**Product Specification**

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| **Product:** | Outdoor Single Red P10 SMD Module |
| **Item No.:** | P10-4S-2835H |
| **Version:** | 2.3 |

1. **Module Picture**

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| **Front View** | **Rear View** |
|  | **213** |

**2. Technical Specification**

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| Module | Pixel Pitch | 10 mm | Pixel Density | 10000 Dots/㎡ |
| Configuration | 1R | LED Lamp | SMD2835H |
| Size (Width\*Height\*Depth) | 320\*160\*12mm | Weight | 0.267kg±0.01kg |
| Structure | Lamp & IC in same PCB | Resolution | 32\*16=512 Dots |
| Input Voltage (DC) | 4.5±0.1V | Maximum Current | ≤3.5A |
| Power Consumption | ≤16W | Driving Method | Constant Current  1/4 Scan |
| 40A Power Supply for | 8-9 pcs module | 80A Power Supply for | 17-18 pcs module |
| Screen | Brightness | ≥1000cd/㎡ | Brightness Uniformity | ＞0.8 |
| Horizontal Viewing Angle | 140 ±10 degree | Vertical Viewing Angle | 130 ±10 degree |
| Best Viewing Distance | ≥10 m | Black Spot Ratio | < 0.0003 |
| Max Power Consumption | ≤308W/㎡ | Operation Environment | Outdoor |
| Grayscale | 8 bits | Display Color | 256 types |
| Frame Frequency | ≥60 frame/sec | Refresh Frequency | ≥60 Hz |
| Control Mode | Computer control,  Point-to-point | Brightness Adjustment | 256-grade manual / automatic |
| Life Span | ≥100,000 hours | Average Failure Free Time | ≥10,000 hours |
| Attenuation  (3 years later) | ≤25％ | Operating Humidity | 10％-90％RH |

1. **Signal Pin**

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| **Pin** | **Signal** | **Function** | **Pin** | **Signal** | **Function** |
| 1 | F | Empty pin | 2 | F | Empty pin |
| 3 | GND | GND | 4 | F | Empty pin |
| 5 | GND | GND | 6 | F | Empty pin |
| 7 | GND | GND | 8 | F | Empty pin |
| 9 | GND | GND | 10 | F | Empty pin |
| 11 | GND | GND | 12 | D1 | Data signal |
| 13 | GND | GND | 14 | D2 | Data signal |
| 15 | GND | GND | 16 | F | Empty pin |

接口**HUB12C**

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1. **Precautions**

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| **Item** | | **Description** |
| Environmental  Precautions | Temperature requirement | Storage temperature range: -10 ° C - 30 ° C, over 30 ° C needs to do cooling treatment. Operating temperature range: -20 ° C -40 ° C, other temperature range, need to install temperature control equipment. Lamp surface temperature (working time): ≤60°C, temperature control equipment is required to be installed when temperature exceeding the standard |
| Humidity requirement | Storage humidity range: 10% RH-60% RH, humidity over 60% RH requires dehumidification treatment.  Operating humidity range: 10% RH-90% RH, If the humidity exceeds the standard, it must be dehumidified before it can be used normally. |
| Avoiding corrosive gas | Corrosive gas contains salt or acid gas in the environment, may cause corrosion of electronic components, crystallization, leakage and so on. |
| Electrostatic hazard，Prevent lightning strikes | The metal components of the screen, the shell of power supply and the cabinet should be grounded well, and the grounding resistance should be less than 10Ω. Prevent electrostatic damage to electronic devices in humid environment, while avoiding electric leakage to harm human body. |
| Operational precautions | Electro-static Protection | The worker must wear an anti-electrostatic wrist strap and anti- electrostatic glove. Various tools must be strictly grounded during assembly |
| Screen waterproof | After the installation of the entire screen is completed, it is necessary to ensure that no water enters the interior of the screen body. Waterproof glue should be applied around the screen body, the box body and the box body connection, and strict waterproof treatment should be done. |
| Description of the hazards of magnetic installation | It is not recommended that customers install the module outdoors by magnetic attraction. If it is installed outdoors, it will cause the following hazards:  1) Rain and snow will enter from the front of the display to the back of the display, causing the electronic components, system cards, switching power supplies and wires of the module IC surface to be immersed and corroded, resulting in premature failure;  2) The magnetic installation method cannot guarantee the flatness and assembling effect of the display;  3) The magnetic installation method is easy to deform the module in extremely cold weather. |
| Product batch control | Different batches of products cannot be installed in the same screen, otherwise there will be color blocks (mosaic) on the display. |
| LED module and box installation gap requirements | Place the 0.6mm plug gauge thin steel sheet vertically in the gap between the modules. After fixing the LED module, slowly pull out the plug gauge thin steel sheet vertically. During the splicing process, it is necessary to ensure that the four splicing gaps on the top, bottom, left, and right of the module use plug gauges to control the gap standard; |
| Place the 0.6mm plug gauge cross section vertically in the gap between the modules. After fixing the connecting piece of the box, slowly pull out the thin steel sheet of the plug gauge vertically. |
| Disassembly and transportation | Do not throw, push, squeeze or press the module to avoid damaging the display screen. |
| Product wiring | The module cannot be directly connected to 220V, and the module positive and negative poles connection must be right. |
| Installation Torque Control | In connection with power supply, it is necessary to ensure tightening of terminal joint screw to prevent joint position from loosening, resulting in wire burning or product damage caused by high contact resistance. Torque of M4 screw is 6.0-8.0 Kgf.cm, and that of M3 screw is 4.0-6.0 Kgf.cm. |
| Display control | Please do not display static picture or text, for this may cause LED lamp brightness go down seriously or LED lamp die. Please play moving pictures or text. |
| Prohibited touch with electricity | It is forbidden for people to touch the LED display screen when the LED screen is in usage, so as to avoid electrostatic breakdown of LED lights and chips and other components caused by human body friction. |
| Control card supply voltage | The control card needs to use 5V power supply to read the contents of the U disk normally. |
| Environmental inspection | Temperature and humidity meters should be equipped on the installation site to monitor the surrounding environment of the screen in time. After heavy rain, it is necessary to check whether there are any problems such as dampness, water droplets and over humidity in the screen in time. |
| Avoid construction work to the installed LED screen | It is strictly forbidden to rebuild after the installation of the LED display screen, so as to prevent the LED display screen from being affected by the impact of high current and dust, such as welding, electric saw and other equipment. |