



**SMARTPRO**<sup>®</sup>

GENERATION AHEAD TECHNOLOGY

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## 1.INTRODUCTION

Congratulations for having our SmartPro Optimum-I (SPO-I).



The very first and unique handheld diamond multi-tester using a special UV LEDs with fiber optic technology that designed for identifying between Natural Diamond, CVD/HPHT, all types of Moissanite, various shapes and carat weight from 0.015 carat to 10 carat for polished diamonds Colorless to Faint (D-M) Loose diamonds or Jewelry (with or without under hole)

## **2.DISCLAMERS, EXCLUSIONS AND LIMITATIONS OF LIABILITY**

Please read and note SMARTPRO WARRANTY TERMS AND CONDITIONS as stated in the warranty card. SmartPro warranty for its subject to proper use by its user in accordance with all the terms and conditions as stated in the relevant user manual and shall cover only manufacturing defects.

Due to continued product improvement, SmartPro reserves the right to revise all documents including the right to make changes to the user manual without notice and without obligation to notify any person of such revisions or changes. Users are advised to check SmartPro's website <http://www.smartproinstrument.com>

SmartPro shall not be responsible for any damage or loss resulting from the use of the product or user manual, and under no circumstances shall SmartPro, its manufacturer or any of its subsidiaries, licensors, distributors, resellers, servants and/or agents be liable for any direct or indirect damages resulting from the use of this product.

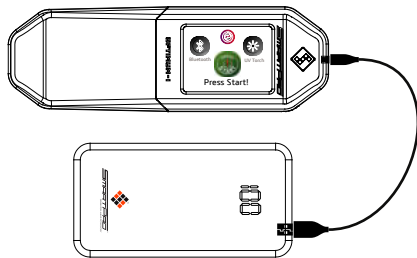
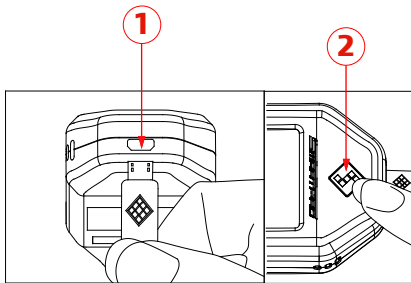
To maximum extent permitted by applicable law, under no circumstances shall SmartPro, its manufacturer or any of its subsidiaries, licensors, distributors, resellers, servants and/or agents be liable for any special, incidental, consequential or indirect damages howsoever caused.

Smartpro Optimum I referred to in this user manual is provided and/or sold on “as is” basis. Except as required by applicable law, no warranties of any kind, expressed or implied, including, but not limited to, the implied warranties of merchantability and fitness for a particular purpose.

### 3. QUICK START GUIDE

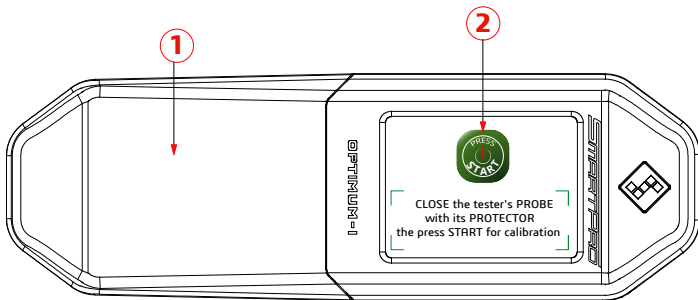
#### 3.1) Turn ON/Turn OFF

1. Plug the USB cable from to Output port of Power bank /Adaptor to an Input port of SPO-I
2. Press and hold the Switch for 3 seconds to turn ON/OFF

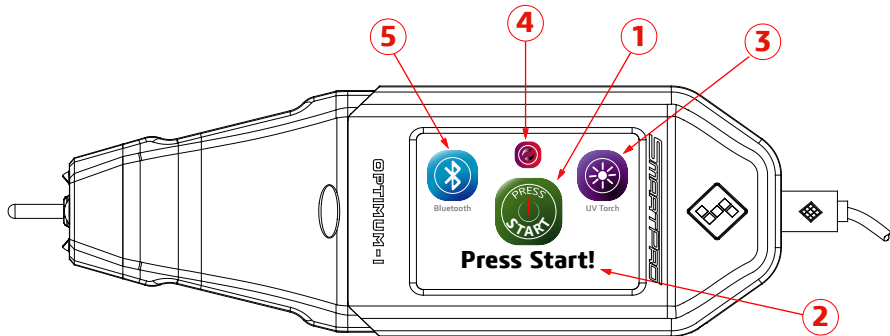









### 3.2) Calibration

1. Cover the Probe tip
2. Click at "START" to begin the calibration

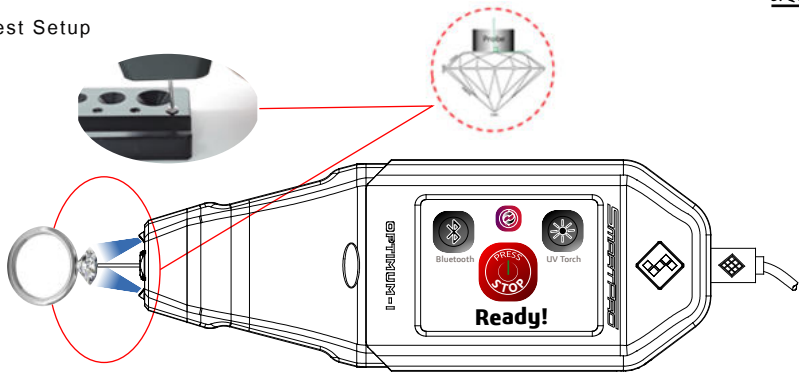


### 3.3) Functions



No.	Item display	Meaning
1	 	Testing START/ STOP
2	Press Start! Ready! <b>DIAMOND</b> <b>MOISSANITE</b> <b>CVD/HPHT</b>	Information&Test results
3	 	UV Torch ON / OFF
4		Rotate Display
5	 	Bluetooth ON/OFF

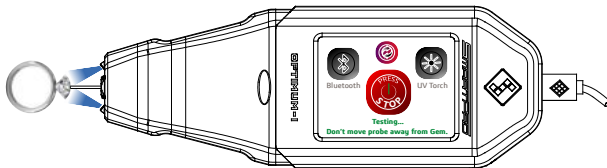
### 3.4) Test Setup



**NOTE:** Don't move probe away from Gem.

### 3.5) Testing Result

1. Detected Natural Diamond (Type Ia)
2. Detected Synthetic Moissanite
3. Detected Synthetic Diamond (CVD or HPHT)



1

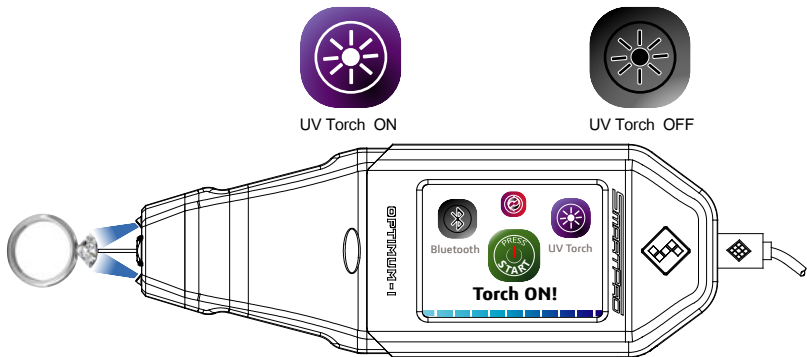


2



3

3.6) Torch mode.

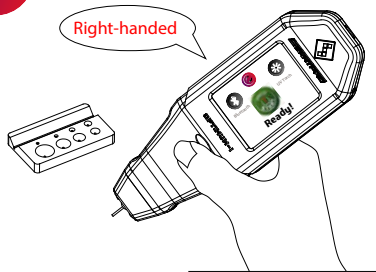
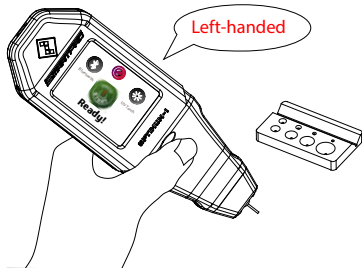


### 3.7) Rotate display

**Press** Screen rotation button



for the display rotation



### 3.8) Bluetooth

SPO-I can connect to Smartpro App just need active the Bluetooth!



Bluetooth ON



Bluetooth OFF

**Download the Smartpro App using these QR Code:**



## 4. FEATURES AND ADVANTAGES

### 4.1) FEATURES

#### ❖ 3 in 1 Distinguisher:

- ✓ Natural Diamonds
- ✓ All types of Synthetic Moissanites
- ✓ Synthetic CVD / HPHT Diamonds

NOTE: CZ ,GGG ,YAG ,Glass, and other Simulants can't be tested.

#### ❖ Designed for:

- ✓ Colorless to Faint ( D to M ) Color
- ✓ 0.015 ct. up to 10 ct.
- ✓ Round brilliant cut and almost all fancy cut
- ✓ Capable in checking loose and mounted stones in jewelry (with or without under hole)

- ❖ Beep sound indicator
- ❖ Auto Testing Function
- ❖ No warm up time before testing
- ❖ Automatic Power OFF (after 5 minutes inactive)
- ❖ Powered by USB adaptor or Power Bank

4.2) Advantages :

- ❖ Torch mode for diamond fluorescent test
- ❖ Display by 2.4" colorful Touch LCD
- ❖ LED light source mercury-free
- ❖ Right and Left-hand user-friendly
- ❖ Easy to operate with Touch screen
- ❖ Bluetooth connectivity

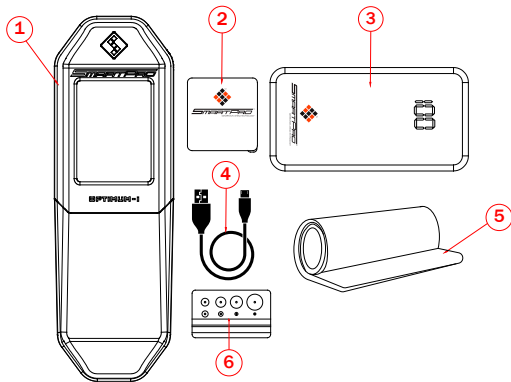
## 5.PRODUCT SPECIFICATIONS

Device Dimensions	57 (W)x177.5(L)x30(H) mm.
Device Weight	160 g.
Device Display	240x320pixels LCD 2.4 inches Touchscreen
Device Input	5 V / 1-2 A.
Power Bank	Dimension : 65.5x133x10.1 mm. Weight : 120 g. Capacity : 5000 mAh. Input : 5 V/ 2.0 A. Output : 5 V/ 2.1 A. Life test : 24 hours Approx.
USB Power Adaptor	Input 100~240 V,50/60 Hz,0.3A. Output 5 V / 2.4 A.
USB Cable Type	USB 2.0 type A To Micro USB type B
Loose Stone Tray support gems size	0.015 to 10 Carat
Testing Results	Natural Diamond, Synthetic Moissanite, CVD / HPHT Synthetic Diamond
Time Duration part test	3 sec.Avg.
Bluetooth	V 4.0 BLE

## 6. DEVICE ACCESSORIES AND OVERVIEW

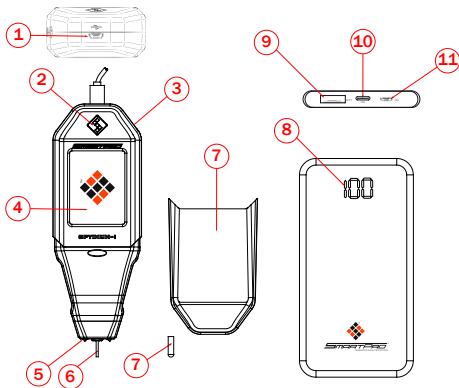
### 6.1) Device Accessories

1. OPTIMUM-I Tester
2. Power adaptor
3. Power bank
4. USB cable
5. Cleaning cloth
6. Stone tray



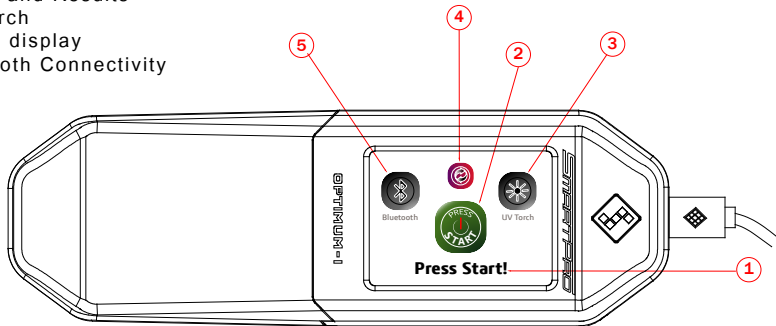
## 6.2) Device Overview

1. Micro USB port
2. Power switch
3. Buzzer
4. LCD touch screen
5. LED light source
6. Test probe
7. Probe tip protector
8. Battery Percentage
9. USB type A Output Port
10. Lightning Input Port
11. Micro USB Input port



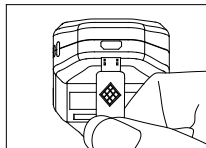
### 6.3) Display Overview

1. Start/Stop Testing
2. Status and Results
3. UV Torch
4. Rotate display
5. Bluetooth Connectivity

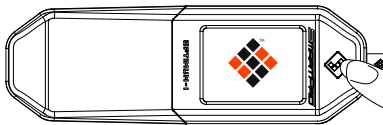


## 7. POWERING THE DEVICE

7.1) USB Plug the cable side of USB to Wall Adaptor or Power Bank and the side of Micro to the device.

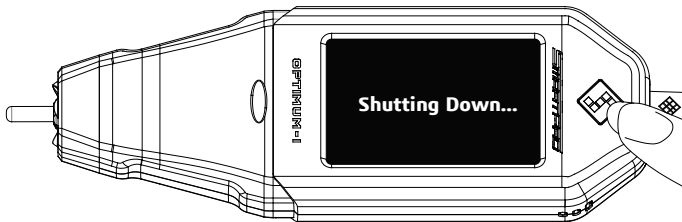


7.2) Press and hold the Power Switch for 3 seconds to turn ON the device.



Device Turned ON:

7.3) Press and hold the Power Switch for 3 seconds to turn OFF the device.



Device Turned OFF:

**NOTE:** Device will automatically be turned off after 5 minutes of idle.

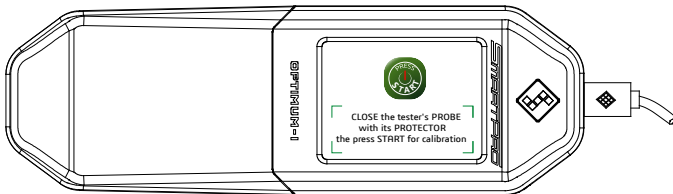
## 8. CALIBRATION

8.1) After turning ON the device make sure that the probe tip protector is attached to the tester's probe before pressing the " START " button.

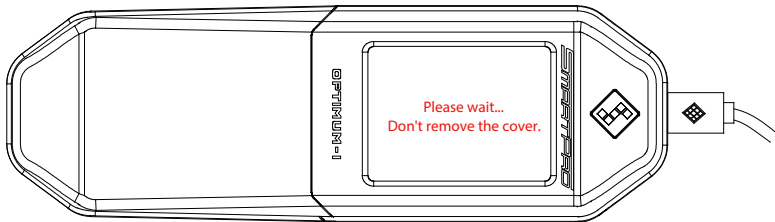
Click



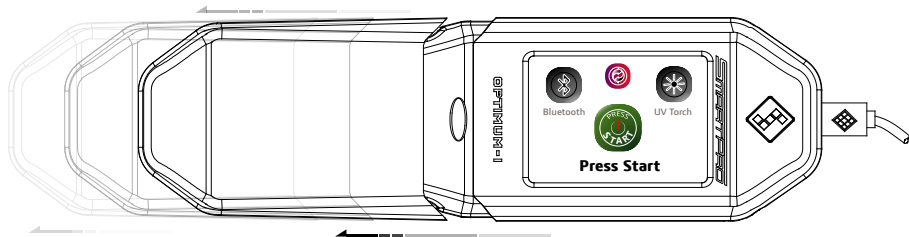
Button to begin the calibration



8.2) While the device is calibrating, do not remove the Probe's protector.



8.3) Done calibration. Remove the Probe Tip Protector then start testing.



## 9.TESTING PROCEDURES

9.1)

**Press**



to Begin testing mode. or

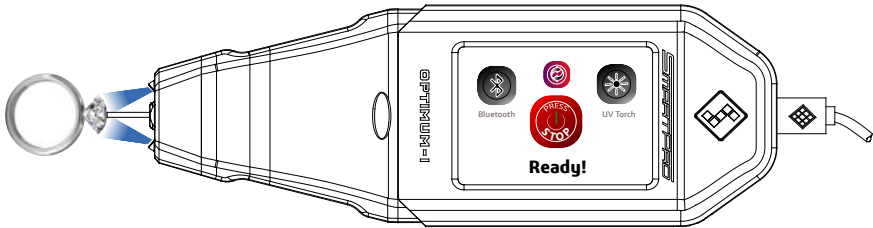
**Press**



to End testing mode.

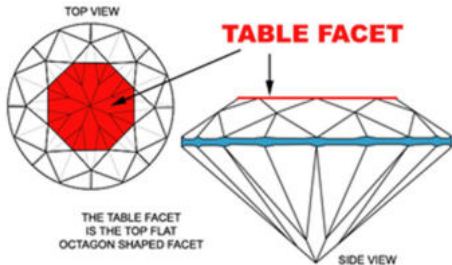
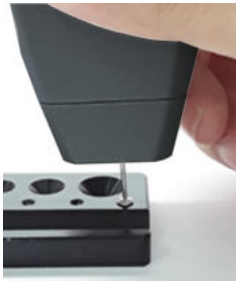
**Note:** This button is disabled when the analyzing process is on-going.

9.2) "READY!" will be displayed. Start testing by placing the tester probe tip on the stone's table.

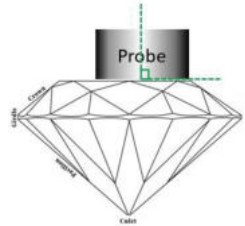
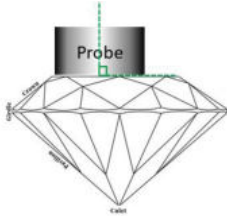
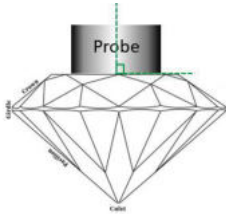


## Tester's Setup

The Tester's Probe should always be placed on center area as much as possible on the TABLE FACET.

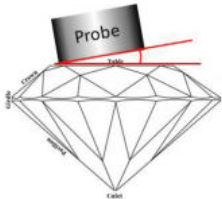


## ACCURATE TESTING

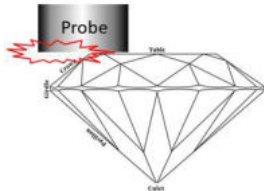


The Probe's Tip placed within Table Facet

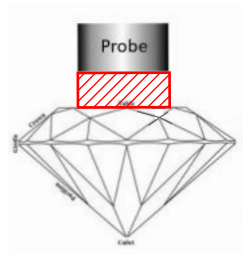
## INACCURATE TESTING



Have an angle between  
the probe tip and  
table side of the diamond

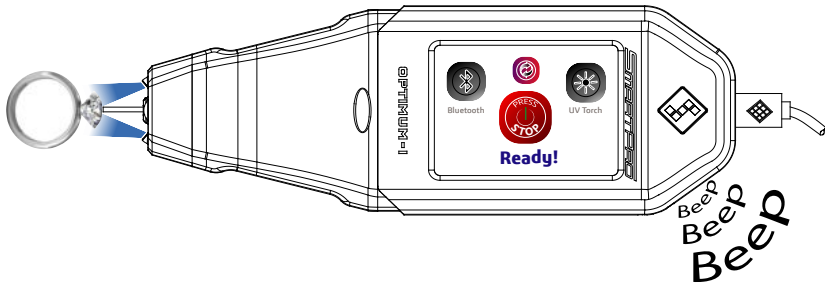


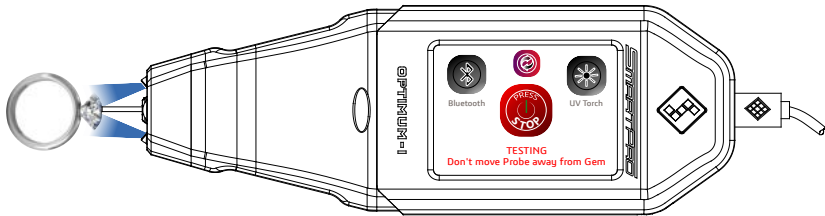
Probe out from the area  
of table facet



Have distance between  
the probe tip and table  
side of diamond

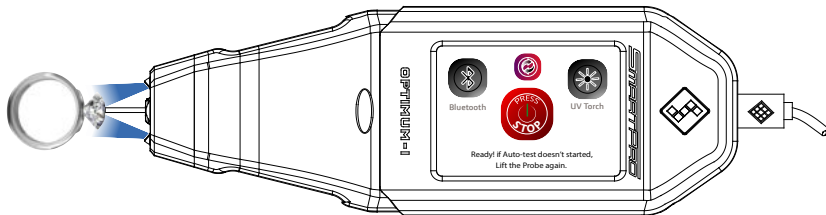
9.3) If the probe sensor detects nearby object device will start testing. The “READY” will change color from Black to Blue color with beep sound.





**NOTE:** While testing please don't move the probe to ensures the most accurate results.

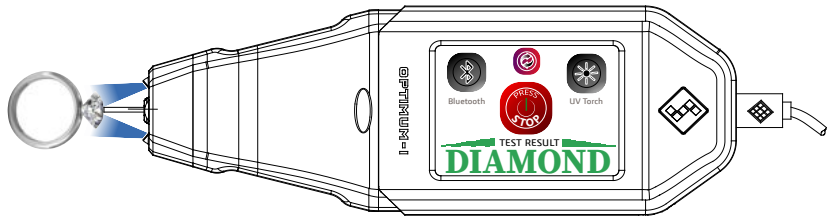
9.4) If the testing doesn't begin please lift the probe again away from Gemstone then there will be a beep sound indicating the object/stone has been detected.



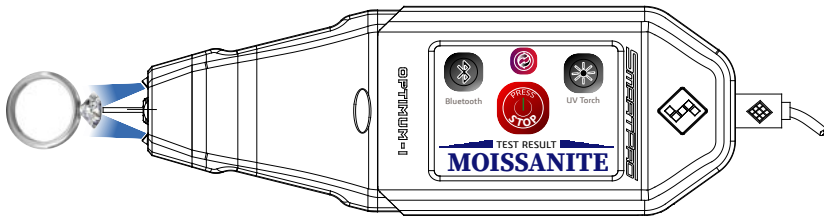
**NOTE:** Make sure that the UV LEDs are not blocked by anything while testing..

## 10. TEST RESULTS

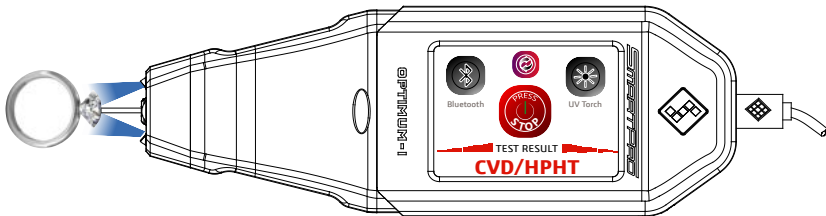
10.1) Diamond result: Detected Natural Diamond (Type Ia)



10.2) Moissanite result : Detected Synthetic Moissanite

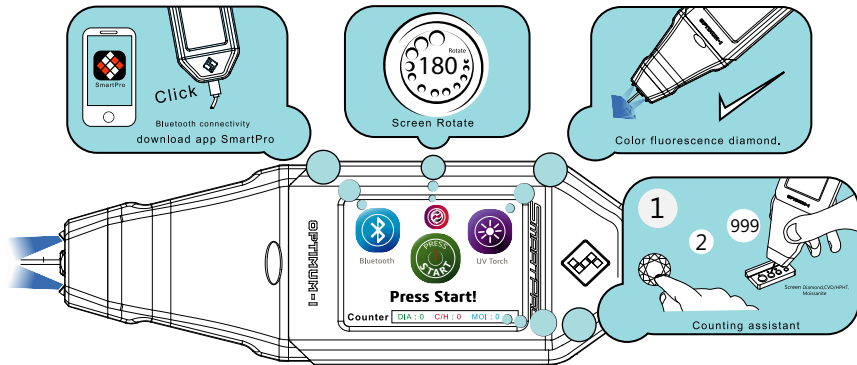


10.3) CVD/HPHT result: Detected Synthetic Diamond (CVD or HPHT)



**NOTE:** For the Natural diamond-type IIa SPO-1 will show the result as the CVD/HPHT because it has similarly no Nitrogen impurities.

## 11. OTHER FEATURES



## 11.1) UV Torch

SPO-I also has a UV torch mode. It helps you to view color fluorescence diamond.



**UV torch mode ON**



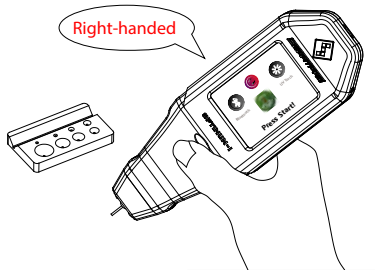
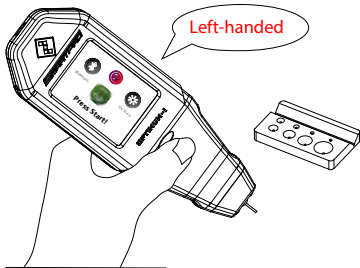
**UV torch mode OFF**

## 11.2) Rotate display

**Press** Screen rotation button



for the display rotation



### 11.3) Bluetooth

SPO-I can connect to Smartpro App just need active the Bluetooth!



**Bluetooth ON**



**Bluetooth OFF**

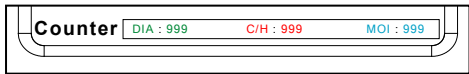
#### 11.4) Test Result Counter

This Counter is available in testing mode to help to user in monitoring test count. To Restart the counter to zero, click the STOP button then click the START button

**DIA** = Natural Diamond test count

**C/H** = CVD/HPHT test count

**MOI** = Moissanite test count



**Note:** Maximum count value is 999



You can download the Smartpro Instrument mobile application from



## **12. SAFETY INFORMATION**

SPO-I uses UV LEDs that radiate UV light during operations. Since UV light can be harmful to eyes, do NOT look directly into the UV light, even through an optical instrument. In the case of light reflection, UV protective glasses are required to use in order to avoid damage by the light. A proper way of using the tester is not harmful to eyes and skin.

## **13. SAFE HANDLING / MAINTENANCE**

13.1) Avoid exposing the SPO-I to dusty and moist places. This tester contains precise electrical circuits, so never attempt to open anything of the sealed parts

13.2) If the SPO-I and its Power bank are not going to be used for an extended amount of time, they should keep on its proper place.

13.3) Operating temperature of SPO-I is designed to work in ambient temperatures between 32° and 95° F (0° and 35° C) and stored in temperatures between -4° and 113° F (-20° and 45° C). SPO-I can be damaged and tester life shortened if stored or operated outside of these temperature ranges. Avoid exposing it to dramatic changes in temperature or humidity

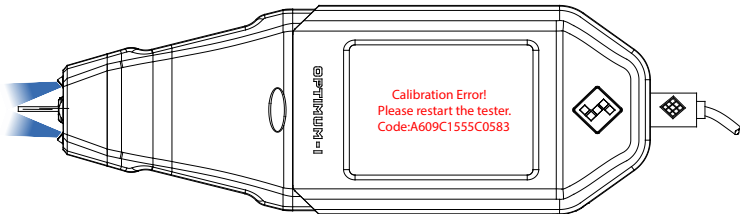
13.4) Always put the Probe's protector when not in use.

13.5) The test probe should stay in clean condition. In case of dirt at the end of the fiber probe tip should be gently clean with low lint wipes or optical cleaning tissue with isopropyl alcohol.

13.6) We are recommending not to connect Power bank to tester if it is charging at the same time. This may cause overheating on Power bank.

## 14.TROUBLESHOOTING

If Calibration Error please try to restart the tester and do follow the “CALIBRATION PROCEDURES”



If the device has no power, check the USB cable is properly connected.

If using the Power bank, check the battery level. If empty, charge it before using it.