

trinamiX Mobile NIR Spectroscopy Solutions

trinamiX PAL Two



Spectroscopic specifications

Spectral range	1,300 nm – 2,350 nm
Scan spot size	50 mm ² , evenly illuminated
Spectral resolution	< 50 nm
Signal to noise ratio	> 12,000 per spectral resolution element

Optical components

Technology	Grating technology
Detector	128-pixel PbS line array detector
Lamp module	12 Tungsten halogen lamps Lifetime > 500,000 scans (typically)
Scan window	Scratch resistant sapphire window

Physical specifications

Dimensions	180 mm x 124.5 mm x 70 mm
Weight	700 g
IP class	IP65 dust- and waterproof (splash and jet water)

trinamiX Mobile NIR Spectroscopy Solutions

trinamiX PAL Two

Environmental conditions

Operating temperature	0 °C – 40 °C / 0 °C – 30 °C for charging
Storage temperature	– 20 °C – 60 °C
Air humidity (non-condensing)	20 % – 80 % (operation) / 20 % – 90 % (storage)
Height above sea level	≤ 3,000 m
Type of use	Indoor and outdoor (operation), indoor (charging)

Electrical specifications

Power input (for charging)	5 VDC, max. 2 A via USB type C connector
USB-connection (for stationary use)	USB type C
Wireless connection (for handheld use)	BLE (<i>Bluetooth® Low Energy</i>)

Battery

Type	Rechargeable lithium-ion battery
Number of scans per battery charge	> 3,000, typically 5,000
Nominal voltage	3.6 V
Nominal capacity	4,900 mAh
Charging current	1,600 mA
Transport classification	UN class: 9 UN number: 3,480, Lithium-ion battery Energy of battery: < 100 Wh

Radio frequency module

The device contains the following radio frequency (RF) module:

Type	ESPRESSIF ESP32-S3-MINI-1
Frequency range	2.40 – 2.48 GHz
Max. output power	Typ. 0 dBm, max. 9.96 dBm

This document, or any answers or information provided herein by trinamiX GmbH does not constitute a legally binding obligation of trinamiX GmbH. While the descriptions, designs, data and information contained herein are presented in good faith and believed to be accurate, it is provided for your guidance only. Because many factors may affect processing or application/use, we recommend that you make tests to determine the suitability of a product for your particular purpose prior to use. It does not relieve our customers from the obligation to perform a full inspection of the products upon delivery or any other obligation. No warranties of any kind, either express or implied, including warranties of merchantability or fitness for a particular purpose, are made regarding products described or designs, data or information set forth, or that the products, designs, data or information may be used without infringing the intellectual property rights of others. In no case shall the descriptions, information, data or designs provided be considered a part of our terms and conditions of sale.