**ihere Manual & Specification**

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| --- |
| **ihere** |
| **WISOL** |
| **November 1, 2017** |

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# Key features

* **SIGFOX**
  + RCZ1/2/3/4 support
* **GPS**
  + Adaptive scan time algorithm for power saving
  + Cold start 30 seconds / warm start 3 seconds
* **Battery**
  + Li-ion
  + Battery level detector
  + Rechargeable by solar cell \*optional
* **Low sleep current**
  + Deep sleep 2~3uA
  + Sleep 30~40uA
* **WiFi**
  + BSSID scan time 3 seconds
* **BLE**
  + FOTA support
  + Advertizing mode / Connection mode
* **Configurable NFC tag**
* **Accelerometer**
  + Motion interrupt and shock detection
* **Magnetic sensor**
* **Temperature sensor**

# Composition

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | | | | | | |
|  | | |  | | | |
|  | Top |  | |  | Bottom |  |

# LED

## USB charging status LED

|  |  |  |
| --- | --- | --- |
| LED | Supply | Status |
| Red | Connected | Charging |
| Off | Connected | Full charge |
| Off | Not connected | - |

## Indication LED

|  |  |  |  |
| --- | --- | --- | --- |
| GPS on | WIFI on | SIGFOX on | BLE |
| Red | Yellow | Blue | Green |

## Indication LED light color combination.

* Blue + Red = Magenta
* Blue + Green = Cyan
* Green + Red = Yellow
* Blue + Green + Red = White

# Default scenario

|  |
| --- |
|  |

# Electrical characteristic

## Absolute maximum ratings

|  |  |  |  |
| --- | --- | --- | --- |
| Symbol | Parameter | Rating | Unit |
| VCC | Module input voltage | 5.5 | V |
| OT | Operating Temperature | -30 to +85 | ℃ |
| ST | Storage Temperature | -40 to +125 | ℃ |

## DC characteristic

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Symbol | Parameter | Min | Typ. | Max | Unit |
| VCC | Input supply voltage | 3.2 | 3.7 | 5 | V |
| Current | Deep sleep current |  | 5 |  | uA |
|  | BLE advertizing current@1sec interval |  | 40 |  | uA |
|  | BLE connection |  | 45 |  |  |
|  | WiFi scan current |  | 71 |  | mA |
|  | GPS positioning current |  | 27 |  | mA |
|  | Sigfox Tx current@RCZ1,3 |  | 54 |  | mA |
|  | Sigfox Tx current@RCZ2,4 |  | 200 |  | mA |

* Supply to Accelerometer, GPS backup battery is always turn on.

# Current consumption on running scenario (@RC1)

|  |
| --- |
|  |

# Antenna characteristic

## Test environment

|  |
| --- |
|  |

## Test result

|  |
| --- |
|  |

|  |  |  |
| --- | --- | --- |
| SIGFOX | E:\KYJ\20170315\SIGFOX.PNG |  |
| 800MHz  RC1 |
|  |
|  |
| SIGFOX | F:\KYJ1\171026_ihere_RC234\171026_IHERE_900MHZ.PNG |  |
| 900MHz  RC 2/3/4 |
|  |
|  |
| WIFI | E:\KYJ\20170315\WIFI.PNG |  |
|  |
|  |
| BLE | E:\KYJ\20170315\BLE.PNG |  |
|  |
|  |
| GPS |  |  |
|  |

# Debug interface connection

Please refer to the download manual and user manual of WSSFM20R module.

|  |  |
| --- | --- |
|  |  |

# Mechanical characteristic

|  |  |  |
| --- | --- | --- |
|  | Top/bottom case | Solar/LED window |
| Material | PC | Acrylic |

|  |
| --- |
|  |

|  |
| --- |
| ***WISOL hereby declares that this ihere is in compliance with the essential requirements and other relevant provisions of Directive 1999/5/EC.*** |

|  |
| --- |
| ***The antennas must be installed such that a minimum separation distance of at least [ cm] is maintained between the radiator and all persons at all times. This device must not be collocated or operating in conjunction with any other antenna or transmitter*** |