

# Optiprobe - Continuous adjustable probe current up to 100 nA

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## Introduction

The Optiprobe module has been recently introduced for the GEMINI® Field Emission SEMs. The Optiprobe module is a user friendly easy to use possibility to adjust the beam current continuously from 4 pA up 100 nA depending of the selected high current modules.

Optiprobe selects automatically the optimum parameters for aperture diameter and extraction voltage of the cathode to set up the desired beam current. The selection of the beam current can either be done by direct type in of the beam current value or by moving the slider in the control window (Figure 1). The selected beam current is always displayed in the User Interface.

For calibrating the Optiprobe module a specimen current meter and a faraday cup are necessary which are included already in the Optiprobe module. The fully automated calibration procedure needs to be done only once.

## Benefits

With the Optiprobe module the beam current can be adjusted continuously. This module can exceed the 40 nA high current module up to 100 nA. These extrem high current values can be used for ultra fast analytical mappings for example in EDS, WDS, EBSD and CL.

## Upgrade path

The Optiprobe module is available in SUPRA® 40, SUPRA® 40VP, SUPRA® 55, SUPRA® 55VP, SUPRA® 60, SUPRA® 60VP, ULTRA 55, ULTRA 60, ULTRAPLUS and SIGMA™.

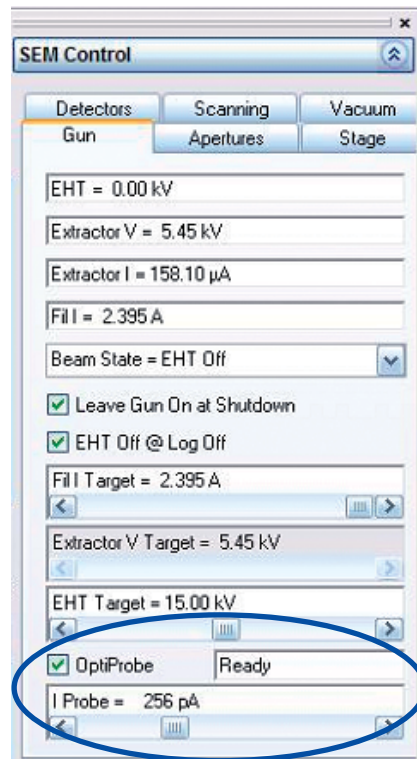


Figure 1:  
Software interface for Optiprobe modul.  
By activating the Optiprobe modul with the tick box in the overall SEM Control window the beam current can be adjusted by direct typing the desired value or by using the slider.

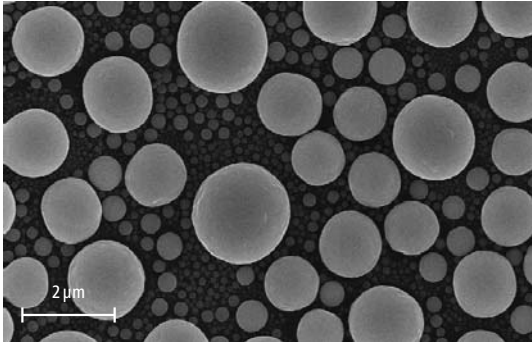


Figure 2: High current image at 12 pA.

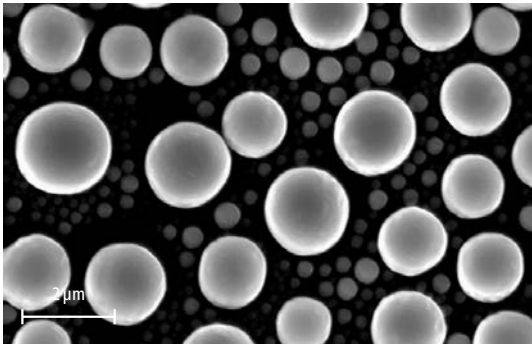


Figure 3: High current image at 40 nA.

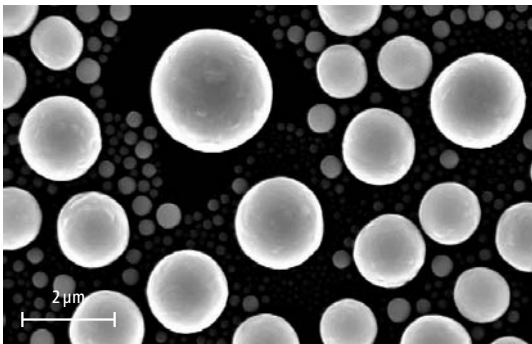


Figure 4: High current image at 20 nA.

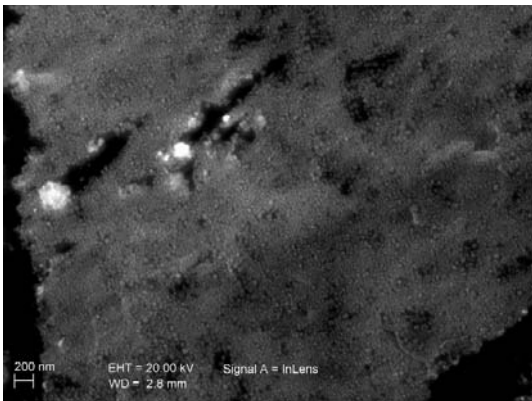


Figure 5: High current image at 100 nA.

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