## $12 \times 2$ Character OLED



| MECHANICAL DATA |  |  |
| :---: | :---: | :---: |
| ITEM | STANDARD VALUE | UNIT |
| Module dimension | $55.7 \times 32.0 \times 11.0$ (max.) | mm |
| Viewing area | $46.0 \times 14.5$ |  |
| Active area | $38.95 \times 11.80$ |  |
| Dot size | $0.45 \times 0.60$ |  |
| Dot pitch | $0.55 \times 0.70$ |  |
| Mounting hole | $31.2 \times 30.0$ |  |
| Character size | $2.65 \times 5.5$ |  |
| Character pitch | $3.6 \times 6.3$ |  |

## FEATURES

- Type: Character
- Display format: $12 \times 2$ characters
- Built-in controller: OLED-0010
- Duty cycle: $1 / 16$
- +5 V power supply, +3 V optional
- Interface: 6800, option 8080 and SPI
- Sunlight readable and polarizer optional
- Material categorization: For definitions of compliance please see www.vishay.com/doc?99912

ABSOLUTE MAXIMUM RATINGS

| ITEM | SYMBOL | STANDARD VALUE |  | UNIT |
| :--- | :---: | :---: | :---: | :---: |
|  |  | MAX. |  |  |
| Supply voltage <br> for logic | $V_{D D}$ to $\mathrm{V}_{\mathrm{SS}}$ | -0.3 | 5.3 | V |
| Input voltage | $\mathrm{V}_{\mathrm{I}}$ | -0.3 | $\mathrm{~V}_{\mathrm{DD}}$ |  |

## Note

- $\mathrm{V}_{\mathrm{SS}}=0 \mathrm{~V}, \mathrm{~V}_{\mathrm{DD}}=3.0 \mathrm{~V} / 5.0 \mathrm{~V}$


## ELECTRICAL CHARACTERISTICS

| ITEM | SYMBOL | CONDITION | STANDARD VALUE |  |  | UNIT |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | MIN. | TYP. | MAX. |  |
| Supply voltage for logic | $V_{D D}$ to $V_{S S}$ | - | 3.0 | 5.0 | 5.3 | V |
| Input high voltage | $\mathrm{V}_{\mathrm{IH}}$ | - | 0.9 V DD | - | $V_{D D}$ | V |
| Input low voltage | $\mathrm{V}_{\text {IL }}$ | - | GND | - | $0.1 V_{\text {DD }}$ | V |
| Output high voltage | $\mathrm{V}_{\mathrm{OH}}$ | $\mathrm{I}_{\mathrm{OH}}=0.5 \mathrm{~mA}$ | 0.8 V DD | - | $V_{D D}$ | V |
| Output low voltage | $\mathrm{V}_{\text {OL }}$ | $\mathrm{l}_{\mathrm{OL}}=0.5 \mathrm{~mA}$ | GND | - | $0.2 \mathrm{~V}_{\mathrm{DD}}$ | V |
| Supply current | ldD | $\mathrm{V}_{\mathrm{DD}}=5 \mathrm{~V}$ | - | 32 | - | mA |


| OPTIONS |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| EMITTING COLOR |  |  |  |  |  |  |  |  |  |  |  | MOQ |
| YELLOW | GREEN | RED | BLUE | WHITE | YELLOW | GREEN | RED | BLUE | WHITE |  |  |  |
| Y | - | - | - | - | $N$ | - | - | - | - |  |  |  |

OLED-012N002A

| INTERFACE PIN FUNCTION |  |  |
| :--- | :---: | :--- |
| PIN NO. | SYMBOL |  |
| 1 | $\mathrm{~V}_{\text {SS }}$ | Ground |
| 2 | $\mathrm{~V}_{\mathrm{DD}}$ | Supply voltage for logic |
| 3 | NC | No connection |
| 4 | RS | H: Data; L: Instruction code |
| 5 | R/ $/ \mathrm{W}$ | H: Read (MPU $\leftarrow$ Module); L: Write (MPU $\rightarrow$ Module) |
| 6 | E | H $\rightarrow$ L enable signal |
| 7 | DB0 | Data bit 0 |
| 8 | DB1 | Data bit 1 |
| 9 | DB2 | Data bit 2 |
| 10 | DB3 | Data bit 3 |
| 11 | DB4 | Data bit 4 |
| 12 | DB5 | Data bit 5 |
| 13 | DB6 | Data bit 6 |
| 14 | DB7 | Data bit 7 |
| 15 | NC | No connection |

## DIMENSIONS in millimeters



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