


| | | | |
|----------------------|------------|------------------|-------------|
| MCOT128064HV-YM | 128 x 64 | Yellow | OLED Module |
| Specification | | | |
| Version: 1 | | Date: 07/06/2017 | |
| Revision | | | |
| 0 | 18/08/2016 | First release | |

| Display Features | |  | |
|-----------------------|-------------------------|--------------------------------------------------------------------------------------|------------------|
| Resolution | 128 x 64 | | |
| Appearance | Yellow on Black | | |
| Logic Voltage | 3V | | |
| Interface | Parallel / SPI / I2C | | |
| Module Size | 60.50 x 37.00 x 2.00 mm | | |
| Operating Temperature | -40°C ~ +80°C | | |
| Construction | TAB | Box Quantity | Weight / Display |
| | | --- | --- |

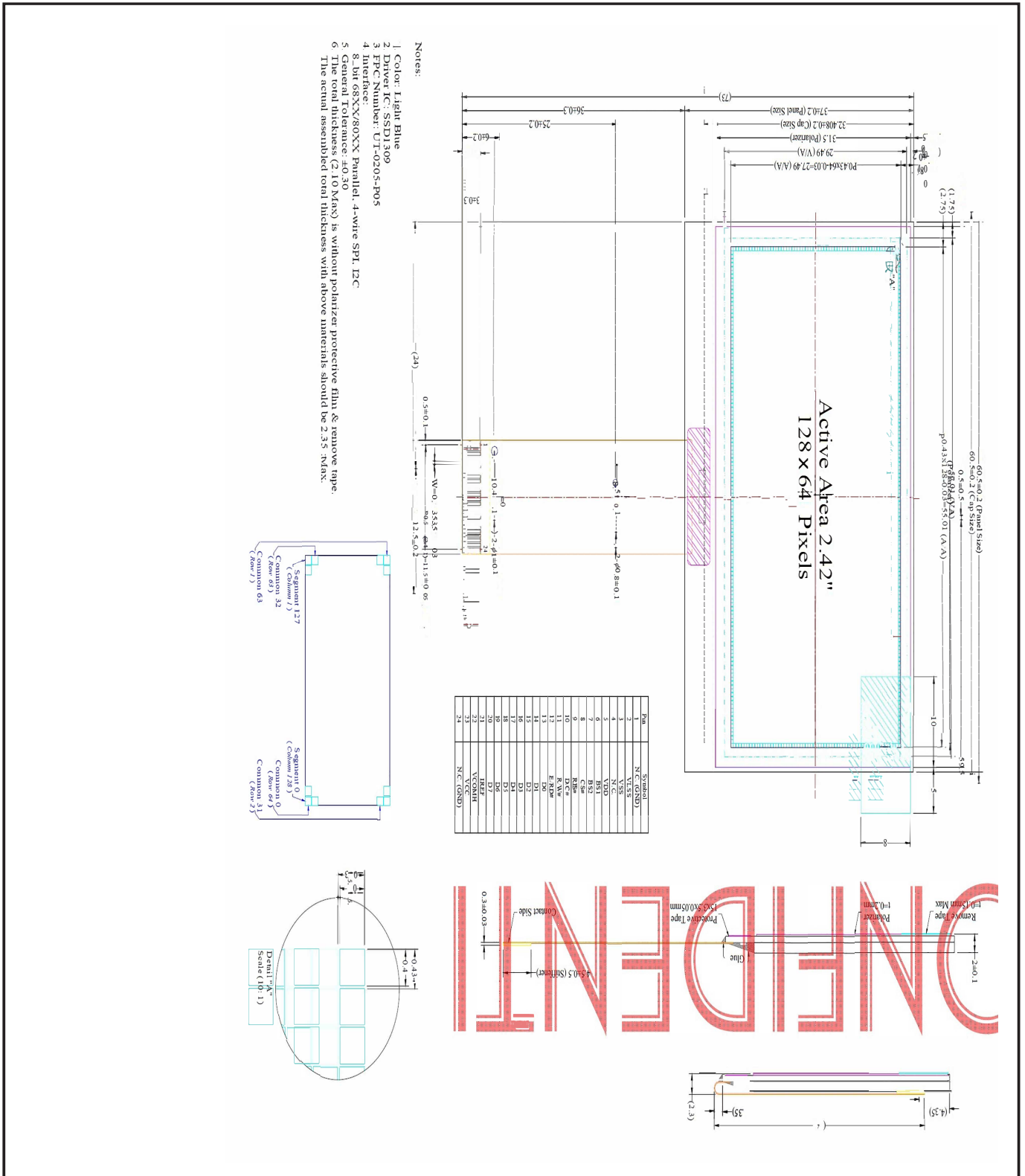
* - For full design functionality, please use this specification in conjunction with the SSD1309Z specification. (Provided Separately)

| Display Accessories | |
|---------------------|---------------------------------------------------------------------------------------------------------------------|
| Part Number | Description |
| MPBV7 | FFC to cable. 0.5mm Pitch. Supports up to 30 way. Any driver board that supports 1mm pitch SHDR-40V-S-B receptacle. |
| MCIB12 | UC32 Breakout Board with SD card and LED back light driver. Used in conjunction with MPBV7. |
| | |

| Optional Variants | |
|---------------------------------------------------|---------|
| Appearance | Voltage |
| White on Black Green on Black Blue on Black | |
| | |

Mechanical Specifications

| | | | | | |
|--------------|---------------------------------------|----------|--------------|-------------|--------------|
| Module Size | 60.50 x 37.00 x 2.00 (With Backlight) | | | | W x H x D mm |
| Viewing Area | 57.01 x 29.49 | W x H mm | Hole-to-Hole | --- | W x H mm |
| Dot Size | 0.40 x 0.40 | W x H mm | Dot Pitch | 0.43 x 0.43 | W x H mm |



| | | | |
|-----------------|----------|------------------|-------------|
| MCOT128064HV-YM | 128 x 64 | Yellow | OLED Module |
| Version: 1 | | Date: 07/06/2017 | |
| Revision | | | |

Pin layout

| Pin | Symbol | Description | Remarks |
|-------|-------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|
| 1 | NC (Ground) | No Connection | |
| 2 | VLSS | Analog Ground Pin. | |
| 3 | VSS | Ground. | |
| 4 | NC | No Connection. | |
| 5 | VDD | Power Supply pin for core logic operation. | |
| 6 | BS1 | MCU bus interface selection pins. Select appropriate logic setting, as described below: (Note: "0" is connected to VSS and "1" is connected to VDD) I2C = BS1: 1 BS2: 0 4-wire SPI = BS1: 0 BS2: 0 8-bit 68XX = BS1: 0 BS2: 1 8-bit 80XX = BS1: 1 BS2: 1 | |
| 7 | BS2 | | |
| 8 | CS# | Chip Select Input connecting to MCU. Chip is enabled for MCU communication when CS# is pulled Low. | |
| 9 | RES# | Reset Signal Input. Initialisation is executed when pulled Low. Keep pulled High during normal operation. | |
| 10 | D/C# | Data / Command control pin connect to MCU. High= Data at D(7:0) interpreted as data. Low= Data at D(7:0) transferred to command register. I2C mode = SA0 for slave address selection. 3-Wire SPI = Connect to VSS | |
| 11 | R/W# | Read / Write input pin, connecting to MCU interface. 6800 Mode= R/W (R/W#) selection input, read mode carried out when pulled High, write mode when Low. 8080 Mode= WR (W/R#) input, data write initiated when pin is pulled Low and chip is selected. I2C or SPI selected = Connect to VSS. | |
| 12 | E/RD# | MCU Interface Input. 6800 Mode= Enable signal pin, Read/Write initiated when pin is pulled High and chip is selected. 8080 Mode= Read (RD#) signal pin, read operation initiated when pin is pulled Low and chip is selected. I2C or SPI selected = Connect to VSS. | |
| 13~20 | D0~D7 | Bi-directional data bus connecting to MCU data bus. Unused pins to tie low. SPI Mode= D0 will be Serial Clock input (SCLK). D1 will be the Serial Data input (SDIN) and D2 should be kept NC. I2C Mode= D2 and D1 should be tied together and serve as SDAout, SDAin in application and D0 is Serial Clock input (SCL). | |
| 21 | IREF | Segment output current reference pin. IREF supplied externally. | |
| 22 | VCOMH | COM signal deselected voltage level. Capacitor between here and VSS. | |
| 23 | VCC | Power Supply for driving voltage. Positive power voltage supply pin. | |
| 24 | NC (GND) | No Connection | |

| | | | |
|----------------------|----------|------------------|-------------|
| MCOT128064HV-WM | 128 x 64 | Yellow | OLED Module |
| Specification | | | |
| Version: 1 | | Date: 07/06/2017 | |
| Revision | | | |
| | | | |

| Absolute Maximums Ratings | | | | | |
|----------------------------|--------|---------|---------|---------|------|
| Item | Symbol | Minimum | Typical | Maximum | Unit |
| Supply Voltage for Display | VI | 0.00 | --- | 15.00 | V |
| Supply Voltage for Logic | V0 | -0.30 | --- | 5.50 | V |
| Operating Temperature | Vopr | -40 | --- | 80 | °C |
| Storage Temperature | Vstg | -40 | --- | 80 | °C |

| Electronic Characteristics | | | | | | |
|----------------------------|--------|-----------|---------|---------|---------|------|
| Item | Symbol | Condition | Minimum | Typical | Maximum | Unit |
| Operating Current for VDD | VIH | --- | --- | 180 | 300 | μA |
| Operating Current for VCC | --- | --- | --- | 16.00 | 20.00 | mA |
| | | --- | --- | 23.20 | 29.10 | mA |
| | | --- | --- | 36.20 | 45.30 | mA |
| Supply Voltage for Logic | VDD | --- | 1.65 | 3~5 | 5.30 | V |
| Supply Voltage for Display | VCC | --- | 12.50 | 13.00 | 13.50 | V |
| Sleep Mode Current VDD | IDD | --- | --- | 1 | 5 | μA |
| Sleep Mode Current VCC | ICC | --- | --- | 2 | 10 | μA |

| OLED Characteristics | | | | | | |
|----------------------------------------|--------|-----------|---------|-----------|---------|-------------------|
| Item | Symbol | Condition | Minimum | Typical | Maximum | Unit |
| Viewing Angle | (V)θ | --- | --- | Free | --- | Deg |
| | (H)φ | --- | --- | Free | --- | Deg |
| Contrast Ratio | CR | Dark | --- | >10,000:1 | --- | --- |
| Response Time | T Rise | --- | --- | 10 | --- | μs |
| | T Fall | --- | --- | 10 | --- | μs |
| Display with 50% Checkboard Brightness | | | --- | 80 | --- | cd/m ² |
| CIEx(White) | | (CIE1931) | 0.46 | 0.50 | 0.54 | --- |
| CIEy(White) | | (CIE1931) | 0.45 | 0.49 | 0.53 | --- |

| OLED Life Time | | | |
|---------------------|----------------------------------------------|---------------|--------|
| Item | Conditions | Typical | Remark |
| Operating Life Time | Ta=25°C. Initial checkboard brightness, 50%. | 100,000 Hours | --- |

| | | | |
|----------------------|----------|------------------|-------------|
| MCOT128064HV-WM | 128 x 64 | Yellow | OLED Module |
| Specification | | | |
| Version: 1 | | Date: 07/06/2017 | |
| Revision | | | |
| | | | |