EzDx Technology
杭州逸检科技有限公司

EzDx WeD™-1 Handheld Nucleic Acid Fluorescence Visualization Detector

- We are dedicated to offering convenient diagnostic tools and services to everyone

1. Product Description

The WeD™-1 portable visual POC device is a reusable, hand-held instrument that is convenient in use and value for money. Weighing only 280 grams, the pocket-size device can interface with smart phones in real time and is compatible with isothermal detection methods like LAMP, RPA, LAMP-CRISPR, RPA-CRISPR, LAMP-PfAgo, and more, therefore is an ideal option for (1) Home-based nucleic acid testing and (2) Onsite rapid testing. Key applications include but not limited to:

- Human infectious disease screening
- Animal/Plant pathogen screening
- Food safety surveillance
- Species identification
- Laboratory based enzymatic reactions, fluorescence detections and isothermal reactions

2. Content and Storage Condition

Content	Quantity	Storage Condition
WeD-1 Device	1	Ambient*
Device power plug	1	Ambient
User Manual	1	Ambient

* 10°C to 40°C (50–104°F), relative humidity 10% to 80%

3. Product Specifications

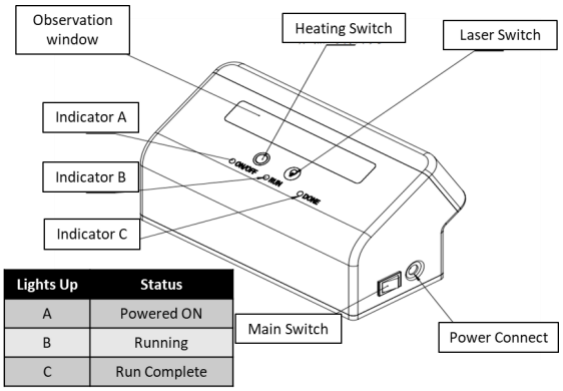
Category	Specification
Voltage	24V
Power	36W (72W)MAX
Size	140mm*78.3mm*80.3mm
Weight	280g
Heating range	20 ~ 100°C

YouTube Channel

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4. Quick Guide



Lights Up	Status
A	Powered ON
B	Running
C	Run Complete

Figure 1: A graphical overview of the WeD-1 portable POC device

a. General Instructions

Note: Settings of the last run will be automatically retrieved upon initialization. If there's a need to modify the default thermal profile saved, refer to Section 4(b)

i. Switch on the device by pressing the Main Switch. Indicator A will light up with a "Beep-beep" sound
ii. Press the Heating Switch, Indicator B will light up with a "Beep-beep" sound. The device starts to heat up and the thermal profile can be monitored in real time via the phone App. Long-pressing the heating switch will stop the amplification reaction.
iii. Once the heating process is complete, Indicator C will light up with a 5-second-long "BEEP" sound

b. Modifying the thermal profile using Phone App

i. Switch on the Main switch, indicator A will light up with a "Beep-beep" sound
ii. Launch the WeD-1 phone App and connect to the designated WeD-1 device via in-App search. A successful connection is prompted by a "Beep" sound
iii. Modify/ Set up the thermal profile by directly inputting in the App and uploading to the device. A successful uploading of protocol is indicated by a "Beep" sound
iv. Press the Heating switch, heating will commence with a "Beep-beep" sound and the indicator B will light up. User can monitor heating status via phone App.
v. Once the heating process is complete, Indicator C will light up with a 5-second-long "BEEP" sound

5. User Guide for operating WeD-1 phone App (or Wechat mini-program)

a. Refer to **QR Codes below**, download/install and launch WeD-1 phone App on a designated smart phone, or find Wechat WeD-1 mini-program from the Wechat App
b. Click “setting” and search for available WeD-1 devices in range
c. Connect to the selected WeD-1 device
d. The device name and model will appear in-App. It will also populate the thermal profile cum settings
e. Set the appropriate reaction profile or modify the thermal profile cum settings for intended use
f. Confirm the required consumables (PCR tubes) are loaded on the selected device and press the heating switch to start the protocol
g. Wait for the run to complete

QR Codes for Mobile App, WeChat Mini Program, and Operation Video Tutorial:

iOS/macOS App

Google Play App

Operation Tutorial

6. Precautions:

- **a.** This product is compatible only with standard 200µL PCR tubes, and not with 100µL PCR tubes. The minimum reaction volume it supports is 25µL.
- **b.** This device is capable of detecting fluorescence within the 510~650nm range and is specifically optimized for duplex detection of FAM/fluorescein (emitting at approximately 520nm) and ROX/TexRed (emitting at approximately 600nm).
- **c.** Result interpretation: LAMP results based on fluorescence dyes should be interpreted within a temperature range of 60-80°C, whereas methods based on the cleavage of fluorescent probes do not require a specific temperature range for interpretation.
- **d.** Recommendation: To facilitate result interpretation at your convenience, we suggest heating the reaction to a high temperature, such as 95°C, for 5 minutes to terminate the amplification reaction.
- **e.** The amplification reaction can be stopped either by switching off the red power switch located on the side of the device, or by long-pressing the heating switch.
- **f.** If using lyophilized reagents, ensure that the reagents are fully dissolved and thoroughly mixed.
- **g.** During use, ensure that the mobile app (or WeChat mini-program) has Bluetooth and location-sharing enabled. Please connect Bluetooth via the app (or WeChat mini-program), not through the phone's "Settings."
- **h.** To initiate the amplification reaction, press the "Heating swith" button. Please note that merely sending the protocol will not trigger the reaction.
- **i.** Recommendation: We recommend using a reaction volume of 25~50 µL to run the test. In case the reaction time exceeds 30 minutes, it's advisable to add mineral oil to the reaction mixture.
- **j.** If you are using an Android operating system, ensure that the EzDx app is granted background running permissions. Specific paths and settings may vary depending on the device brand and system version; please refer to the device manual. If not set, real-time data display may be affected by screen-off or app switching.
- **k.** The power parameters for this product are: 24V, 3A. When using or replacing the power adapter, make sure to use an adapter of the same specifications to avoid affecting the normal operation or damaging the product.
- **l.** The product's cooling is achieved through natural dissipation, resulting in a slower cooling rate. If conducting multi-stage isothermal reactions, it is recommended to design experiments with lower temperature stages executed first, followed by higher temperature stages.
- **m.** In the event of product damage, please contact the manufacturer or other qualified service agents for repair to prevent potential hazards.