

LabRAM Soleil

NFC Reader



Reference: 1300089671

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NOTICE TO THE USER

This manual should not be construed as any representation or warranty with respect to the unit named herein. Occasionally, changes or variations exist in the unit that are not reflected in the manual. Generally, should such changes or variations exist and affect the product significantly, a release note would accompany the manual. In such a case, be sure to read the release note before using the product.

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1 Regulations

Regulations

47 CFR Part 15.225 (2020)

- RSS 210 Issue 10
- RSS Gen Issue 5
- ANSI C63.10 (2013)

The instrument contains an NFC module and complies with the FCC part 15 Class B and the Industry Canada RSS applicable to radiocommunications equipment.

1.1. Warnings to users in the United States

Federal Communication Commission Interference - Statement 47 CFR Section 15.105(b): this equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instruction, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception which can be determined by turning the equipment off and on, the user is encouraged to try to correct interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

The device NFC READER complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

No unauthorized modifications (47 CFR Section 15.21): this equipment may not be modified, altered, or changed in any way without signed written permission from HORIBA France. Unauthorized modification may void the equipment authorization from the FCC and will void the HORIBA France warranty.

This device complies with FCC RF radiation exposure limits set forth for general population. This device must be installed to provide a separation distance of at least 20cm from all people and must not be co-located or operating in conjunction with any other antenna or transmitter.

1.2. Warnings to users in Canada

This device complies with Industry Canada license-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

Under Industry Canada regulations, this radio transmitter may only operate using an antenna of a type and maximum (or lesser) gain approved for the transmitter by Industry Canada.

To reduce potential radio interference to other users, the antenna type and its gain should be so chosen that the equivalent isotropically radiated power (e.i.r.p.) is not more than that necessary for successful communication.

This device complies with Industry Canada RF radiation exposure limits set forth for general population (uncontrolled exposure). This device must be installed to provide a separation distance of at least 20cm from all persons and must not be collocated or operating in conjunction with any other antenna or transmitter. LC

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes : (1) il ne doit pas produire de brouillage, et (2) l'utilisateur du dispositif doit être prêt à accepter tout brouillage radioélectrique reçu, même si ce brouillage est susceptible de compromettre le fonctionnement du dispositif.

Conformément à la réglementation d'Industrie Canada, le présent émetteur radio peut fonctionner avec une antenne d'un type et d'un gain maximal (ou inférieur) approuvé pour l'émetteur par Industrie Canada.

Dans le but de réduire les risques de brouillage radioélectrique à l'intention d'autres utilisateurs, il faut choisir le type d'antenne et son gain de sorte que la puissance isotrope rayonnée équivalente (p.i.r.e.) ne dépasse pas l'intensité nécessaire à l'établissement d'une communication satisfaisante. IE Bureau Veritas, 33 avenue du Général Leclerc – 92260 Fontenay-aux-Roses. Tél. : + 33 1 40 95 60 60 Fax : + 33 1 40 95 86 56

Le présent appareil est conforme aux niveaux limites d'exigences d'exposition RF aux personnes définies par Industrie Canada. Cet appareil doit être installé afin d'offrir une distance de séparation d'au moins 20cm avec l'utilisateur, et ne doit pas être installé à proximité ou être utilisé en conjonction avec une autre antenne ou un autre émetteur.

1.3. Module integration: special warnings for USA and Canada

The NFC Reader module is considered as component that will be operated in combination with the final equipment. Then, the final equipment (including power supply) still needs to re-confirm that the whole system complies with both intentional & unintentional emission requirements.

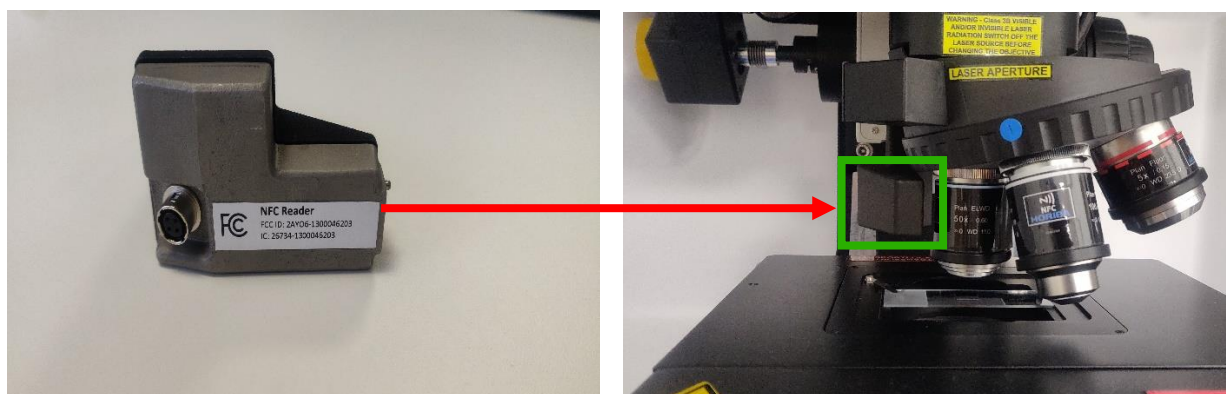
The minimum 20cm separation distance (between people & antenna/transmitter) should be mentioned in the final product documentation.

The end product's regulatory label should mention:

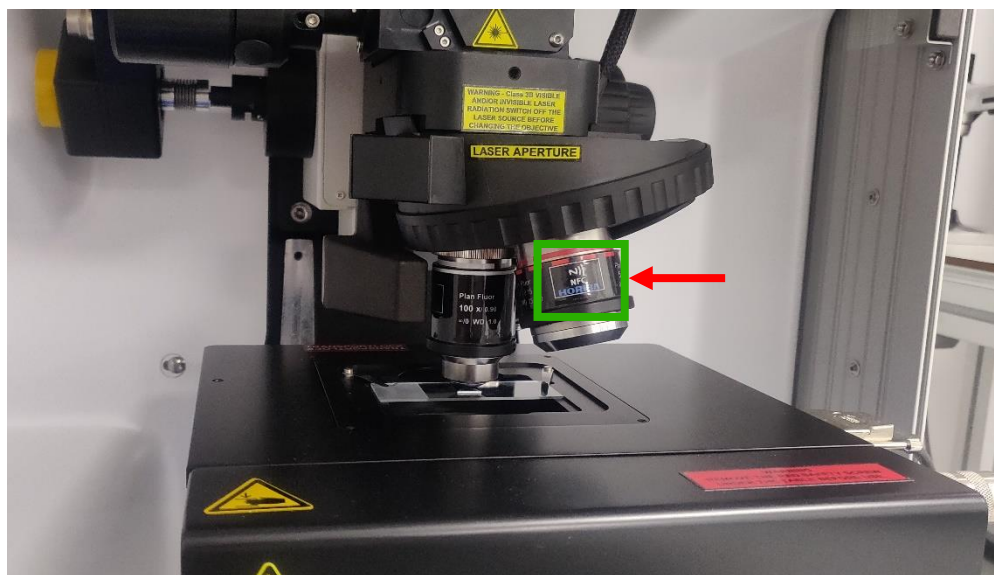
“Contains FCC ID: 2AYO6-1300046203 and IC: 26734-1300046203.

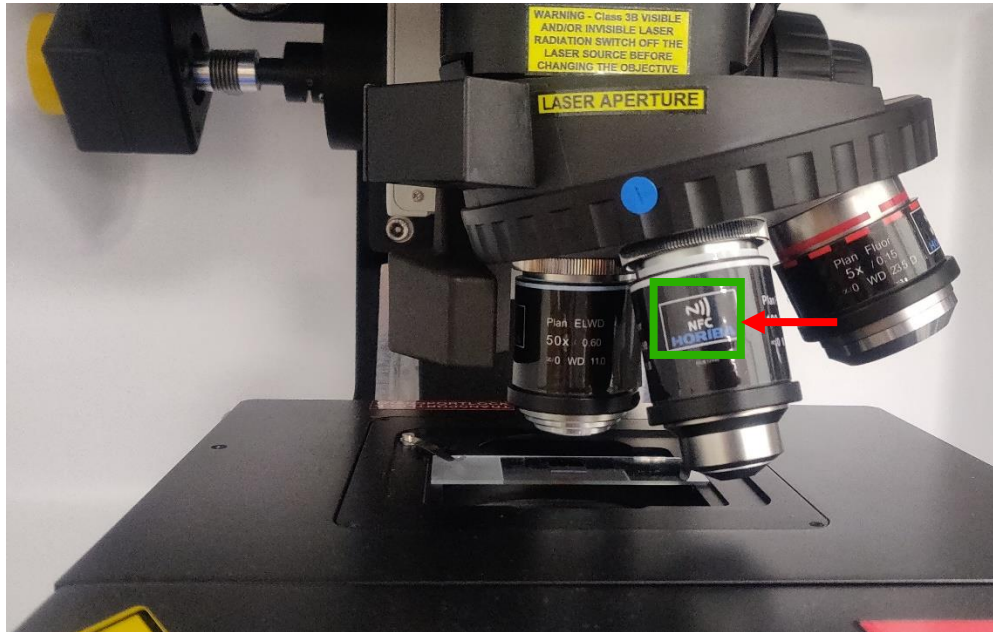
2 NFC reader

NFC (Near-Field Communication) is a wireless communication technology which can be used for contact-less exchange of data over short distances. In the case of the LabRAM Soleil system, an NFC reader is by default implemented onto the microscope:



The NFC reader automatically identifies objectives equipped with NFC tags:





The NFC reader is positioned to be in front of the tags, which allows it to recognize which objective is being used and the associated characteristics, including the:

- Optimal functioning range
- Numerical aperture
- Working distance
- Magnification
- Supplier
- Objective type: immersion objective, slides, etc.

The data is then automatically sent to Labspec6 and the software will display the currently equipped objective and a specific color which will determine its reliability:

- **Green** => optimum range, >70% transmission
- **Pale green** => average range, between 50% and 70% transmission
- **Orange** => weak range, <50% transmission



The LabRAM Soleil system and its software have been designed to work with objectives equipped with NFC tags. Horiba does not guarantee the good functioning of the system if it is equipped with non-NFC objectives, for which the optimum acquisition parameters cannot be automatically determined.

The NFC reader has its own FCC identification label affixed to the LabRAM Soleil:



Model Number: **Labram Soleil**

Contains: **NFC Reader**

FCC ID: 2AYO6-1300046203

IC: 26734-1300046203

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Service Team mailbox: services.hfr@horiba.com

To increase the processing speed of a request, please insert at the beginning of the email subject line, the following word: [TFD].

For example - Subject: [TFD] How to initialize the instrument.

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