**POCKET PM2.5 SENSORTM SPEC SHEET**

YAGUCHI ELECTRIC CORP.

**Basic Specifications**

|  |  |  |
| --- | --- | --- |
| No | Item | Parameter |
| 1 | Measurement parameters | PM2.5,PM10 |
| 2 | Range | 0.0-999.9 μg /m3 |
| 3 | Rated voltage | 5V |
| 4 | Rated current | 60mA±10mA |
| 5 | Sleep current | <4mA Laser&Fan sleep |
| 6 | Temperature range | Storage environment：-10 ~ +50℃Work environment：-20 ~ +60℃ |
| 7 | Humidity range | Storage environment：Max 90% Work environment：Max 70% |
| 8 | Air pressure | 86KPa~110KPa |
| 9 | Corresponding time | 1s |
| 10 | Serial data output frequency | 1Hz |
| 11 | Minimum resolution of particle | <0.3um |
| 12 | Counting yield | 70%@0.3μm 98%@0.5μm |
| 13 | Relative error | Maximum of ± 15% and ± 10μg/m325℃, 50%RH |
| 14 | Product size | 42.5x32x24.5mm |
| 15 | Certification | Note certified yet (CE/FCC/RoHS) |

**Power requirement**

Voltage：4.7~5.3V

Power supply：>1W

Supply voltage ripple：<20mV

**Serial protocol**

Bit rate :9600

Data bit :8

Parity bit:NO

Stop bit :1

Data Packet frequency: 1Hz

|  |  |  |
| --- | --- | --- |
| The number of bytes  | Name | Content |
| 0 | Message header | AA |
| 1 | Commander No. | C0 |
| 2 | DATA 1 | PM2.5 Low byte |
| 3 | DATA 2 | PM2.5 High byte |
| 4 | DATA 3 | PM10 Low byte |
| 5 | DATA 4 | PM10 High byte |
| 6 | DATA 5 | ID byte 1 |
| 7 | DATA 6 | ID byte 2 |
| 8 | Check-sum | Check-sum |
| 9 | Message tail | AB |

Check-sum: Check-sum=DATA1+DATA2+...+DATA6

PM2.5 value: PM2.5 (μg /m3) = ((PM2.5 High byte \*256) + PM2.5

