


| | | |
|----------------------|------------------|-------------|
| MCOB128064JX-GM | 2 x 16 | OLED Module |
| Specification | | |
| Version: 1 | Date: 05/05/2016 | |
| Revision | | |
| 1 | 05/05/2016 | First Issue |

| Display Features | |  | Box Quantity | Weight / Display |
|-----------------------|------------------------|---|--------------|------------------|
| Resolution | 128 x 64 | | | |
| Appearance | Green on Black | | | |
| Logic Voltage | 3/5V | | | |
| Interface | Multi | | | |
| Module Size | 75.00 x 52.70 x 7.50mm | | | |
| Operating Temperature | -40°C ~ +80°C | | | |
| Construction | COB | | | |

* - For full design functionality, please use this specification in conjunction with the SSD1309 specification. (Provided Separately)

| Display Accessories | |
|---------------------|-------------|
| Part Number | Description |
| | |
| | |
| | |

| Optional Variants | |
|-------------------|---------|
| Appearance | Voltage |
| | |
| | |
| | |



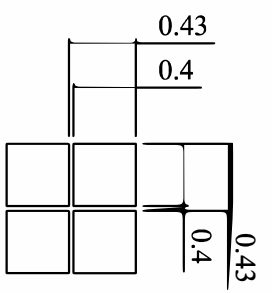
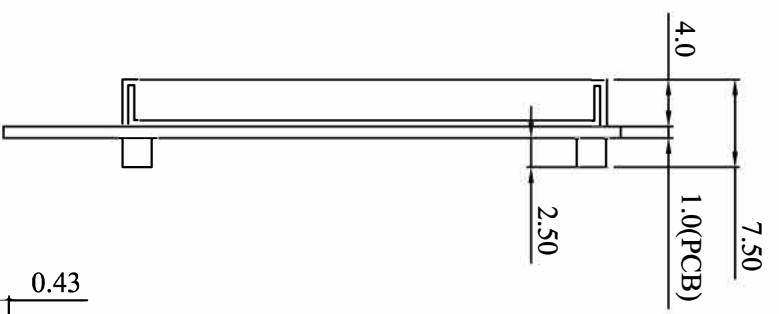
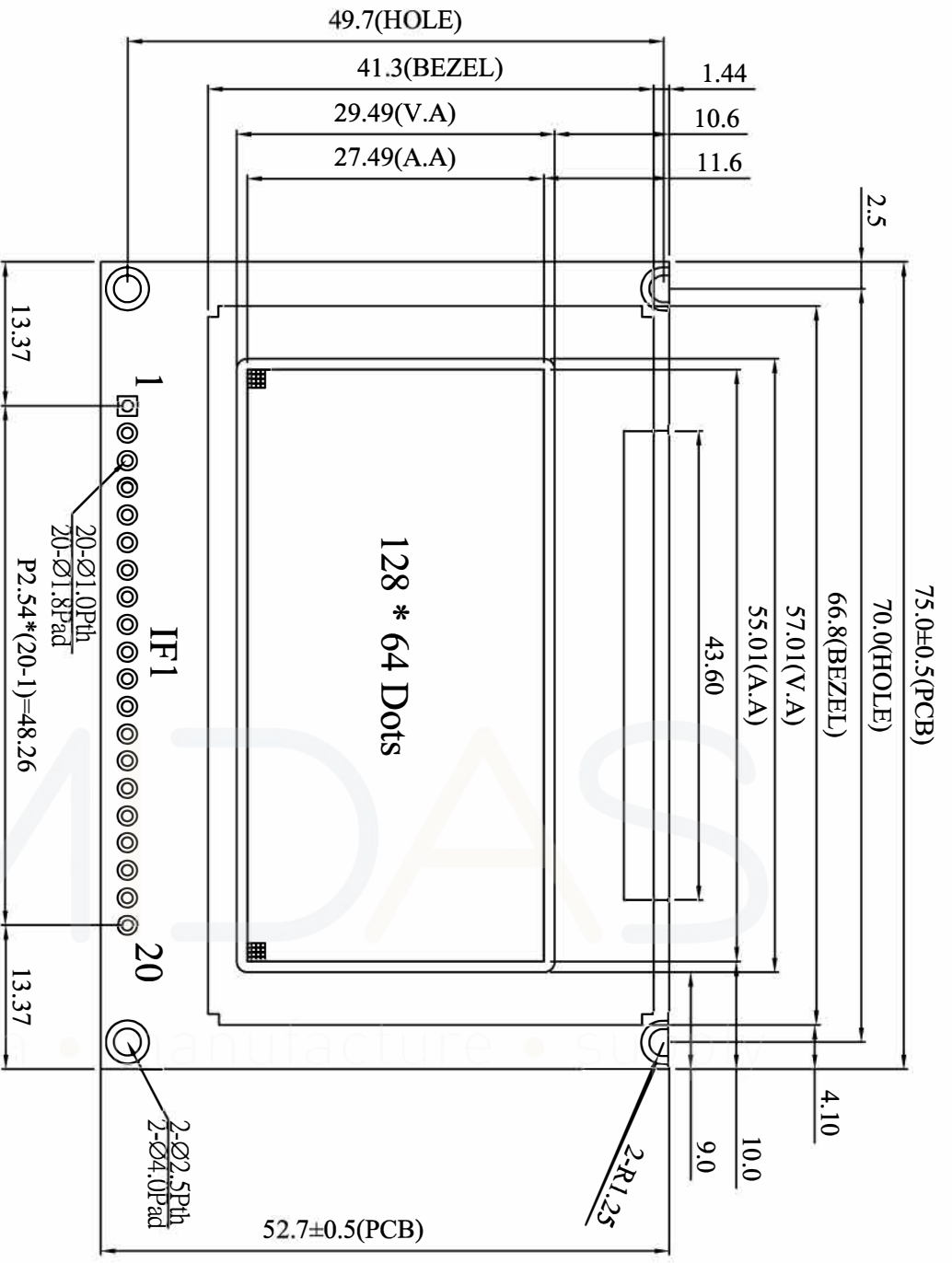
Functions and Features

- 128 X 64 Graphic
- Built-in controller
- viewing angle Free
- Wide Temperature -40°C ~ +80°C (Operating)
- RoHS compliant

Mechanical Specification

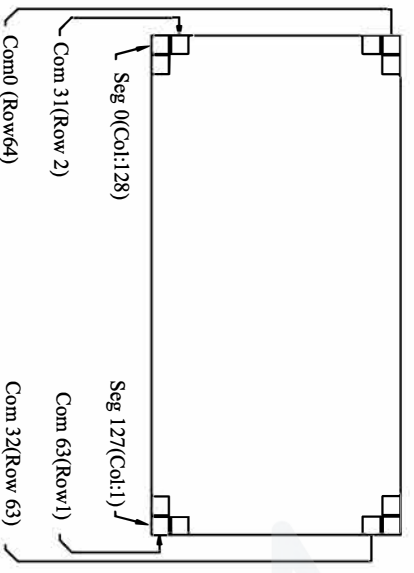
| Item | Description | |
|-----------------------|---------------------------|------|
| Product No. | MCOB128064JX-GM | |
| Inch | 2.42" | |
| Color | Green | |
| Active Area | 55.01(W)×27.49(H) | mm |
| Module Size | 75.00(W)×52.70(H)×7.50(D) | mm |
| Dot Size | 0.40(W)×0.40(H) | mm |
| Dot Pitch | 0.43(W)×0.43(H) | mm |
| Display Format | 128×64 | |
| Duty Ratio | 1/64 Duty | Duty |
| Controller | SSD1309 or Equivalent | |
| Operation Temperature | -40~80 | °C |
| Storage Temperature | -40~85 | °C |
| Response Time | ≤10 | us |





DOT SIZE
SCALE 20/1

| | |
|------|--------|
| IF1 | SYMBOL |
| 1 | VDD |
| 2 | VSS |
| 3 | NC |
| 4-11 | DB0-7 |
| 12 | CS# |
| 13 | NC |
| 14 | RESS# |
| 15 | R/W# |
| 16 | D/C# |
| 17 | E/RD# |
| 18 | NC |
| 19 | DISP |
| 20 | NC |



| | | | | | | | | | |
|-----------------|----------|-----------|----------|---------------------|---------|----------------|--|------|--|
| Projection Type | | Tolerance | | MODEL | | Drawing Number | | Rev. | |
| | | ±0.3 | | MCOB128064JX-GM | | | | A | |
| Dimension | | Unit | | TITLE | | | | | |
| mm | | mm | | OLED Module Drawing | | | | | |
| Drawn | Checked | Approved | PM | Scale | Sheet | Size | | | |
| Eco-2048 | Eco-1500 | Eco-0150 | Eco-0097 | 3/2 | 1 of 1 | A4 | | | |
| By | Note | 2048.00 | 1500.00 | 0150.00 | 0097.00 | | | | |

Pin Description

Power Supply

| Pin No. | Symbol | Level | Description |
|---------|---------|-------|--|
| 1 | VDD | 3~5V | Supply voltage for logic |
| 2 | VSS | 0V | Ground |
| 3 | NC | - | No connection |
| 4~11 | DB0~DB7 | H/L | Data bus line |
| 12 | CS | H/L | Chip select pin |
| 13 | /NC | - | No connection |
| 14 | /RES | H/L | Hardware reset pin |
| 15 | WR | H/L | 8080: data write enable pin 6800: Read/Write select pin |
| 16 | RS | H/L | H: Data; L: Command. |
| 17 | RD | H/L | 8080: data read enable pin 6800: Read/Write enable pin |
| 18 | NC | - | No connection |
| 19 | DISP | H/L | L:OLEDM display off H or NC: display on |
| 20 | NC | - | No connection |

※80 Series Interface is Default (6800.SERIAL.I2C interface is option)

Table: MCU Bus Interface Pin Selection

| Pin Name. | I ₂ C Interface | 6800- parallel interface | 8080- parallel interface | Serial interface |
|-----------|----------------------------|--------------------------|--------------------------|------------------|
| JB1 | 1(H) | 0(L) | 1(H) | 0(L) |
| JB2 | 0(L) | 1(H) | 1(H) | 0(L) |

Note

- (1) 0 (L) is connected to VSS
- (2) 1 (H) is connected to VDD



DC Characteristics

| Item | Symbol | Condition | Min. | Type | Max. | Unit |
|--------------------------|-----------|-----------|---------|------|---------|------|
| Supply Voltage for Logic | VDD - VSS | - | 1.65 | 3~5 | 5.3 | Volt |
| Input High Volt. | VIH | - | 0.8 VDD | - | - | Volt |
| Input Low Volt. | VIL | - | - | - | 0.2 VDD | Volt |
| Output High Volt. | VOH | - | 0.9 VDD | - | - | Volt |
| Output Low Volt. | VOL | - | - | - | 0.1 VDD | Volt |
| Supply Current | IDD | - | - | 120 | - | mA |

Optical Characteristics

| Item | Symbol | Conditions | Min. | Typ | Max. | Unit |
|---------------------|--------|------------|------|----------|------|-------------------|
| Brightness | Lbr | - | - | 120 | - | cd/m ² |
| C.I.E. (Green) | (X) | C.I.E 1931 | 0.25 | 0.29 | 0.33 | |
| | (Y) | | 0.62 | 0.66 | 0.70 | |
| Dark Room Contrast | CR | - | - | >10000:1 | - | |
| Viewing angle range | - | - | - | Free | - | Degree |

Absolute Maximum rating

| Item | Symbol | Min. | Typ. | Max. | Unit | Notes |
|-----------------------------------|--------|------|---------|------|------|-------|
| Supply Voltage for Logic | VDD | -0.3 | - | 5.5 | Volt | |
| Life Time (55 cd/m ²) | | --- | 100,000 | --- | Hour | |

AC Characteristics

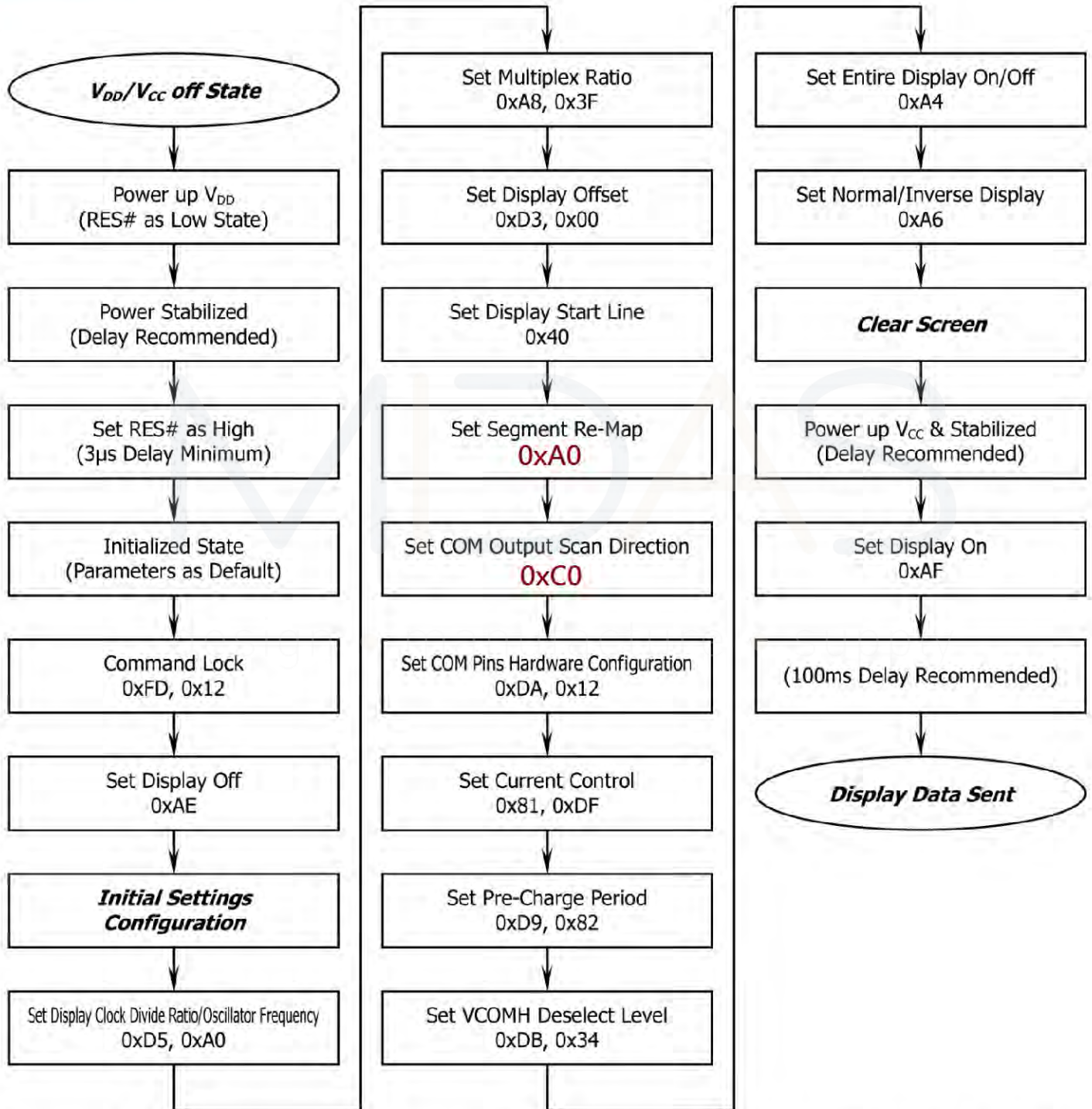
Please refer "SSD1309 specification.



Actual Application Example

Command usage and explanation of an actual example

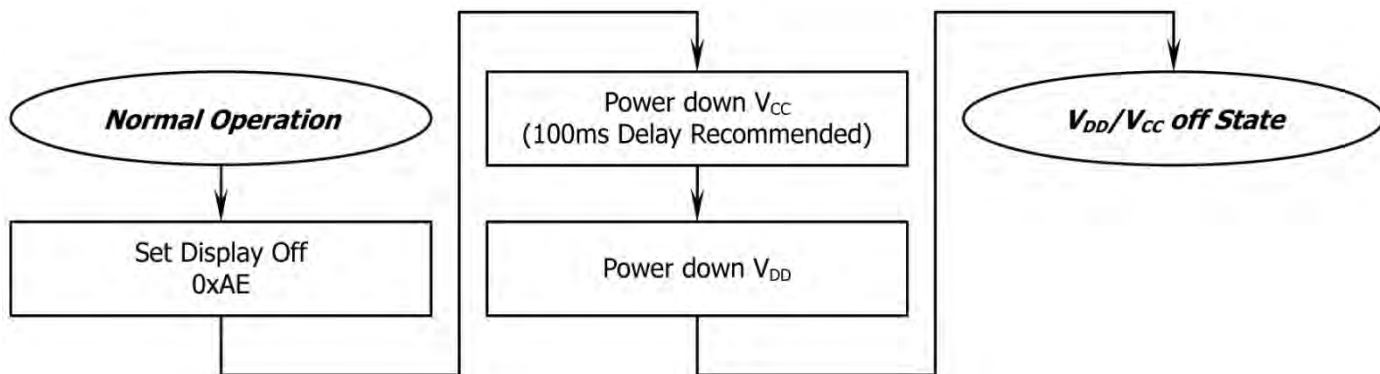
<Power up Sequence>



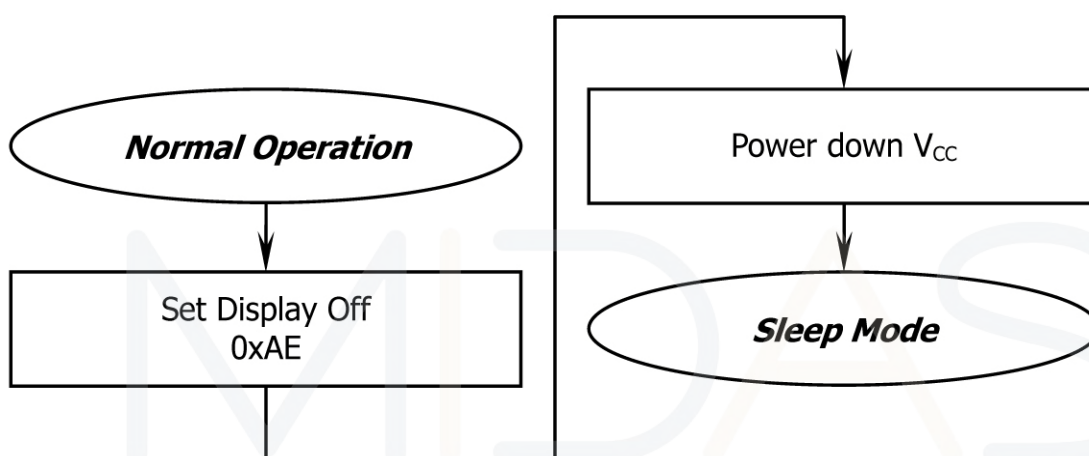
If the noise is accidentally occurred at the displaying window during the operation, please reset the display in order to recover the display function.



<Power down Sequence>



<Entering Sleep Mode>



<Exiting Sleep Mode>

