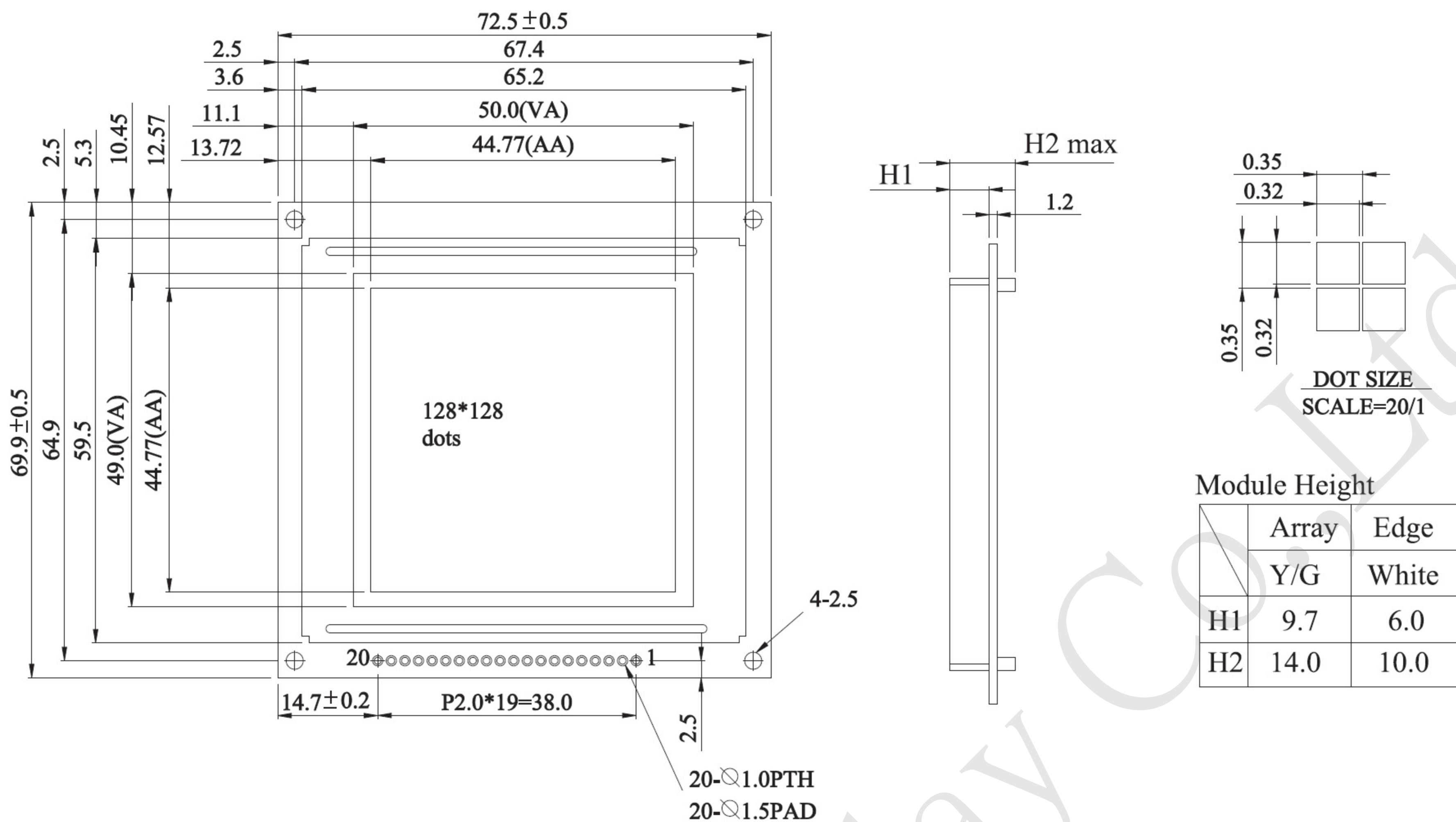


Dimension drawing



Feature

1. Built-in controller SANYO(LC7981)
2. 1/128 duty cycle
3. +5V power supply

| Pin NO. | Symbol | Function |
|---------|---------|---------------------------------|
| 1 | DB0 | Data bus line |
| 2 | DB1 | Data bus line |
| 3 | DB2 | Data bus line |
| 4 | DB3 | Data bus line |
| 5 | DB4 | Data bus line |
| 6 | DB5 | Data bus line |
| 7 | DB6 | Data bus line |
| 8 | DB7 | Data bus line |
| 9 | RS | Data /Instruction select |
| 10 | R/W | Data read /write |
| 11 | E | Enable signal |
| 12 | CS | Chip select |
| 13 | RES | Reset signal |
| 14 | VO | Contrast Adjustment |
| 15 | VDD | Power supply (+5v) |
| 16 | VSS | Power supply (GND) |
| 17 | Vee | Negative voltage output |
| 18 | dispoff | No connection |
| 19 | LED(+) | Power supply for LED B/L(+4.2V) |
| 20 | LED(-) | Power supply for LED B/L(0V) |

Mechanical Data

| Item | Standard Value | Unit |
|------------------|----------------|------|
| Module Dimension | 72.5x69.9 | mm |
| Viewing Area | 50.0x49.0 | mm |
| Dot Size | 0.32x0.32 | mm |
| Dot Pitch | 0.35x0.35 | mm |

Absolute Maximum Rating

| Item | Symbol | Standard Value | | | Unit |
|---------------|---------|----------------|------|------|------|
| | | min. | typ. | max. | |
| Power Supply | VDD-VSS | 4.75 | 5.0 | 5.25 | V |
| Input Voltage | VI | -0.3 | --- | VDD | V |

Note : VSS=0 Volt, VDD=5.0 Volt.

Electronical Characteristics

| Item | Symbol | Condition | Standard Value | | | Unit |
|--|--------|------------------|--------------------|------|--------------------|------|
| | | | min. | typ. | max. | |
| Input Voltage | VDD | L level | 0.7V _{DD} | --- | V _{DD} | V |
| | VIO | H level | --- | --- | 0.3V _{DD} | V |
| Supply Current | IDD | VDD=5V | --- | 1.5 | --- | mA |
| Recommended LC Driving Voltage for Normal Temp. Version module | VDD-V0 | -20°C | --- | 18.0 | --- | V |
| | | 0°C | --- | 17.5 | --- | |
| | | 25°C | --- | 17.0 | --- | |
| | | 50°C | --- | 16.0 | --- | |
| LED Forward Voltage | VF | 25°C | --- | 4.2 | 4.6 | V |
| | | 25°C | --- | --- | --- | mA |
| LED Forward Current | IF | 25°C | --- | --- | --- | mA |
| EL Power Supply Current | IEL | Vel=110VAC;400Hz | --- | --- | 5.0 | mA |