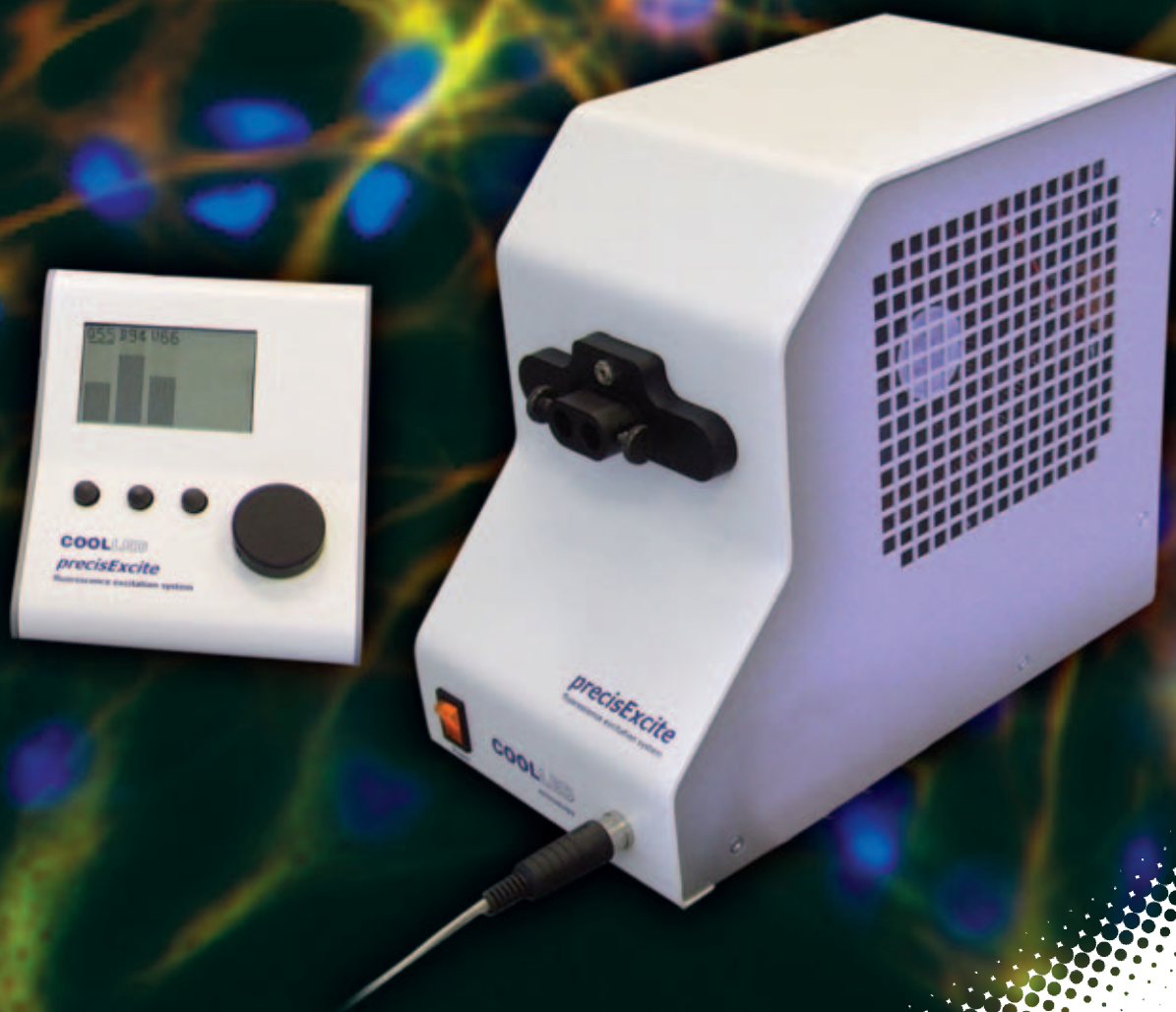


# precisExcite

FLUORESCENCE EXCITATION SYSTEM



a **COOLLED** LED product

# A bright, stable, long lasting light source for fluorescence microscopy

- **precisExcite represents the very latest in fluorescence illumination**
- **No more throwing wide spectrums at your sensitive samples**

The precisExcite delivers high power light in the three wavelengths required for common fluorescence methods. Comparable results to those produced with mercury and xenon bulb systems are achieved but without the restrictions, limitations and on going running costs.

The three colour sources in a single unit target all the common blue, green and red emitting fluorophores (DAPI, GFP, FITC, CY2, CY3, Rhodamine, Texas red etc) and give each a precise spectrum containing extremely low out of band noise with no deep UV or IR.

Being a solid-state LED light source, the output is stable over time with a very long working lifetime in excess of 10,000 hours. No warm up or cool down periods are required as the light source can be switched on and off at any time to produce a consistent, pre-defined output, time after time - ideal for a multi-user facility or tissue culture fluorescence system.

As the specified 10,000 hours is a total figure of LED on time, this would equate to five years life if it was used eight hours a day, every working day of the year. Even with heavy experimental usage a lifetime of 10 to 20 years can

be expected. This ultra stable source is ideal for anyone undertaking fluorescence time-course experiments or those who need to compare samples from one day, or even one year, to the next.

Mercury bulbs are recommended to be left on during the working day to preserve bulb life. With its solid state LED light source, the precisExcite has no mercury, no arc wander that causes power fluctuations and no risks associated with exploding high pressure bulbs.

The output of each of the three wavelength sources can be precisely controlled in 1% steps, removing the need for neutral density filters that only provide a coarse level of adjustment. This also benefits ratio-metric tests as each wavelength source can be balanced independently prior to a test and will remain consistent throughout the experiment.

The precisExcite system is supplied pre-aligned for a specific microscope so there is no need for lengthy bulb image centering adjustments. Just fit the adaptor and the alignment is complete.

**precisExcite** is a practical LED light source for fluorescence microscopy that delivers three separate, controllable wavelength peaks to match the common DAPI, FITC and Rhodamine fluorophores. It is based on a new, patent pending, high power collimated LED light source technology

### Easy to use

- precise control of light intensity and excitation time
- controlled from either PC or remote POD
- no alignment required
- no bulb replacement
- instant on/off with no warm up / cool down time
- no more worries about the state of the mercury bulb

### Economic

- no bulbs to replace
- no wasted time with re-aligning new bulbs
- long life light source (>10,000 hours of LED on-time) up to 25 years of constant fluorescent illumination for typical usage.

### More control

- light intensity can be varied in 1% steps
- either manual control of the light on-time or preset time for durations from 10ms to hundreds of hours.
- stable output with no drift (<7.5% in 10,000hrs)
- fast switching between wavelengths (<10ms)
- excellent uniformity in field of view
- no heat transferred to sample or microscope

### Safety and environmental issues

- built in interlocks to ensure no exposure to high intensity light (safe Class 1 LED product)
- no mercury and hence no risk of exploding high pressure bulbs
- no risk of UVC, UVB or IR radiation

# Specifications

## Standard system includes:

Main housing containing LED arrays, power supply and micro-controller  
Remote POD for manual control of individual wavelengths  
Microscope adaptor specific to specific microscope model  
A pair of 1.0m length liquid light guides  
Interlock cable  
Power cable  
Instruction manual

## Optional extras

Software for PC control with serial cable  
Longer light guides (2m and 3m)

## Peak wavelengths

Violet 400nm (DAPI)  
Blue 470nm (FITC)  
Green 525nm (Rhodamine)

## LED life

In excess of 10,000 hours

## Stability over life

Less than 7.5% variation

## Warm-up period

None required (microcontroller takes typically five seconds to initialise)

## Cool down period

None required

## Power control

1% steps for each wavelength

## Power supply

110 / 230 V a.c. (selectable) 50 / 60Hz

## Dimensions

Main housing - 140mm x 210mm x 250mm (W x H x L)  
Remote Pod - 94mm x 40mm x 107mm (W x H x L)

## Weight

Main housing - 5.5kg  
Remote Pod - 0.4kg

## Certifications

CE marked  
IEC / EN60825-1 (2001) Class 1

## Warranty

1 year (excluding light guides)

### For more information call...

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