


**VM15B9 VB**

15.6" FHD High Brightness Color TFT-LCD Module

| FEATURES  |   |
|---|---|
|  | - 1920 x 1080 resolution                |
|   | - 1800nits Extreme high brightness      |
|   | - Normally Black                        |
|   | - 178/178 view angle                    |
|   | - 25 ms response time                   |
|   | - eDP interface                         |
|   | - -20~70C Wide operation temperature    |
|   | - 100K Hrs backlight operation lifetime |
|   | - RoHS Compliance                       |

## Display Specifications

| Items   | Unit              | Specification  |
|---|-------------------|--|
| Screen Diagonal                                 | mm                | 15.6 inch  |
| Active Area                                     | mm                | 344.16(H) X 193.59(V)                                |
| Pixels H x V                                    | pixels            | 1920 x3(RGB) x 1080                                  |
| Pixels Pitch                                    | um                | 179.25 (per one triad) x 179.25                      |
| Pixel Arrangement                               |                   | RGB Vertical stripe                                  |
| Display mode                                    |                   | AHVA Normally black                                  |
| White luminance (center)                        | Cd/m <sup>2</sup> | 1800 (Typ.)  |
| Contrast ratio                                  |                   | 1000:1 (Typ.)  |
| Optical Response Time                           | msec              | 25 ms (Typ. on/off)                                  |
| Normal Input Voltage VDD                        | Volt              | 3.3  |
| Power Consumption<br>(Vcc Line + LED backlight) | Watt              | 22.04W<br>(VDD line=0.98 W; LED lines= 21.06 W, TBD) |
| Weight  | Grams             | 600  |
| Physical size                                   | mm                | 363.8(W)×215.9(H)×8.8(D, max)                        |
| Electrical Interface                            |                   | 2-lane eDP 1.3                                       |
| Support Colors                                  |                   | 16.2M colors (RGB 6-bit + FRC)                       |
| Surface Treatment                               |                   | Anti-glare and hard-coating 3H                       |
| Temperature range                               |                   |  |
| Operating                                       | °C                | -20 ~ 70 (TFT surface)                               |
| Storage   | °C                | -20 ~ 70   |
| RoHS Compliance                                 |                   | RoHS Compliance                                      |

Note: This specification is subject to change without notice.

## ● Accessories for option:

&gt;&gt; Industrial grade Signal control board &amp; SoC

| Input  | Output                            | Resolution |
|--|-----------------------------------|------------|
| RGB with voltage integration                     | RGB                               | TBD        |
| LVDS with voltage & backlight driver integration | RGB                               | WXGA (max) |
| LVDS with voltage & backlight driver integration | LVDS                              | WXGA (max) |
| VGA/DVI/DP...etc.                                | RGB/ LVDS / mipi / eDP / V-by-One | 4K (max.)  |
| ARM Cortex A17/A53 (Android 6, 8, & 11)          | LVDS / eDP / V-by-One             | 4K (max.)  |

&gt;&gt; Industrial grade LED driver board:

| Input     | Max Output             | Dimming control |
|-----------|------------------------|-----------------|
| 12V DC    | 36V *1 port            | PWM             |
| 12~24V DC | 53V * 1 port           | PWM / Analog    |
| 12~24V DC | 53V * 2 port           | PWM / Analog    |
| 24V       | 120V / 150V * 1/2 port | PWM             |

&gt;&gt; Industrial grade interactive interface:

| Type  | Input            | Output      | Protection glass thickness |
|---|------------------|-------------|----------------------------|
| Projected capacitive touch panel  | Fingers / stylus | USB / i2C   | Max 6mm                    |
| 4wire / 5 wire resistance touch panel   | Fingers / stylus | USB / RS232 | TBD                        |
| Option:<br>1. Customized cover glass design, special color printing<br>2. AG/AR/AF Surface treatment,<br>3. Lamination process,<br>4. Gloved touch function design,<br>5. Waterproof touch function design<br>6. EMI shielding touch design |                  |             |                            |

- HANDLING PRECAUTIONS

- 1) Since front polarizer is easily damaged, pay attention not to scratch it.
- 2) Be sure to turn off power supply when inserting or disconnecting from input connector.
- 3) Wipe off water drop immediately. Long contact with water may cause discoloration or spots.
- 4) When the panel surface is soiled, wipe it with absorbent cotton or other soft cloth.
- 5) Since the panel is made of glass, it may break or crack if dropped or bumped on hard surface.
- 6) Since CMOS LSI is used in this module, take care of static electricity and insure human earth when handling.
- 7) Do not open or modify the Module Assembly.
- 8) Do not press the reflector sheet at the back of the module to any directions.
- 9) In case if a Module has to be put back into the packing container slot after once it was taken out from the container, do not press the center of TFTLCD panel.
- 10) At the insertion or removal of the Signal Interface Connector, be sure not to rotate nor tilt the Interface Connector of the TFT Module.
- 11) After installation of the TFT Module into an enclosure, do not twist nor bend the TFT Module even momentary. At designing the enclosure, it should be taken into consideration that no bending/twisting forces are applied to the TFT Module from outside. Otherwise the TFT Module may be damaged.