



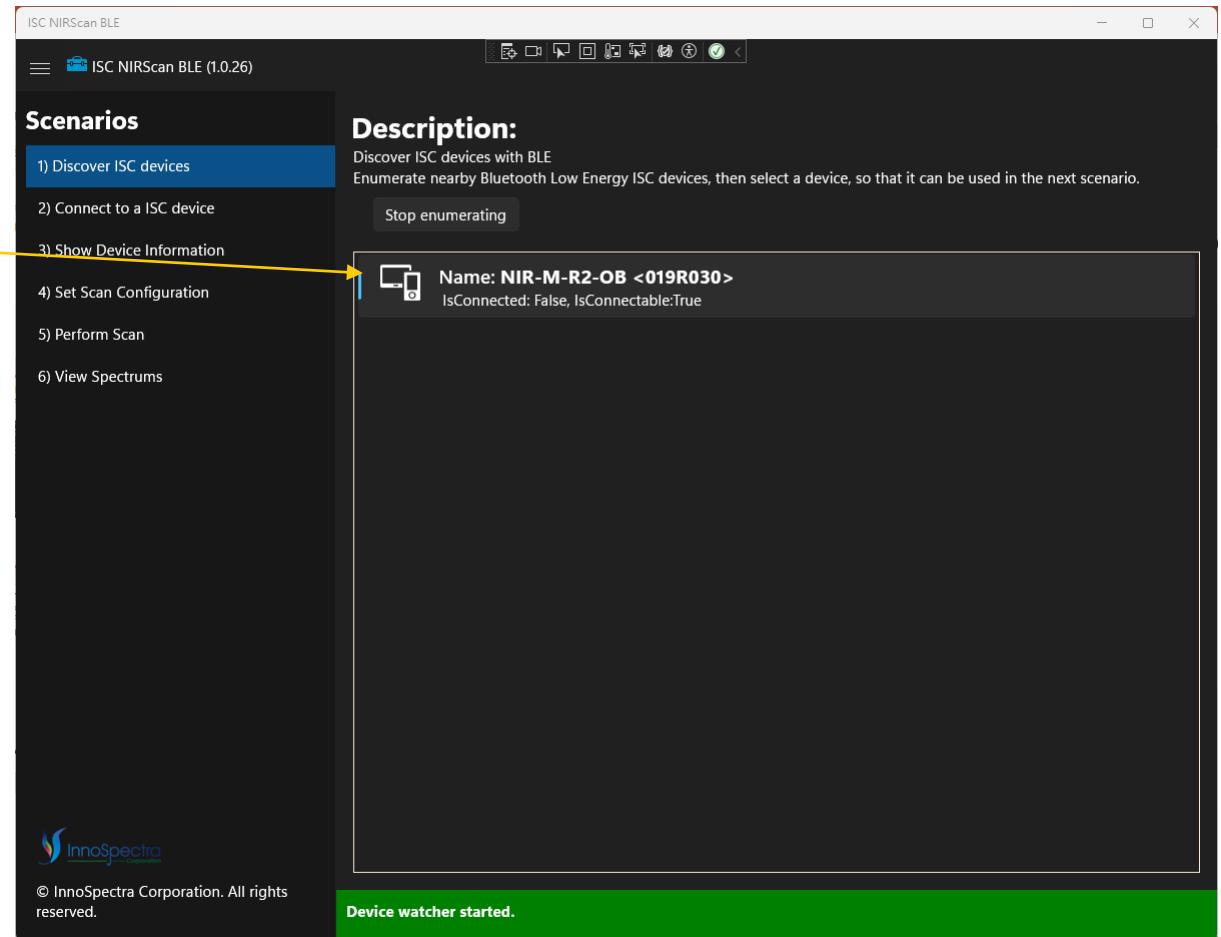
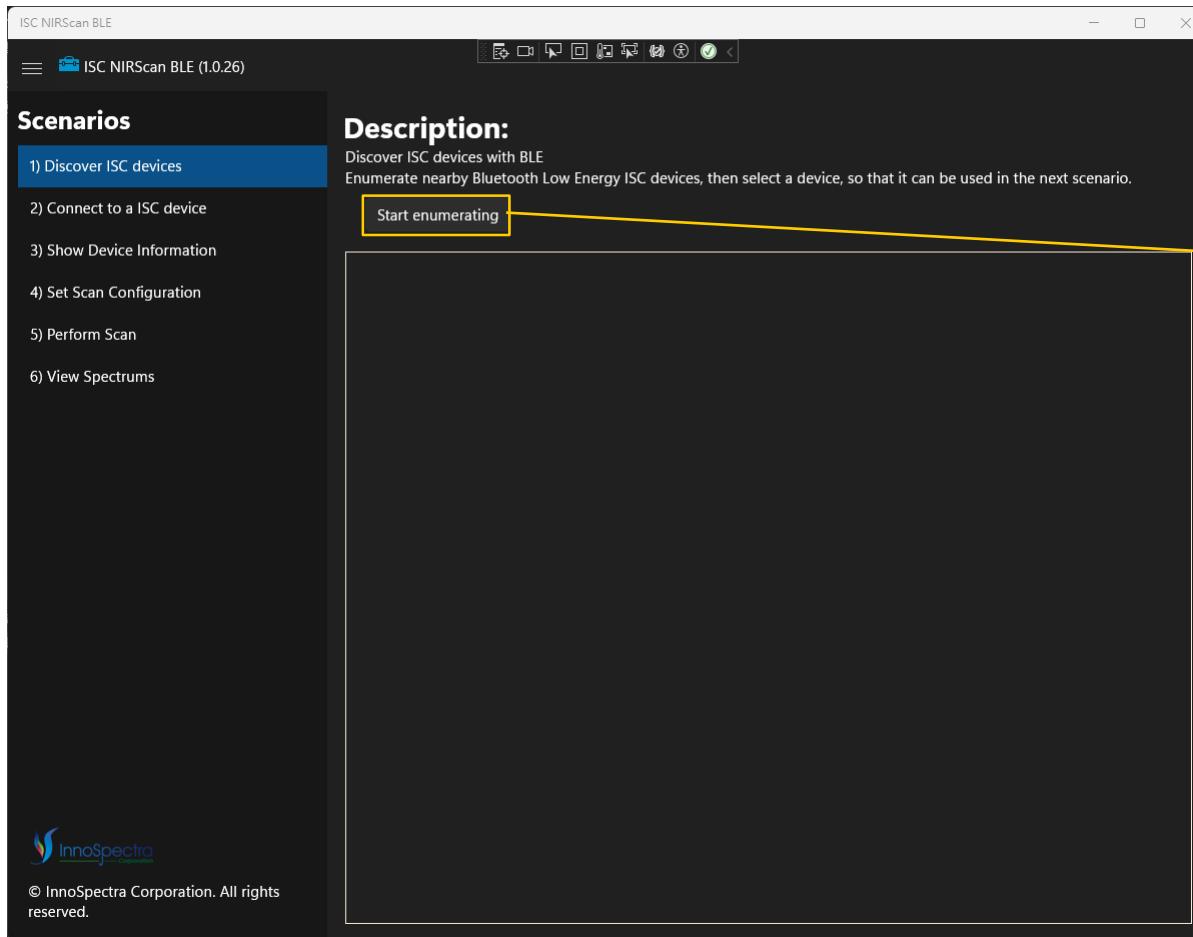
PC BLE SDK V1

July. 14, 2025

Step1 – Discover ISC device



Press **Start enumerating** button to start discover ISC device. Once found, select the device you want to connect to.



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Step2 – Connect to ISC device



Press **Connet** button connect ISC device. It will start finding services and characteristics.

ISC NIRScan BLE

ISC NIRScan BLE (1.0.26)

Scenarios

- 1) Discover ISC devices
- 2) Connect to a ISC device**
- 3) Show Device Information
- 4) Set Scan Configuration
- 5) Perform Scan
- 6) View Spectrums

Description:
Query services from ISC device

This scenario connects to the Bluetooth Low Energy device selected in the "Discover ISC devices" scenario and communicates with the device for services and characteristics.

Selected device: **NIR-M-R2-OB <019R030>**

Connect

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ISC NIRScan BLE

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Selected device: **NIR-M-R2-OB <019R030>**

Disconnect

Found Services/Characteristics:

- GenericAttribute
- GenericAccess
- DeviceName (Read) --> NIR-M-R2-OB <019R030>
- Appearance (Read) --> 80:00
- PeripheralPreferredConnectionParameters (Read) --> FF:FF:FF:00:00:FF:FF
- Battery
- BatteryLevel (Read/Notify) --> 100%
- DeviceInformation
- ManufacturerNameString (Read) --> Inno-Spectra Corp.
- ModelNumberString (Read) --> NIR-M-R2-OB
- SerialNumberString (Read) --> 019R030
- HardwareRevisionString (Read) --> D.B.B.A
- FirmwareRevisionString (Read) --> 2.4.6
- SoftwareRevisionString (Read) --> 2.1.2
- SystemID (Read) --> DE:67:0C:88:67:5F:22:21
- IEEE11073_20601RegulatoryCertificationDataList (Read) --> Empty data received
- PnPID (Read) --> 00:00:00:00:00:00
- Command Service
- InternalCommand (Write/Notify)
- ActivateState (Read/Write) --> Activated
- ReturnActivateState (Notify)
- ReplaceBuiltInReference (Write)
- General_Information Service
- TemperatureMeasurement (Read/Notify) --> 34.67 °C
- HumidityMeasurement (Read/Notify) --> 65.82 %RH

Download spectrum calibration coefficients finished!

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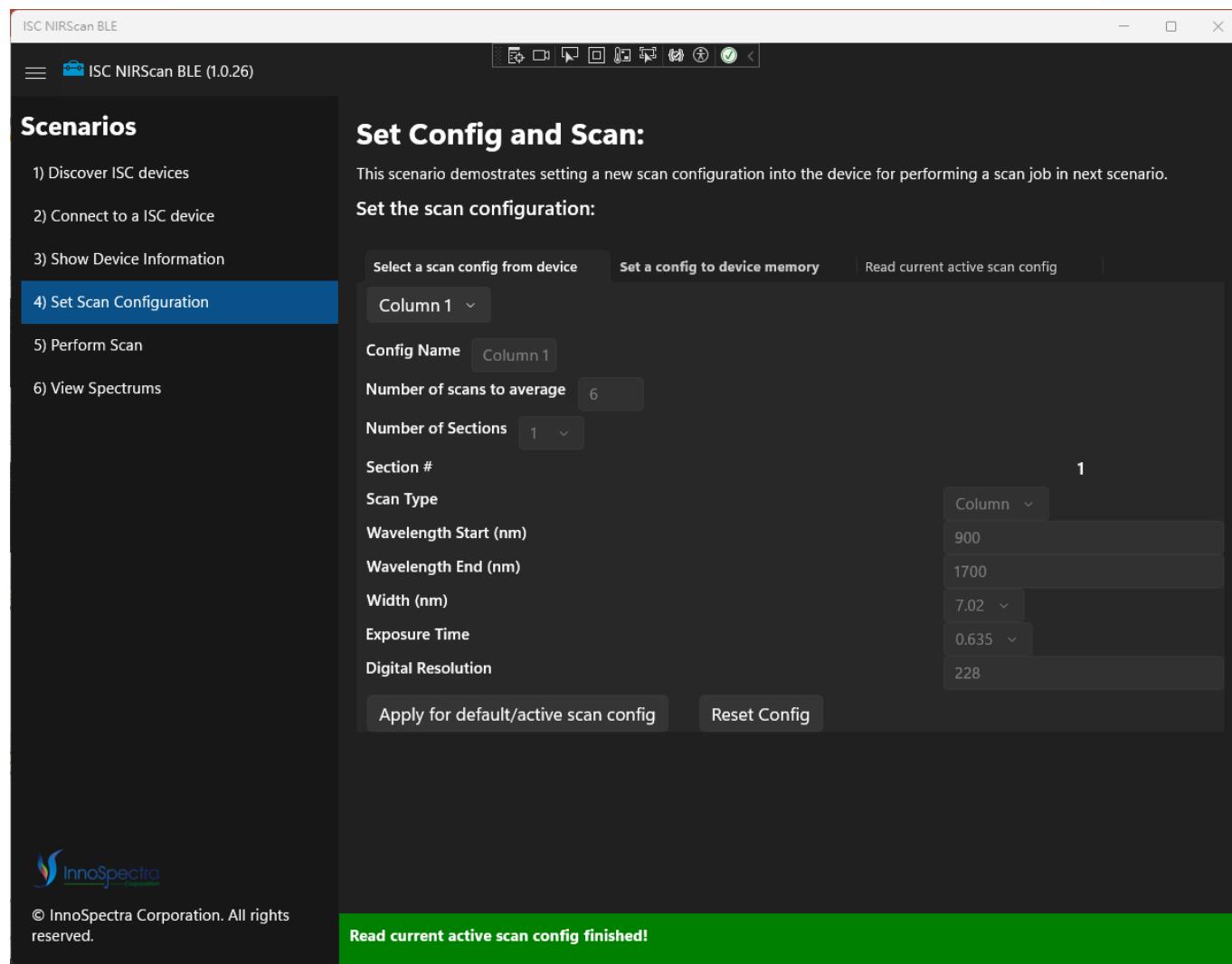
Step3 – Show Device Information



Press **Refresh** button to refresh device information.

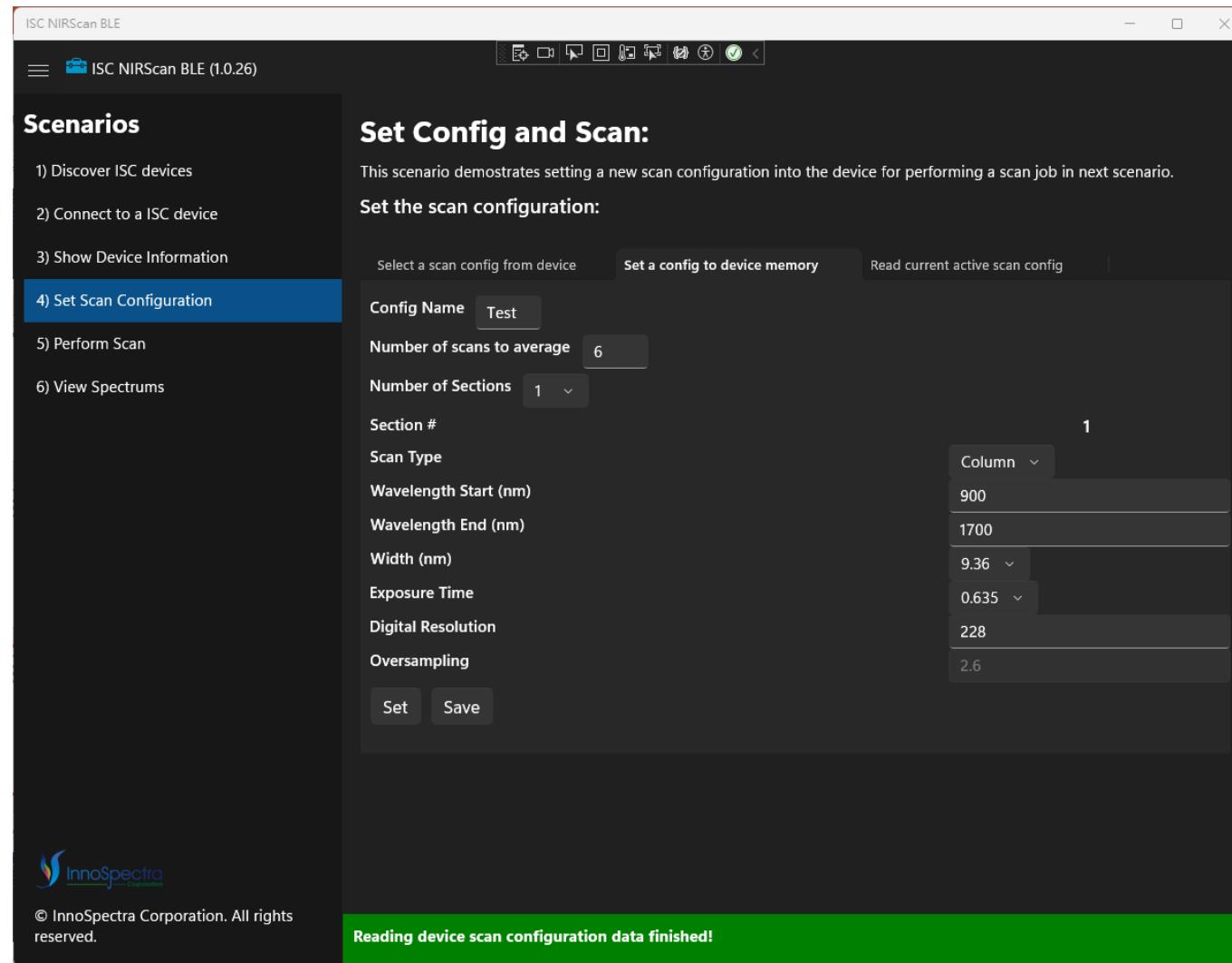
Step4 – Set Scan Configuration

The user can select the device's config from the menu. Press **Apply for default/active scan config button** will set the config to default. Press **Reset Config** button will initialize the device's config.



Step4 – Set Scan Configuration

Users can also set the desired config and then press **Set** button to temporarily save it to the device or press **Save** button to save it to the device.



Step4 – Set Scan Configuration



Select **Read current active scan config** tab to get current config from the device.

A screenshot of the ISC NIRScan BLE software interface. The window title is "ISC NIRScan BLE". The left sidebar lists "Scenarios" with items 1) through 6), where item 4) "Set Scan Configuration" is highlighted with a blue background. The main panel is titled "Set Config and Scan:" and contains instructions: "This scenario demonstrates setting a new scan configuration into the device for performing a scan job in next scenario." Below this, there are three tabs: "Select a scan config from device" (disabled), "Set a config to device memory" (disabled), and "Read current active scan config" (selected). The "Read current active scan config" tab shows a configuration for "Column 1":

- Number of scans to average: 6
- Number of Sections: 1
- Section # 1:
 - Scan Type: Column
 - Wavelength Start (nm): 900
 - Wavelength End (nm): 1700
 - Width (nm): 7.02
 - Exposure Time: 0.635
 - Digital Resolution: 228

A note field at the bottom says "Note...". A green status bar at the bottom right says "Read current active scan config finished!".

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Step5 – Preform Scan



Select **New** in Reference setting and press the **Reference Scan** button to start scanning the reference. Then select **Previous** in Reference setting and press the **Scan** button to scan the spectrum. The spectrum will be calculated with the previously scanned reference.

A side-by-side comparison of the ISC NIRScan BLE software interface. Both screenshots show a dark-themed window with various control panels and status indicators.

Left Screenshot (Reference Setting: New):

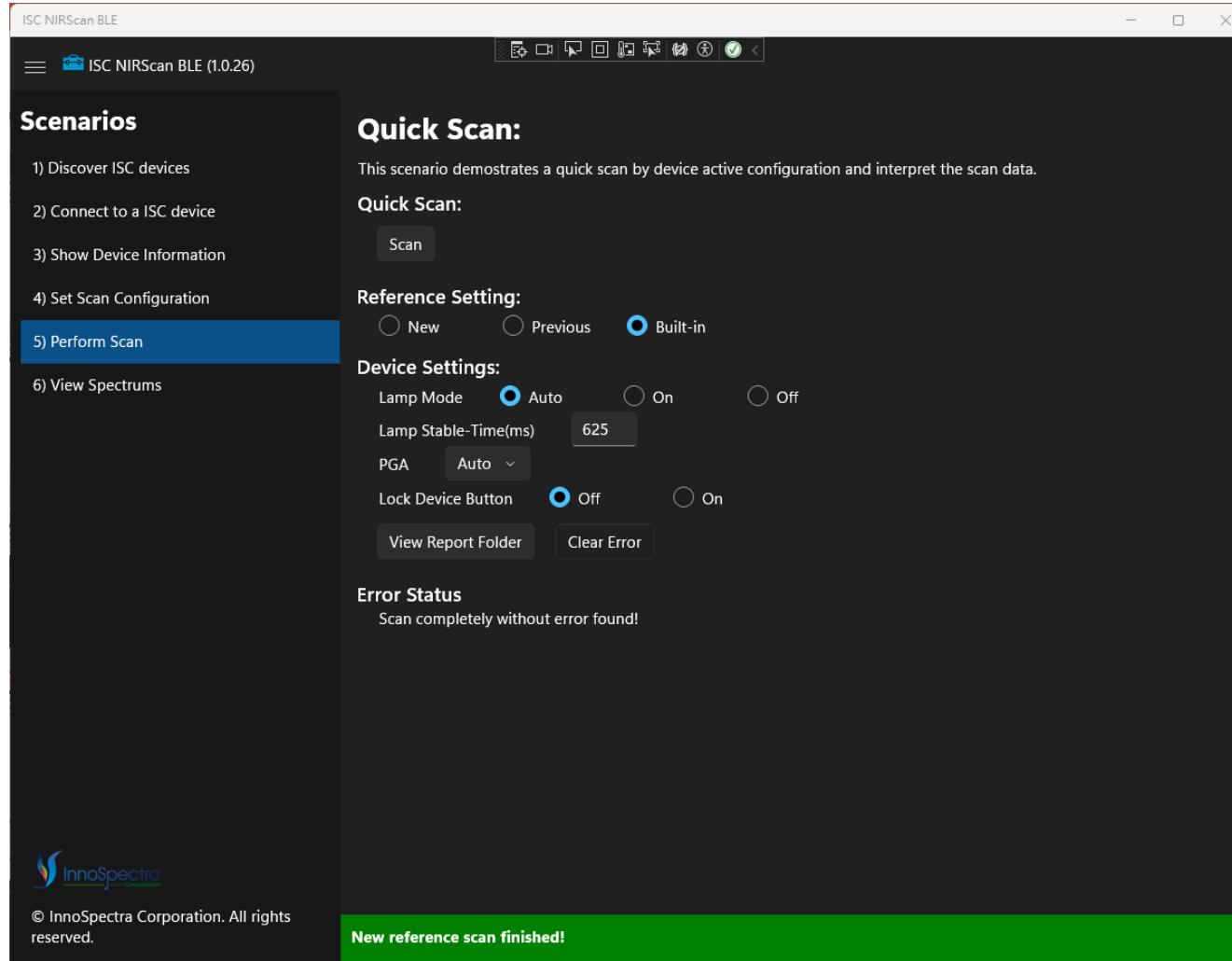
- Scenarios:** A sidebar with numbered options: 1) Discover ISC devices, 2) Connect to a ISC device, 3) Show Device Information, 4) Set Scan Configuration, 5) Perform Scan (highlighted in blue), 6) View Spectrums.
- Quick Scan:** A panel with a "Reference Scan" button.
- Reference Setting:** A radio button group where "New" is selected (highlighted with a yellow box).
- Device Settings:** Includes "Lamp Mode" (Auto selected), "Lamp Stable-Time(ms)" (625), "PGA" (Auto dropdown), and "Lock Device Button" (Off selected).
- Error Status:** "No error".
- Bottom Bar:** Shows "Setting device finished!" in a green bar.

Right Screenshot (Reference Setting: Previous):

- Scenarios:** Same numbered options as the left screenshot.
- Quick Scan:** A panel with a "Scan" button.
- Reference Setting:** A radio button group where "Previous" is selected (highlighted with a yellow box).
- Device Settings:** Same configuration as the left screenshot.
- Error Status:** "Scan completely without error found!"
- Bottom Bar:** Shows "New reference scan finished!" in a green bar.

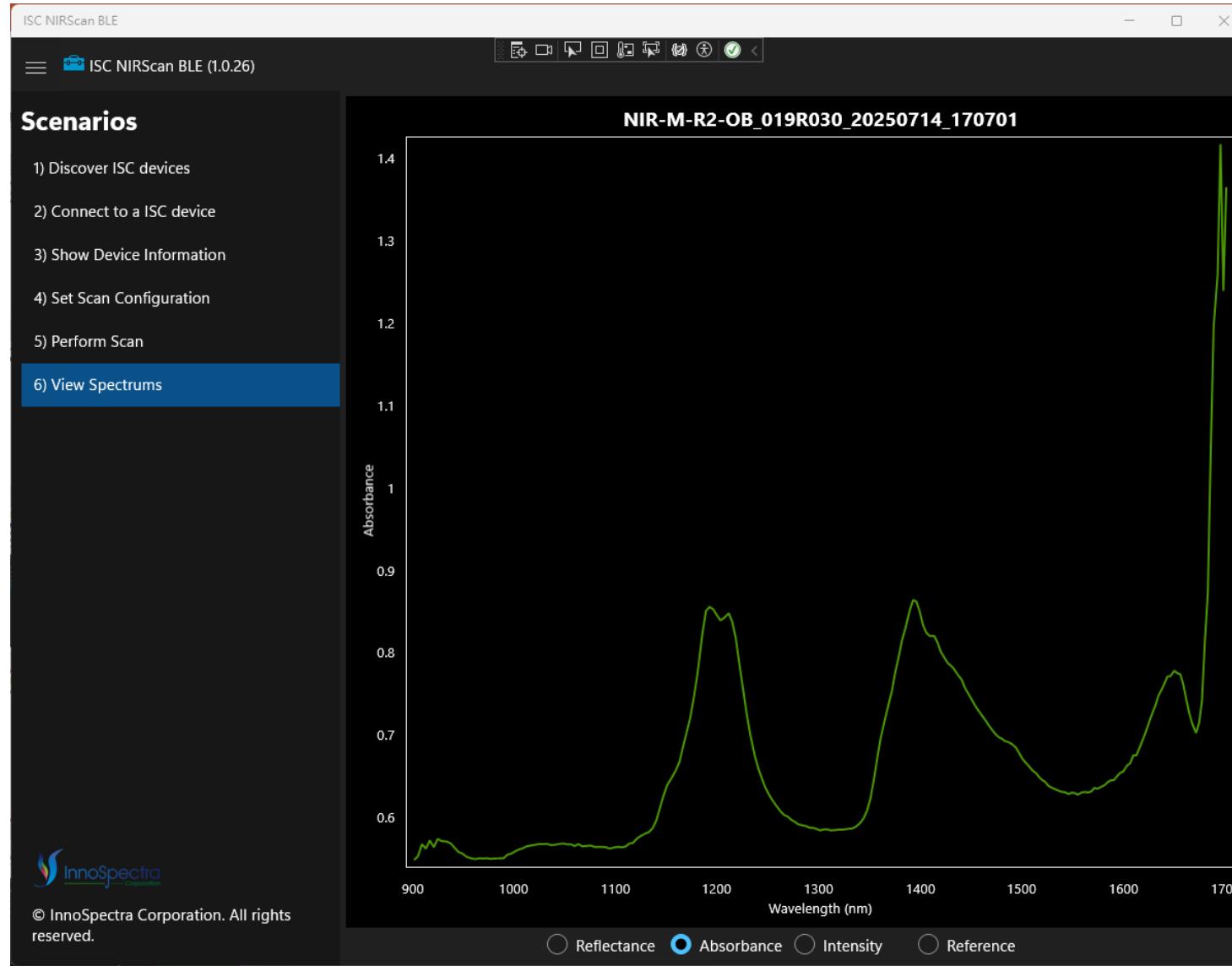
Step5 – Preform Scan

Reference Setting Select **Built-in** to scan the spectrum directly.



Step6 – View Spectrum

Displays the spectrum of the last device scan.



Thank You

