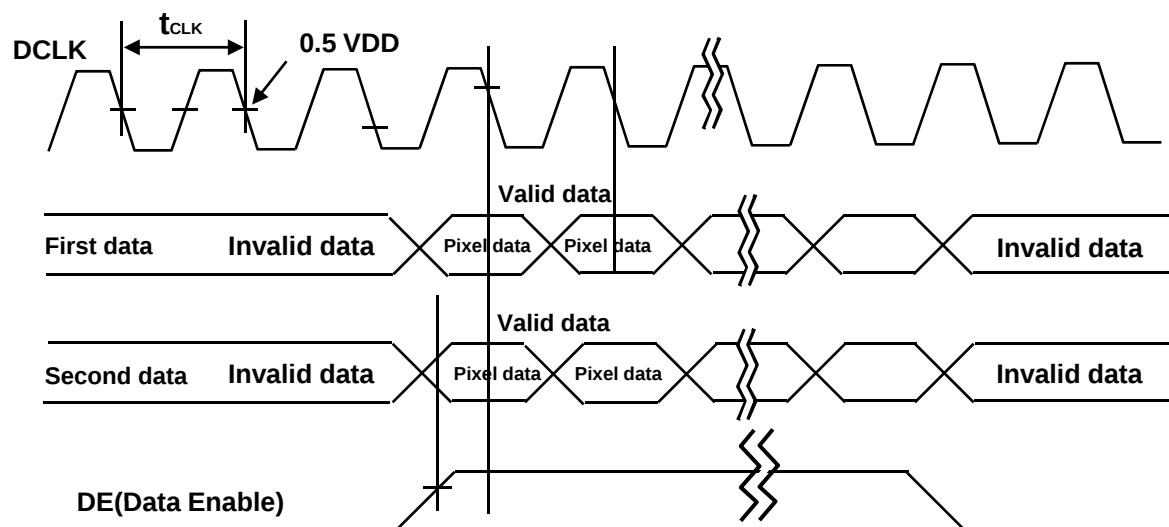
< Table 8. Timing Table >

| Item                      |           | Symbols | Min   | Typ   | Max   | Unit   |
|---------------------------|-----------|---------|-------|-------|-------|--------|
| Clock                     | Frequency | 1/Tc    | 66.00 | 74.25 | 82    | MHz    |
|                           | High Time | Tch     | -     | 4/7Tc | -     |        |
|                           | Low Time  | Tcl     | -     | 4/7Tc | -     |        |
| Frame Period              |           | Tv      | 1116  | 1126  | 1150  | lines  |
|                           |           |         | 56.32 | 60    | 62.77 | Hz     |
| Vertical Display Period   |           | Tvd     | -     | 1080  | -     | lines  |
| One line Scanning Period  |           | Th      | 1050  | 1100  | 1150  | clocks |
| Horizontal Display Period |           | Thd     | 960   | 960   | 960   | clocks |

Notes: This product is DE only mode. The input of Hsync & Vsync signal does not have an effect on normal operation.



## 5.2 Signal Timing Waveform





京东方  
BOE

## PRODUCT GROUP

TFT LCD

REV

0

ISSUE DATE

2013.05.03

### 5.3 Input Signals, Basic Display Colors and Gray Scale of Colors

< Table 9. Input Signal and Display Color Table >

| Color & Gray Scale  |          | Input Data Signal |    |    |    |    |    |    |    |            |    |    |    |    |    |    |    |           |    |    |    |    |    |    |    |
|---------------------|----------|-------------------|----|----|----|----|----|----|----|------------|----|----|----|----|----|----|----|-----------|----|----|----|----|----|----|----|
|                     |          | Red Data          |    |    |    |    |    |    |    | Green Data |    |    |    |    |    |    |    | Blue Data |    |    |    |    |    |    |    |
|                     |          | R7                | R6 | R5 | R4 | R3 | R2 | R1 | R0 | G7         | G6 | G5 | G4 | G3 | G2 | G1 | G0 | B7        | B6 | B5 | B4 | B3 | B2 | B1 | B0 |
| Basic Colors        | Black    | 0                 | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0          | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0         | 0  | 0  | 0  | 0  | 0  | 0  | 0  |
|                     | Blue     | 0                 | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0          | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 1         | 1  | 1  | 1  | 1  | 1  | 1  | 1  |
|                     | Green    | 0                 | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 1          | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 0         | 0  | 0  | 0  | 0  | 0  | 0  | 0  |
|                     | Cyan     | 0                 | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 1          | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1         | 1  | 1  | 1  | 1  | 1  | 1  | 1  |
|                     | Red      | 1                 | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 0          | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0         | 0  | 0  | 0  | 0  | 0  | 0  | 0  |
|                     | Magenta  | 1                 | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 0          | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 1         | 1  | 1  | 1  | 1  | 1  | 1  | 1  |
|                     | Yellow   | 1                 | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1          | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 0         | 0  | 0  | 0  | 0  | 0  | 0  | 0  |
|                     | White    | 1                 | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1          | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1         | 1  | 1  | 1  | 1  | 1  | 1  | 1  |
| Gray Scale of Red   | Black    | 0                 | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0          | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0         | 0  | 0  | 0  | 0  | 0  | 0  | 0  |
|                     | △        | 0                 | 0  | 0  | 0  | 0  | 0  | 0  | 1  | 0          | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0         | 0  | 0  | 0  | 0  | 0  | 0  | 0  |
|                     | Darker   | 0                 | 0  | 0  | 0  | 0  | 0  | 1  | 0  | 0          | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0         | 0  | 0  | 0  | 0  | 0  | 0  | 0  |
|                     | △        | ↑                 |    |    |    |    |    |    |    | ↑          |    |    |    |    |    |    |    | ↑         |    |    |    |    |    |    |    |
|                     | ▽        | ↓                 |    |    |    |    |    |    |    | ↓          |    |    |    |    |    |    |    | ↓         |    |    |    |    |    |    |    |
|                     | Brighter | 1                 | 1  | 1  | 1  | 1  | 1  | 0  | 1  | 0          | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0         | 0  | 0  | 0  | 0  | 0  | 0  | 0  |
|                     | ▽        | 1                 | 1  | 1  | 1  | 1  | 1  | 0  | 0  | 0          | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0         | 0  | 0  | 0  | 0  | 0  | 0  | 0  |
|                     | Red      | 1                 | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 0          | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0         | 0  | 0  | 0  | 0  | 0  | 0  | 0  |
| Gray Scale of Green | Black    | 0                 | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0          | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0         | 0  | 0  | 0  | 0  | 0  | 0  | 0  |
|                     | △        | 0                 | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0          | 0  | 0  | 0  | 0  | 0  | 0  | 1  | 0         | 0  | 0  | 0  | 0  | 0  | 0  | 0  |
|                     | Darker   | 0                 | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0          | 0  | 0  | 0  | 0  | 0  | 1  | 0  | 0         | 0  | 0  | 0  | 0  | 0  | 0  | 0  |
|                     | △        | ↑                 |    |    |    |    |    |    |    | ↑          |    |    |    |    |    |    |    | ↑         |    |    |    |    |    |    |    |
|                     | ▽        | ↓                 |    |    |    |    |    |    |    | ↓          |    |    |    |    |    |    |    | ↓         |    |    |    |    |    |    |    |
|                     | Brighter | 0                 | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 1          | 1  | 1  | 1  | 1  | 1  | 0  | 1  | 0         | 0  | 0  | 0  | 0  | 0  | 0  | 0  |
|                     | ▽        | 0                 | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 1          | 1  | 1  | 1  | 1  | 1  | 0  | 0  | 0         | 0  | 0  | 0  | 0  | 0  | 0  | 0  |
|                     | Green    | 0                 | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 1          | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 0         | 0  | 0  | 0  | 0  | 0  | 0  | 0  |
| Gray Scale of Blue  | Black    | 0                 | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0          | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0         | 0  | 0  | 0  | 0  | 0  | 0  | 0  |
|                     | △        | 0                 | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0          | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0         | 0  | 0  | 0  | 0  | 0  | 0  | 1  |
|                     | Darker   | 0                 | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0          | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0         | 0  | 0  | 0  | 0  | 0  | 1  | 0  |
|                     | △        | ↑                 |    |    |    |    |    |    |    | ↑          |    |    |    |    |    |    |    | ↑         |    |    |    |    |    |    |    |
|                     | ▽        | ↓                 |    |    |    |    |    |    |    | ↓          |    |    |    |    |    |    |    | ↓         |    |    |    |    |    |    |    |
|                     | Brighter | 0                 | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0          | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 1         | 1  | 1  | 1  | 1  | 1  | 0  | 1  |
|                     | ▽        | 0                 | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0          | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 1         | 1  | 1  | 1  | 1  | 1  | 1  | 0  |
|                     | Blue     | 0                 | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0          | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 1         | 1  | 1  | 1  | 1  | 1  | 1  | 1  |
| Gray Scale of White | Black    | 0                 | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0          | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0         | 0  | 0  | 0  | 0  | 0  | 0  | 0  |
|                     | △        | 0                 | 0  | 0  | 0  | 0  | 0  | 0  | 1  | 0          | 0  | 0  | 0  | 0  | 0  | 0  | 1  | 0         | 0  | 0  | 0  | 0  | 0  | 0  | 1  |
|                     | Darker   | 0                 | 0  | 0  | 0  | 0  | 0  | 1  | 0  | 0          | 0  | 0  | 0  | 0  | 0  | 1  | 0  | 0         | 0  | 0  | 0  | 0  | 0  | 1  | 0  |
|                     | △        | ↑                 |    |    |    |    |    |    |    | ↑          |    |    |    |    |    |    |    | ↑         |    |    |    |    |    |    |    |
|                     | ▽        | ↓                 |    |    |    |    |    |    |    | ↓          |    |    |    |    |    |    |    | ↓         |    |    |    |    |    |    |    |
|                     | Brighter | 1                 | 1  | 1  | 1  | 1  | 1  | 0  | 1  | 1          | 1  | 1  | 1  | 1  | 1  | 0  | 1  | 1         | 1  | 1  | 1  | 1  | 1  | 0  | 1  |
|                     | ▽        | 1                 | 1  | 1  | 1  | 1  | 1  | 0  | 1  | 1          | 1  | 1  | 1  | 1  | 1  | 0  | 1  | 1         | 1  | 1  | 1  | 1  | 1  | 1  | 0  |
|                     | White    | 1                 | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1          | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1         | 1  | 1  | 1  | 1  | 1  | 1  | 1  |

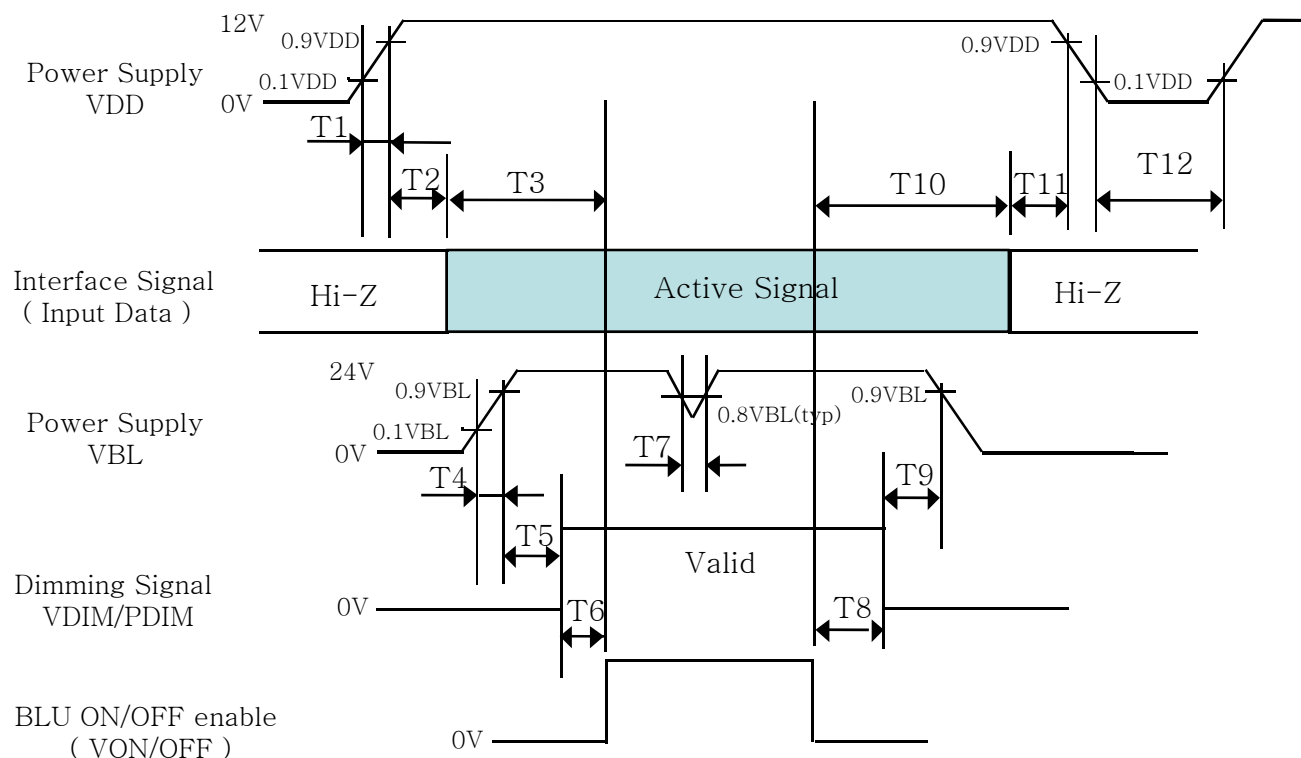
SPEC. NUMBER  
S8XX-XXXX

SPEC. TITLE  
HV550WU2-202 Preliminary Product Specification

PAGE  
13 of 25



## 5.4 Power Sequence



< Table 10. Sequence Table >

| Parameter | Values |     |     | Units |
|-----------|--------|-----|-----|-------|
|           | Min    | Typ | Max |       |
| T1        | 0.5    | -   | 10  | ms    |
| T2        | 0      | -   | 50  | ms    |
| T3        | 200    | -   | -   | ms    |
| T4        | 20     | -   | -   | ms    |
| T5        | 500    | -   | -   | ms    |
| T6        | 0      | -   | -   | ms    |
| T7        | -      | -   | 10  | ms    |
| T8        | 0      | -   | -   | ms    |
| T9        | 500    | -   | -   | ms    |
| T10       | 200    | -   | -   | ms    |
| T11       | 0      | -   | 50  | ms    |
| T12       | 1      | -   | -   | s     |

- Notes: 1. Even though T1 is over the specified value, there is no problem if I2T spec of fuse is satisfied.  
 2. Even though T4 is over the specified value, there is no problem if I2T spec of fuse is satisfied.  
 3. Back Light must be turn on after power for logic and interface signal are valid.



## 6.0 OPTICAL SPECIFICATIONS

The test of optical specifications shall be measured in a dark room (ambient luminance  $\leq 1$  lux and temperature  $= 25 \pm 2^\circ\text{C}$ ) with the equipment of Luminance meter system (Goniometer system and PR730) and test unit shall be located at an approximate distance 50cm from the LCD surface at a viewing angle of  $\theta$  and  $\Phi$  equal to  $0^\circ$ . We refer to  $\theta_{\Phi=0}$  ( $=\theta_3$ ) as the 3 o'clock direction (the "right"),  $\theta_{\Phi=90}$  ( $=\theta_{12}$ ) as the 12 o'clock direction ("upward"),  $\theta_{\Phi=180}$  ( $=\theta_9$ ) as the 9 o'clock direction ("left") and  $\theta_{\Phi=270}$  ( $=\theta_6$ ) as the 6 o'clock direction ("bottom"). While scanning  $\theta$  and/or  $\Phi$ , the center of the measuring spot on the Display surface shall stay fixed. The measurement shall be executed after 30 minutes warm-up period. VDD shall be 12.0V  $\pm 10\%$  at  $25^\circ\text{C}$ . Optimum viewing angle direction is 6 o'clock.

< Table 11. Optical Table >

[VDD = 12.0V, Frame rate = 60Hz,  $T_a = 25 \pm 2^\circ\text{C}$ ]

| Parameter                |            | Symbol        | Condition                                                    | Min            | Typ    | Max            | Unit | Remark |
|--------------------------|------------|---------------|--------------------------------------------------------------|----------------|--------|----------------|------|--------|
| Viewing Angle            | Horizontal | $\Theta_3$    | CR > 10                                                      |                | 89     |                | Deg. | Note 1 |
|                          |            | $\Theta_9$    |                                                              |                | 89     |                | Deg. |        |
|                          | Vertical   | $\Theta_{12}$ |                                                              |                | 89     |                | Deg. |        |
|                          |            | $\Theta_6$    |                                                              |                | 89     |                | Deg. |        |
| Contrast ratio           |            | CR            | $\Theta = 0^\circ$<br>(Center)<br>Normal<br>Viewing<br>Angle | 1200:1         | 1400:1 | -              |      | Note 2 |
| Reproduction<br>of color | White      | $W_x$         |                                                              | TYP.<br>- 0.03 | 0.280  | TYP.<br>+ 0.03 |      | Note 3 |
|                          |            | $W_y$         |                                                              |                | 0.290  |                |      |        |
|                          | Red        | $R_x$         |                                                              |                | 0.630  |                |      |        |
|                          |            | $R_y$         |                                                              |                | 0.345  |                |      |        |
|                          | Green      | $G_x$         |                                                              |                | 0.305  |                |      |        |
|                          |            | $G_y$         |                                                              |                | 0.628  |                |      |        |
|                          | Blue       | $B_x$         |                                                              |                | 0.150  |                |      |        |
|                          |            | $B_y$         |                                                              |                | 0.060  |                |      |        |
| Response Time            | G to G     | $T_g$         |                                                              | -              | 8      | 10             | ms   | Note 4 |
| Gamma Scale              |            |               |                                                              | 2.0            | 2.2    | 2.4            |      |        |
| Cell Transmittance       |            |               |                                                              |                | 6.5    |                | %    | Note 5 |



京东方  
BOE

PRODUCT GROUP

TFT LCD

REV

0

ISSUE DATE

2013.05.03

Note :

1. Viewing angle is the angle at which the contrast ratio is greater than 10. The viewing are determined for the horizontal or 3, 9 o'clock direction and the vertical or 6, 12 o'clock direction with respect to the optical axis which is normal to the LCD surface.
2. Contrast measurements shall be made at viewing angle of  $\theta = 0^\circ$  and at the center of the LCD surface. Luminance shall be measured with all pixels in the view field set first to white, then to the dark (black) state. (See Figure 1 shown in Appendix) Luminance Contrast Ratio (CR) is defined mathematically.

$$CR = \frac{\text{Luminance when displaying a white raster}}{\text{Luminance when displaying a black raster}}$$

3. The color chromaticity coordinates specified in Table 11. shall be calculated from the spectral data measured with all pixels first in red, green, blue and white. Measurements shall be made at the center of the panel.
4. Response time  $T_g$  is the average time required for display transition by switching the input signal as below table and is based on Frame rate  $f_V = 60\text{Hz}$  to optimize.  
Each time in below table is defined as Figure 3 and shall be measured by switching the
5. Definition of Transmittance (T%) :

Module is with white(L255) signal input

$$\text{Transmittance} = \frac{\text{Luminance of LCD Module}}{\text{Luminance of BLU}} \times 100 \%$$

| Measured Response Time |     | Target |    |    |    |    |    |    |     |     |     |     |     |     |     |     |     |     |
|------------------------|-----|--------|----|----|----|----|----|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|                        |     | 0      | 15 | 31 | 47 | 63 | 79 | 95 | 111 | 127 | 143 | 159 | 175 | 191 | 207 | 223 | 239 | 255 |
| Start                  | 0   |        |    |    |    |    |    |    |     |     |     |     |     |     |     |     |     |     |
|                        | 15  |        |    |    |    |    |    |    |     |     |     |     |     |     |     |     |     |     |
|                        | 31  |        |    |    |    |    |    |    |     |     |     |     |     |     |     |     |     |     |
|                        | 47  |        |    |    |    |    |    |    |     |     |     |     |     |     |     |     |     |     |
|                        | 63  |        |    |    |    |    |    |    |     |     |     |     |     |     |     |     |     |     |
|                        | 79  |        |    |    |    |    |    |    |     |     |     |     |     |     |     |     |     |     |
|                        | 95  |        |    |    |    |    |    |    |     |     |     |     |     |     |     |     |     |     |
|                        | 111 |        |    |    |    |    |    |    |     |     |     |     |     |     |     |     |     |     |
|                        | 127 |        |    |    |    |    |    |    |     |     |     |     |     |     |     |     |     |     |
|                        | 143 |        |    |    |    |    |    |    |     |     |     |     |     |     |     |     |     |     |
|                        | 159 |        |    |    |    |    |    |    |     |     |     |     |     |     |     |     |     |     |
|                        | 175 |        |    |    |    |    |    |    |     |     |     |     |     |     |     |     |     |     |
|                        | 191 |        |    |    |    |    |    |    |     |     |     |     |     |     |     |     |     |     |
|                        | 207 |        |    |    |    |    |    |    |     |     |     |     |     |     |     |     |     |     |
|                        | 223 |        |    |    |    |    |    |    |     |     |     |     |     |     |     |     |     |     |
|                        | 239 |        |    |    |    |    |    |    |     |     |     |     |     |     |     |     |     |     |
| 255                    |     |        |    |    |    |    |    |    |     |     |     |     |     |     |     |     |     |     |

SPEC. NUMBER  
S8XX-XXXX

SPEC. TITLE  
HV550WU2-202 Preliminary Product Specification

PAGE  
16 of 25

|                                                                                              |               |     |            |
|----------------------------------------------------------------------------------------------|---------------|-----|------------|
|  京东方<br>BOE | PRODUCT GROUP | REV | ISSUE DATE |
|                                                                                              | TFT LCD       | 0   | 2013.05.03 |

## 7.0 MECHANICAL CHARACTERISTICS

### 7.1 Dimensional Requirements

Figure 4 (located in Appendix) shows mechanical outlines for the model HV550WU2-202. Other parameters are shown in Table 12.

< Table 12. Dimensional Parameters >

| Parameter        | Specification                               | Unit   |
|------------------|---------------------------------------------|--------|
| Active area      | 1209.6 (H) ×680.4(V)                        | mm     |
| Pixel pitch      | 0.63(H) ×0.63(V)                            | mm     |
| Number of pixels | 1920(H) ×1080(V) (1 pixel = R + G + B dots) | pixels |

### 7.2 Mounting

See Figure 5. (Shown in Appendix)

### 7.3 Semi-Glare and Polarizer Hardness

The surface of the LCD has an Anti-glare coating to minimize reflection and a coating to Reduce scratching.

|                           |                                                               |                  |
|---------------------------|---------------------------------------------------------------|------------------|
| SPEC. NUMBER<br>S8XX-XXXX | SPEC. TITLE<br>HV550WU2-202 Preliminary Product Specification | PAGE<br>17 of 25 |
|---------------------------|---------------------------------------------------------------|------------------|

|                                                                                              |               |     |            |
|----------------------------------------------------------------------------------------------|---------------|-----|------------|
|  京东方<br>BOE | PRODUCT GROUP | REV | ISSUE DATE |
|                                                                                              | TFT LCD       | 0   | 2013.05.03 |

## 8.0 RELIABILITY TEST

The Reliability test items and its conditions are shown in below.

< Table 13. Reliability Test Parameters >

| No | Test Items                                      | Conditions                                                                                                                                                                                                                |
|----|-------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1  | High temperature storage test                   | Ta = 60 ℃ , 240 hrs                                                                                                                                                                                                       |
| 2  | Low temperature storage test                    | Ta = -20 ℃ , 240 hrs                                                                                                                                                                                                      |
| 3  | High temperature & high humidity operation test | Ta = 50 ℃ , 80%RH, 240hrs                                                                                                                                                                                                 |
| 4  | High temperature operation test                 | Ta = 50 ℃ , 240hrs                                                                                                                                                                                                        |
| 5  | Low temperature operation test                  | Ta = 0 ℃ , 240hrs                                                                                                                                                                                                         |
| 6  | Thermal shock                                   | Ta = -20 ℃ ↔ 60 ℃ (0.5 hr), 100 cycle                                                                                                                                                                                     |
| 7  | Vibration test<br>(non-operating)               | Frequency : 10 ~ 300 Hz, Random<br><br>Gravity / AMP : 1.0 Grms<br><br>Period : X, Y, Z 30 min/axis                                                                                                                       |
| 8  | Shock test<br>(non-operating)                   | Gravity : 50G<br><br>Pulse width : 11msec, Sine wave<br><br>±X, ±Y, ±Z Once for each direction                                                                                                                            |
| 9  | Electro-static discharge test                   | Air : ±15kV ,150pF/330Ω ,100Point ,1time/Point<br>Contact : ±8kV ,150pF/330Ω ,100Point ,1time/Point<br>Non operation<br>Contact: ±4KV~±6KV,150pF/330Ω,100Point,<br>Input connector Pin, 3 times/pin with no function loss |

|                           |                                                               |                  |
|---------------------------|---------------------------------------------------------------|------------------|
| SPEC. NUMBER<br>S8XX-XXXX | SPEC. TITLE<br>HV550WU2-202 Preliminary Product Specification | PAGE<br>18 of 25 |
|---------------------------|---------------------------------------------------------------|------------------|

|                                                                                                            |               |     |            |
|------------------------------------------------------------------------------------------------------------|---------------|-----|------------|
|  <b>京东方</b><br><b>BOE</b> | PRODUCT GROUP | REV | ISSUE DATE |
|                                                                                                            | TFT LCD       | 0   | 2013.05.03 |

9.0 PRODCUT SERIAL NUMBER



|   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 |   | 2 |   | 3 |   | 4 |   | 5 | 6 |   |   |   | 7 |   |   |   |   |   |
| X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X |

1. Control Number  
2. Rank / Grade  
3. Line Classification  
4. Year (2011 : 11, 2012 : 12, ...)
5. Month (1,2,3, ... , 9, X, Y, Z)  
6. Internal Use  
7. Serial Number

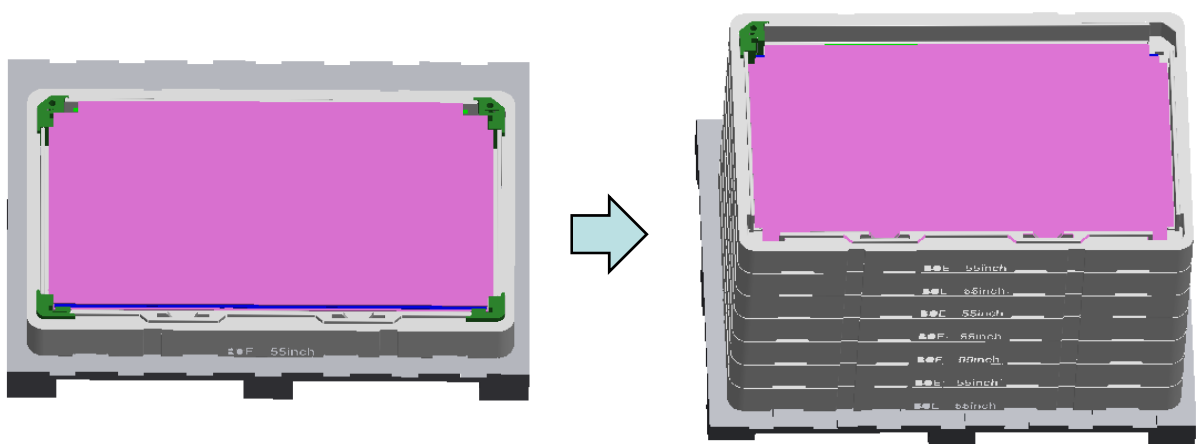
|                           |                                                               |                  |
|---------------------------|---------------------------------------------------------------|------------------|
| SPEC. NUMBER<br>S8XX-XXXX | SPEC. TITLE<br>HV550WU2-202 Preliminary Product Specification | PAGE<br>19 of 25 |
|---------------------------|---------------------------------------------------------------|------------------|

|                                                                                                            |               |     |            |
|------------------------------------------------------------------------------------------------------------|---------------|-----|------------|
|  <b>京东方</b><br><b>BOE</b> | PRODUCT GROUP | REV | ISSUE DATE |
|                                                                                                            | TFT LCD       | 0   | 2013.05.03 |

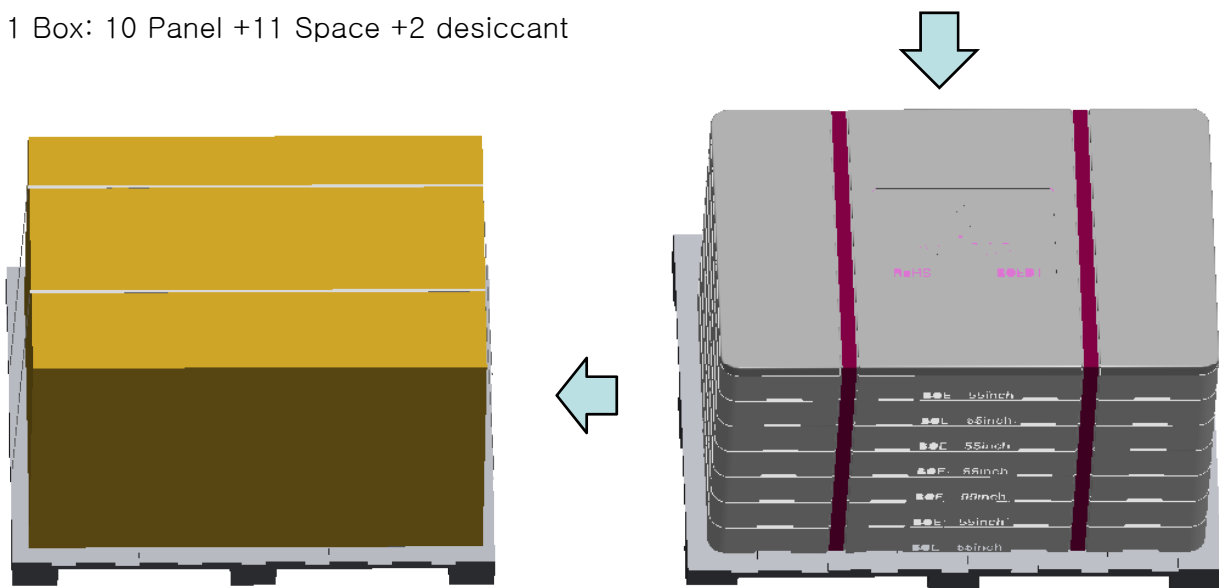
## 10.0 PACKING INFORMATION

BOE provides the standard shipping container for customers, unless customer specifies their packing information. The standard packing method and Barcode information are shown in below.

### 10.1 Packing Order



1 Box: 10 Panel +11 Space +2 desiccant



1 Pallet: 7 Box + 1Cover

|                           |                                                               |                  |
|---------------------------|---------------------------------------------------------------|------------------|
| SPEC. NUMBER<br>S8XX-XXXX | SPEC. TITLE<br>HV550WU2-202 Preliminary Product Specification | PAGE<br>20 of 25 |
|---------------------------|---------------------------------------------------------------|------------------|

|                                                                                                            |               |     |            |
|------------------------------------------------------------------------------------------------------------|---------------|-----|------------|
|  <b>京东方</b><br><b>BOE</b> | PRODUCT GROUP | REV | ISSUE DATE |
|                                                                                                            | TFT LCD       | 0   | 2013.05.03 |

## 10.2 Packing Note

- Box Dimension : 1374 mm (L) × 1140mm (W) ×955mm (H)
- Package Quantity in one Box : 10pcs

## 10.3 Box Label

- Label Size : 110 mm (L) × 55 mm (W)
- Contents

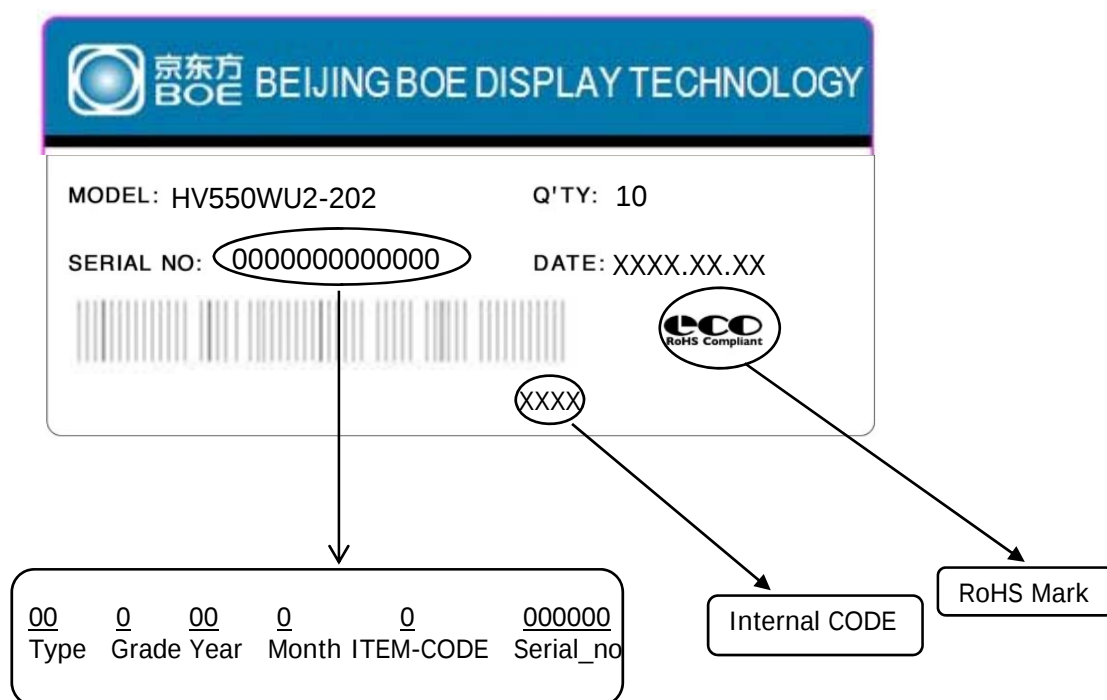
Model : HV550WU2-202

Q'ty : 10 Open Cell in one box.

Serial No. : Box Serial No. See next page for detail description.

Date : Packing Date

FG Code : FG Code of Product



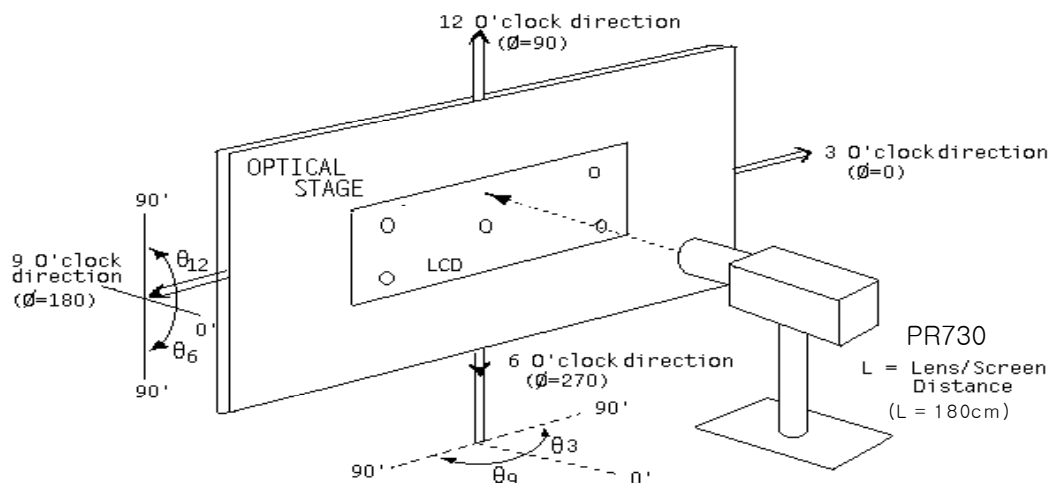
|                           |                                                               |                  |
|---------------------------|---------------------------------------------------------------|------------------|
| SPEC. NUMBER<br>S8XX-XXXX | SPEC. TITLE<br>HV550WU2-202 Preliminary Product Specification | PAGE<br>21 of 25 |
|---------------------------|---------------------------------------------------------------|------------------|

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                               |     |                  |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------|-----|------------------|
|  <b>京东方</b><br><b>BOE</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | PRODUCT GROUP                                                 | REV | ISSUE DATE       |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | TFT LCD                                                       | 0   | 2013.05.03       |
| <b>11.0 HANDLING &amp; CAUTIONS</b> <p>(1) Cautions when taking out the module</p> <ul style="list-style-type: none"> <li>• Pick the pouch only, when taking out module from a shipping package.</li> </ul> <p>(2) Cautions for handling the module</p> <ul style="list-style-type: none"> <li>• As the electrostatic discharges may break the LCD module, handle the LCD module with care. Peel a protection sheet off from the LCD panel surface as slowly as possible.</li> <li>• As the LCD panel and back - light element are made from fragile glass material, impulse and pressure to the LCD module should be avoided.</li> <li>• As the surface of the polarizer is very soft and easily scratched, use a soft dry cloth without chemicals for cleaning.</li> <li>• Do not pull the interface connector in or out while the LCD module is operating.</li> <li>• Put the module display side down on a flat horizontal plane.</li> <li>• Handle connectors and cables with care.</li> </ul> <p>(3) Cautions for the operation</p> <ul style="list-style-type: none"> <li>• When the module is operating, do not lose CLK, ENAB signals. If any one of these signals is lost, the LCD panel would be damaged.</li> <li>• Obey the supply voltage sequence. If wrong sequence is applied, the module would be damaged.</li> </ul> <p>(4) Cautions for the atmosphere</p> <ul style="list-style-type: none"> <li>• Dew drop atmosphere should be avoided.</li> <li>• Do not store and/or operate the LCD module in a high temperature and/or humidity atmosphere. Storage in an electro-conductive polymer packing pouch and under relatively low temperature atmosphere is recommended.</li> </ul> <p>(5) Cautions for the module characteristics</p> <ul style="list-style-type: none"> <li>• Do not apply fixed pattern data signal to the LCD module at product aging.</li> <li>• Applying fixed pattern for a long time may cause image sticking.</li> </ul> <p>(6) Other cautions</p> <ul style="list-style-type: none"> <li>• Do not disassemble and/or re-assemble LCD module.</li> <li>• Do not re-adjust variable resistor or switch etc.</li> <li>• When returning the module for repair or etc., Please pack the module not to be broken. We recommend to use the original shipping packages.</li> </ul> |                                                               |     |                  |
| SPEC. NUMBER<br>S8XX-XXXX                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | SPEC. TITLE<br>HV550WU2-202 Preliminary Product Specification |     | PAGE<br>22 of 25 |

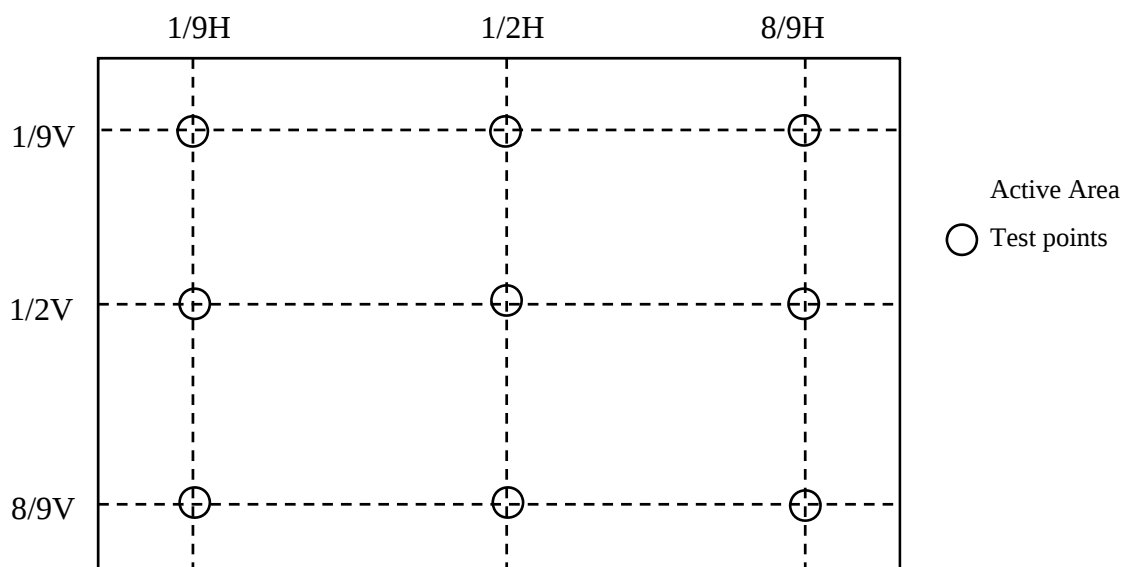


## 12.0 APPENDIX

< Figure 1. Measurement Set Up >



< Figure 2. White Luminance and Uniformity Measurement Locations >



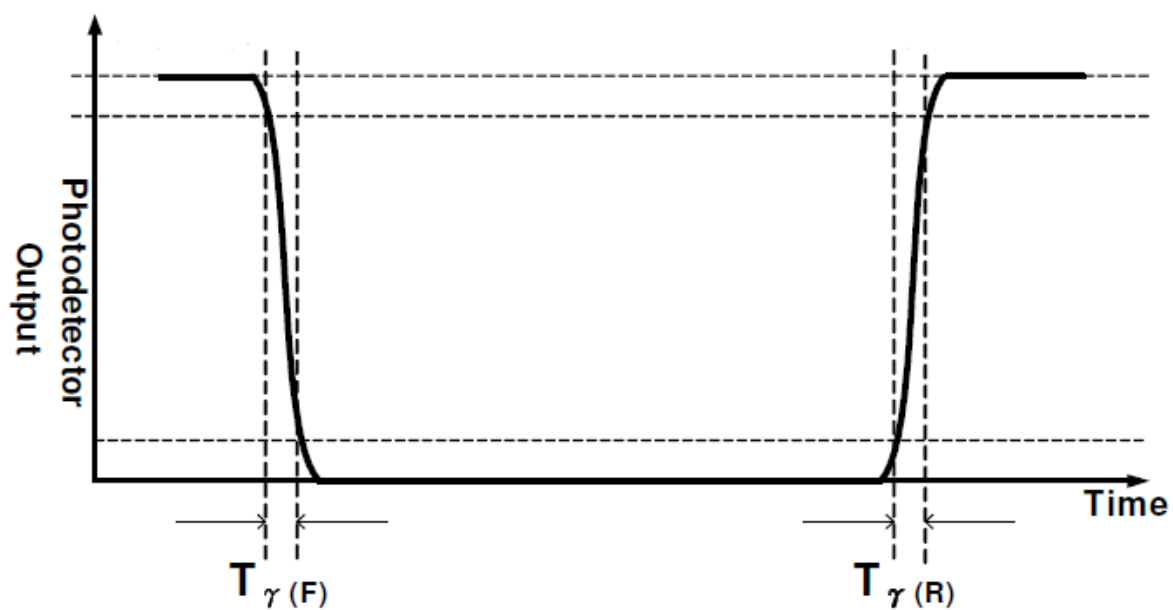


< Figure 3. Response Time Testing >

Any level of gray (Bright)

Any level of gray (Dark)

Any level of gray (Bright)





京东方  
BOE

PRODUCT GROUP

TFT LCD

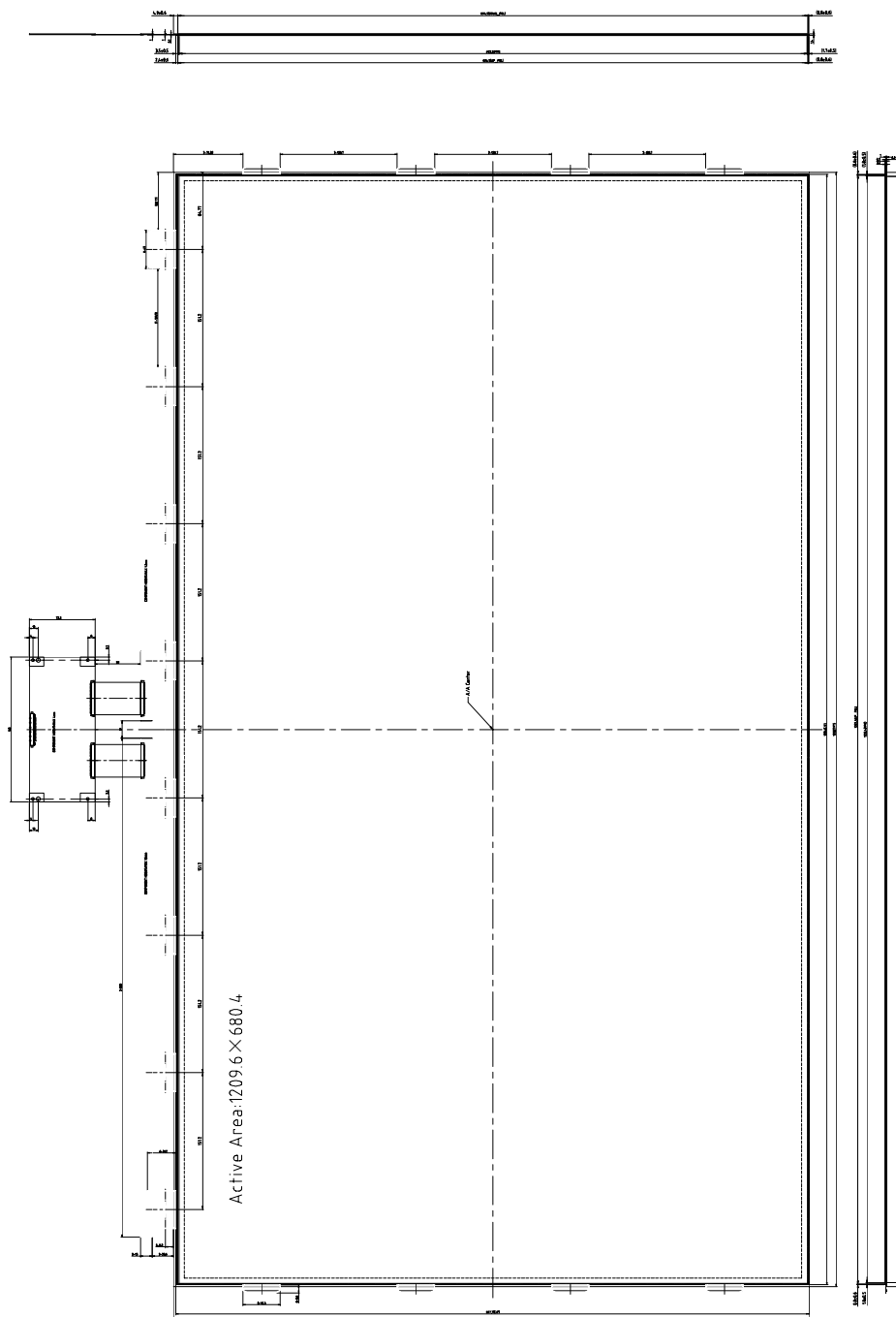
REV

0

ISSUE DATE

2013.05.03

< Figure 4. TFT-LCD Open Cell Outline Dimensions (Front View) >



SPEC. NUMBER  
S8XX-XXXX

SPEC. TITLE  
HV550WU2-202 Preliminary Product Specification

PAGE  
25 of 25