

# Luminescence studies: $\mu$ Stat ECL

## Electrochemiluminescence instrument for Screen-Printed Electrodes



### Basics:

Metrohm DropSens offers a compact, versatile and wireless solution to perform Electrochemiluminescence studies, combining in one equipment a bipotentiostat/galvanostat and a photodiode integrated in an innovative cell for Screen-Printed Electrodes.

This miniaturized and portable alternative is perfect for performing Electrogenerated Chemiluminescence (ECL) measurements.

### Key features:

- Sensitivity towards very low level light signals.
- Obtaining of one luminescence total point per one electrochemical point.
- Electrochemical and Chemiluminescence responses are perfectly synchronized and shown in real time.
- Suitable for research with one marker specie.
- Can also be used independently as a Bipotentiostat/Galvanostat (EC mode).



### (Bi)Potentiostat / Galvanostat

|                                |   |
|--------------------------------|---|
| Operating modes                | BiPotentiostat, Potentiostat, Galvanostat |
| DC-Potential range             | $\pm 4$ V                                 |
| Current ranges (potentiostat)  | $\pm 1$ nA to $\pm 10$ mA (8 ranges)      |
| Maximum measurable current     | $\pm 40$ mA                               |
| Potential ranges (galvanostat) | $\pm 100$ mV, $\pm 1$ V (2 ranges)        |

### Photodiode Cell

|                             |   |
|-----------------------------|---|
| Detector                    | Silicon photodiode with preamp                      |
| Spectral response range     | 340 - 1100 nm                                       |
| Peak sensitivity wavelength | 960 nm  |
| Photo sensitivity at 960nm  | 0.62 V/nW (310 ecl units/nW)                        |
| PGA Gain                    | x1 - x10 - x100                                     |
| Material                    | -ABS (not compatible with most of organic solvents) |

### Software:

$\mu$ Stat ECL is controlled by DropView 8400 Software, providing powerful functions such as:

- Remote control of the amplification for ECL signals (with x1, x10 and x100 gain).
- Plot overlay, peak integration, smoothing, subtraction, derivative curve, baseline fitting, etc.
- Script editor for programming specific work routines.
- Real Time dual axis plot to show at same time the ECL signal and the electrochemical measurement.
- 3D plotting of curves.

