

EUROPROBE 3.2 SYSTEM OPERATION MANUAL FOR OPTO-NUCLEAR PROBES



APPENDIX FOR OPTO NUCLEAR VERSION

Do not use this manual without the main Europrobe 3.2 operation manual

Read the present manual carefully.

This user guide is not intended to be used alone. This is an appendix of the Europrobe 3 operation manual.
Please read carefully the main Europrobe 3.2 operation manual as it contains important notice for operator and patient safety

CE marking: 1999/2014 (EUROPROBE 3.2)



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Check list

Before using the **EUROPROBE 3.2** Dual optical module and the SOE3214 probe, please make sure that no part is missing. If one component is missing please contact your local seller.

- ✓ **EUROPROBE 3.2 display module.**
- ✓ **Dual optical module with its power supply cable.**
- ✓ **SOE 3214 or SOE3214-AF detection probe.**
- ✓ **Main power cable.**
- ✓ **Main Europrobe 3.2 operation manual and the present manual**
 - ✓ **Footswitch Steute MKF1S-med.**

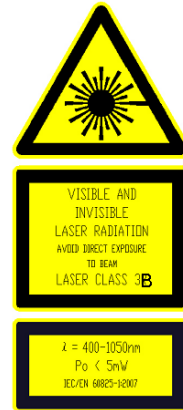
SPECIAL PRECAUTIONS



Be sure you have carefully read the main Europrobe 3.2 Operation manual before using the opto-nuclear Probe. Otherwise you may expose the operator and the patient to severe injuries.

In order to avoid injuries due to the laser radiation :

- Although the laser diode used is a Class 3B (785 nm) its radiation is not accessible. The radiation released at the probe output is lower than a class 3R
- Do not look at the output of the LED with naked eyes or when using an optical instrument.
- Do not look at the output beam of the probe.
- In optical mode: do not connect the fiber optic running.
- Do not expose the opto-nuclear sensor to bright light (halogen, sun, etc.).



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1. OPTO NUCLEAR PROBES SOE3214 AND SOE3214-AF

In addition to radioisotopes, a fluorescence dye can be used for localization of lymphatic channels during surgery.

The opto nuclear probes will allow the user to detect both markers (optical and nuclear) in onesingle procedure.

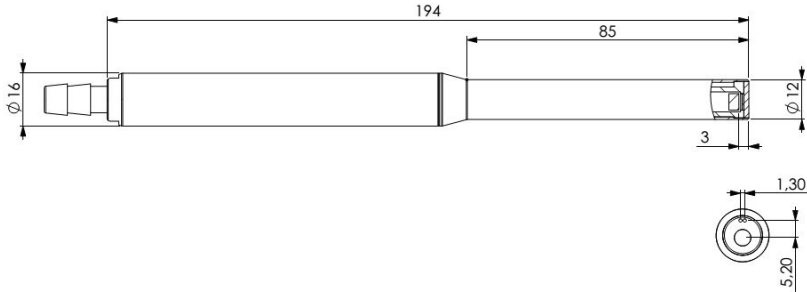
The SOE3214-AF is long and straight in order to allow use in endoscopic application.

2. TECHNICAL SPECIFICATIONS

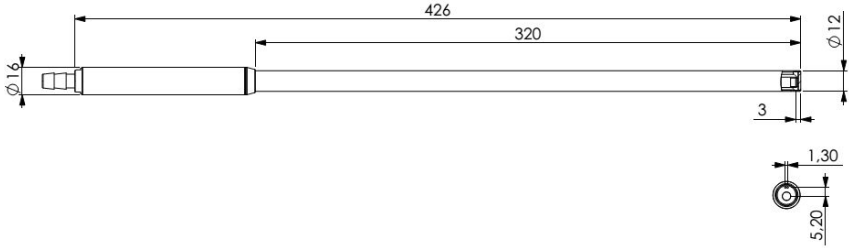
Parameters	Specifications
Crystal	CdTe 5mm x 5mm x 3mm
Energy domain	20 - 170 keV (can also be used from 170 to 364 keV, but the detection efficiency is worse)
Optical fiber diameter	1mm
Storage temperature	+ 1°C to +40°C
Operating temperature	+15°C to +40°C
Probe size	See drawings on the next page
Weight	The collimator is an integral part of the probe. 100 g (-AF : 170g) without cable

EUROPROBE 3.2

Schematics :




SOE3214 : Opto-nuclear probe



SOE3214-AF : Long opto-nuclear

probe

3. OPTICAL MODE OPERATION

- Stack the Europrobe 3.2 module on the top of the Dual optical module
- Connect the Dual optical module to the Europrobe3.2 module.
- Connect the SOE3214 (-AF) probe to the Dual optical module.
- Connect the footswitch to the  connector on the front panel of the Europrobe 3.2.
- Remove the protection covers from the optical fibers ends.
- Remove the protect cover from the laser output and the detector input on the front of the Dual optical module and gently screw the two optical fibers to SMA connectors.
- Switch ON the Europrobe3.2.
- Select the probe, if necessary, by pressing the “Probe Selection” button. The green led flash slowly indicating that the SOE3214 is selected and recognized by the module.
- Then press the foot-switch (or Start) for 3 second to toggle the optical mode ON / OFF. When optical mode is “ON”, the isotope display shows “**oPto**”.



Once in “opto” mode, switching between probes is not allowed.
You must disengage the “opto” mode before.

- During a measurement, a 30000 cps counting indicate a saturation due to a high fluorescent emission.



The 3 positions switch allows to set the detection sensitivity.

- Press the footswitch or “start” button (3 seconds) to return to the Isotope detection.

4. OPTICAL MODE PRECAUTIONS & LIMITATIONS

- Be sure to disinfecte the probe before each use.
- The probe must only be used after being placed in a sterile biocompatible sheath. The front part of the sheath must be see-through transparent in order to avoid detection efficiency loss.

5. QUALITY INSURANCE PROCEDURE

Optical mode :

- Prepare an ICG solution of 1mg/ml or 2.5mg/mL in water, make dilution per 10, 100 and 500 and place 100µl of each dilution sample on a paper towel. Let dry.
- Place the detection probe in optical mode over each sample spot. The measured value should be greater than 100 cps for each sample.

Nuclear mode :

- The SOE3214 is also equipped with a nuclear CdTe detector. To check the good functioning of this detector please refer to the « quality insurance procedure » section of the main Europrobe 3.2 operation manual.

6. CLEANING AND DISINFECTION

Please refer to « Cleaning and disinfection » section of the Europrobe 3.2 operation manual



In case the sterile sheath would be damage, the Europrobe 3.2 wired probes are waterproof IP68 and biocompatible according to ISO10993-5, ISO10993-10 and ISO10993-11 standards.

NOTICE OF INFORMATION

(Please complete in case of an incident with the EUROPROBE 3.2 system)

NAME:

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ADDRESS

.....

PHONE:

FAX:

E-MAIL:

DESCRIPTION OF THE INCIDENT (Thank you to specify if it is a serious incident):

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Please send this notice back to:

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