

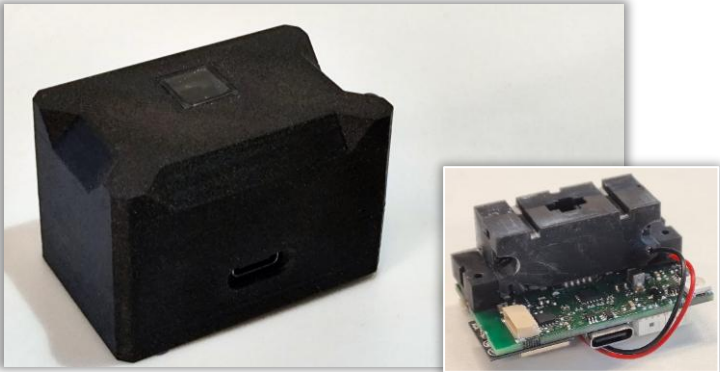
# Nibble™ R 2.0

## ChipSense™ Evaluation Device

- Spectral sensing module, including
- Nibble PCBA 2.0
  - Hyperspectral Sensor ChipSense™ 2.x
  - Electronics
  - Light source and optics

Available in various wavelength range configurations  
Also available without housing

Compatible with SpectraByte™ (Desktop app) and SpectraWeb™ (Browser app)



| Parameter                                        | Unit | Specifications                                                             |
|--------------------------------------------------|------|----------------------------------------------------------------------------|
| Nibble PCBA version                              |      | 2.0 Final                                                                  |
| Typical use case/application                     |      | Solid materials hyperspectral fingerprint data collection                  |
| Certifications                                   |      | CE/FCC (see Remark 1)                                                      |
| Optical Sensing Mode                             |      | Reflection                                                                 |
| Product Assembly Configurations                  |      | Complete,<br>Without Housing                                               |
| ChipSense™ product on-board                      |      | 2.1-16                                                                     |
| Wavelength range configuration options           |      | VIS/NIR/NIR-BP/<br>SWIR/Full Range                                         |
| Wavelength range configuration VIS               | nm   | 500 - 950                                                                  |
| Wavelength range configuration NIR               | nm   | 850 - 1700                                                                 |
| Wavelength range configuration NIR-BP            | nm   | 850-1100                                                                   |
| Wavelength range configuration SWIR              | nm   | 1100 - 1700                                                                |
| Wavelength range configuration Full Range        | nm   | 550 - 1700                                                                 |
| Light Source Type                                |      | Tungsten-based filament                                                    |
| Light Source max power consumption               | W    | 0.575                                                                      |
| Light Source dimmable                            |      | yes, 64 levels                                                             |
| Light Source lifetime                            | h    | 40.000                                                                     |
| Light Source Operation Mode                      |      | Current driven, Continuous/Triggered                                       |
| Signal acquisition method                        |      | Sequential                                                                 |
| Acquisition Time per Channel Range               | ms   | 0.5-192                                                                    |
| Signal to Noise ratio (White ref. sample)        | dB   | 70                                                                         |
| Measurement area                                 | mm   | 5x4                                                                        |
| Max working distance                             | mm   | 2                                                                          |
| On-Device User Interface                         |      | na                                                                         |
| Wired Connectivity                               |      | USB-C / 6 pole SH                                                          |
| USB-C Protocol                                   |      | USB serial port (115.2 kbps to 921.6 kbps)                                 |
| 6 pole SH protocol                               |      | Default: RS485 (115.2 kbps) HW enabled: UART (115.2 kbps up to 921.6 kbps) |
| Wireless Connectivity                            |      | Wi-Fi (2.4 GHz)                                                            |
| Power supply                                     |      | DC (USB) or External Battery                                               |
| Voltage Supply                                   | V    | 3.7 - 5.1                                                                  |
| Current Consumption Stand-by                     | mA   | 60 (Radio Disabled) 130(Radio Enabled)                                     |
| Current Consumption Light Source on at Max Power | mA   | 290                                                                        |
| Size (l x w x h)                                 | mm   | 53x34x32                                                                   |
| Recommended Operating Temperature                | °C   | 10 - 40                                                                    |
| Operating temperature                            | °C   | 0 - 50                                                                     |
| Accessories delivered in package                 |      | USB-C Cable                                                                |
| Software companion                               |      | SpectraByte, SpectraWeb, FW update tool                                    |
| Remarks                                          |      | 1 - WiFi not certified CE/FCC                                              |

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