

# FAQ: X-Cite® *exacte*

## 1. What makes the X-Cite® *exacte* unique?

The X-Cite® *exacte* has several features which make it unique compared to other illuminators:

- Improved short and long term stability thanks to:
- DC-powered lamp
- Patented Closed-Loop Feedback (CLF)
- Calibrated output via an optional X-Cite® Radiometer
- Intensity adjustment in 1% increments
- High speed internal shutter
- Automatic light guide detection

## 2. DC lamps are supposed to provide stable illumination, what extra benefit is there when using CLF as well?

The intensity of all mercury lamps will degrade as they age, even DC lamps. CLF adjusts the iris position as the lamp degrades, so that intensity remains constant throughout an experiment, even if it lasts for several days.

## 3. How does CLF work?

A portion of the light from the lamp is diverted to a sensor (photodiode), which feeds into a microprocessor. The signal is monitored for changes, and then adjusts the iris to compensate for changes in lamp output.

## 4. Is calibration of the X-Cite® *exacte* always necessary?

No. The X-Cite® *exacte* does not require calibration to operate. Even CLF can be enabled without calibration. However, this will only keep illumination consistent for the duration of the experiment. Calibrating the unit and knowing the output power in watts will make it far easier to find the same illumination setting on another day.

## 5. Why does the X-Cite® *exacte* need to be recalibrated on a regular basis?

As the lamp ages, the relationship between light measured by the sensor and total output changes. Updating the calibration on a regular basis ensures that the power setting on the X-Cite® *exacte* will be accurate.

## 6. Can the X-Cite® *exacte* lamp module be used in X-Cite® 120 Series illuminator?

No. The electrical requirements for the X-Cite® *exacte* and 120 series lamps are different. The two lamp types are not interchangeable.

## 7. Can the X-Cite® *exacte* and 120 series illuminators use the same light guides and microscope adaptors?

Yes. All X-Cite® light guides and X-Cite® microscope adaptors are suitable for use with the entire X-Cite® family.

## 8. Can the bandpass filter in the X-Cite® *exacte* be removed?

No. The bandpass filter was specifically selected to protect both the light guide and the specimen from deep UV and IR wavelengths, operating the unit without this filter is not recommended.

## 9. Can the bandpass filter in the X-Cite® *exacte* be exchanged for another filter?

No. There are no other filter options for the X-Cite® *exacte*. If additional filters are required, they can be placed in the filter slots of the microscope or in a commercially available filter wheel fitted between the microscope and adaptor.