pE-400 Series

Controllable LED Microscopy Illumination

pE-400
Controllable white light

pE-400^{max}
Fast, 4-channel control

A choice of two Illumination Systems
for routine to advanced fluorescence

CoolLED
Simply Better Control

pE-400 Series

We've got you covered

Four powerful LEDs offer broad spectral coverage from 365-635 nm, covering all the major fluorophores and opsins from DAPI through YFP to Cy5.

Built on award-winning CoolLED technology, stable and reliable operation is mercury-free with ultra-low power consumption, offering a win-win for performance and sustainability.

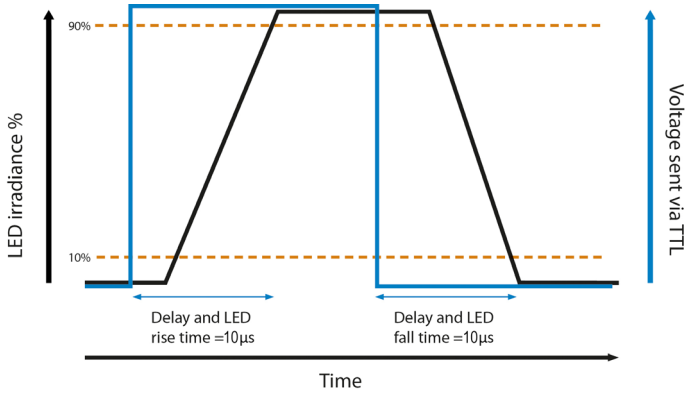
Which Illumination System is right for you?

While the standard pE-400 presents a cost-effective lamp replacement with global control, the four-channel pE-400^{max} enhances performance in demanding applications such as high-speed imaging and optogenetics.

Features	pE-400	pE-400^{max}
Four powerful LEDs cover DAPI through YFP to Cy5	✓	✓
Mercury-free, energy-efficient technology	✓	✓
Near-silent operation	✓	✓
Light delivery via direct fit or liquid light guide	✓	✓
Optimised irradiance control in 1% steps (0-100%)	✓	✓
Manual control pod	✓	✓
Ability to control in imaging software	✓	✓
Global remote triggering (TTL, <10 µs)	✓	✓
Individual channel triggering (TTL, <10 µs)		✓
Individual channel selection		✓
Individual channel irradiance control		✓
LightBridge graphical user interface		✓
Sequence Runner for affordable automation		✓
Ability to fit inline excitation filter holders		✓

pE-400 Controllable white light

Global control of the white light is quick and simple with manual control pod, which includes on/off and irradiance settings. Unlike traditional white light sources, global control is possible within third-party imaging software via USB connection. Increasing temporal resolution to <10 µs, a global TTL input offers precise hardware synchronisation, while compatibility with the pE-6501 USB controlled TTL trigger box enables global control in third-party imaging software such as Evident cellSens.



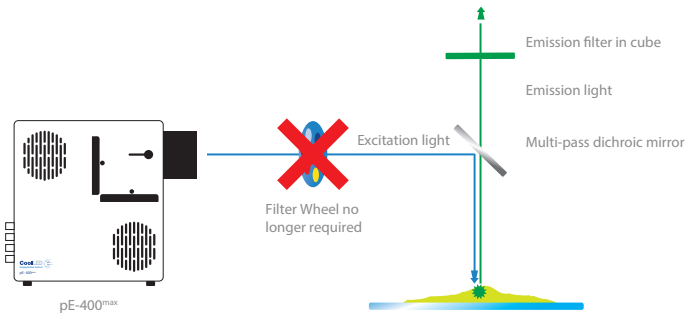
pE-400max Fast, 4-channel control

Individual control of four channels maximises image quality and can be operated via manual control pod, third-party imaging software or The LightBridge graphical user interface.

Capture high-speed events

Combined with the ability to fit inline single-band excitation filters, individual channel control means expensive external filter wheels are no longer needed and when used alongside multi-band filters, offers a low-cost approach to imaging at speeds of <10 µs.

Compatibility with the pE-6501 (USB controlled TTL trigger box) also enables high-speed TTL control in addition to seamless integration into compatible third-party imaging software such as Evident cellSens.

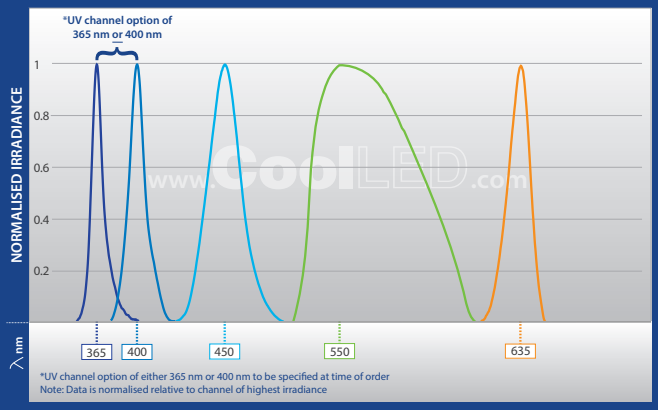


Affordable automation with Sequence Runner

The pE-400max includes the four-channel Sequence Runner function, enabling illumination sequences to be triggered with just a single TTL-out of a camera or external hardware.

When combined with inline filters, Sequence Runner transforms a manual microscope into an affordable and powerful automated imaging system.

pE-400 Series



Specification

Choose variant to match UV excitation requirements (see graph above).
Due to a programme of continual development, please contact CoolLED (info@coolled.com) for performance data.

To Order

pE-400-D-SB-YYY-ZZ	pE-400 direct fit Illumination System with exchangeable microscope adaptor to customer-specified microscope, Control Pod, and Power Supply. Single-Band filter set configuration
pE-400-D-MB-YYY-ZZ	pE-400 direct fit Illumination System with exchangeable microscope adaptor to customer-specified microscope, Control Pod, and Power Supply. Multi-Band filter set configuration
pE-400-L-SB-SYS-ZZ	pE-400 Illumination System for use with 3 mm Liquid Light Guide. Single-Band filter configuration. Includes Light Source, Control Pod, and Power Supply
pE-400-L-MB-SYS-ZZ	pE-400 Illumination System for use with 3 mm Liquid Light Guide. Multi-Band filter configuration. Includes Light Source, Control Pod, and Power Supply
pE-400-MX-D-SB-YYY-ZZ	pE-400^{max} direct fit Illumination System with exchangeable microscope adaptor to customer-specified microscope, Control Pod, and Power Supply. Single-Band filter set configuration
pE-400-MX-D-MB-YYY-ZZ	pE-400^{max} direct fit Illumination System with exchangeable microscope adaptor to customer-specified microscope, Control Pod, and Power Supply. Multi-Band filter set configuration
pE-400-MX-L-SB-SYS-ZZ	pE-400^{max} Illumination System for use with 3 mm Liquid Light Guide. Single-Band filter configuration. Includes Light Source, Control Pod, and Power Supply
pE-400-MX-L-MB-SYS-ZZ	pE-400^{max} Illumination System for use with 3 mm Liquid Light Guide. Multi-Band filter configuration. Includes Light Source, Control Pod, and Power Supply
pE-1906	1.5 m long, 3 mm diameter Liquid Light Guide
pE-10400-YYY	Universal Collimator and customer-specified adaptor
pE-400-EFH-2	Set of two Excitation Filter Holders - to hold four filters (25 mm or 32 mm dia.)
pE-6501	USB-TTL Conversion Kit

To specify microscope adaptor (YYY), see Adaptors
(http:// www.coolled.com/products/adaptors/)
To specify local power cable (ZZ): 10 = Australia, 20 = Europe, 30 = UK, 40 = USA

Power

Power requirements:	100-240 V a.c. 50/60 Hz
Power consumption:	Standby - 2 W All wavelengths on - 80 W

Dimensions

Light Source:	243 mm (w) x 102 mm (d) x 197 mm (h). Weight 1.8 kg
Control Pod:	125 mm (w) x 90 mm (d) x 40 mm (h). Weight 0.3 kg
Power Supply:	167 mm(w) x 67 mm(d) x 35 mm(h) Weight 0.62 kg

Control & Interface

Manual:	Manual control pod
TTL:	pE-400^{max} via four TTL inputs allowing independent on/off control of each channel. pE-400 and pE-400^{max} global TTL for on/off synchronisation to camera Triggering speed <10 µs
Imaging Software:	We are working to fully integrate the pE-400 Series into all major third party imaging software programs. Please see: https://www.coolled.com/support/imaging-software/#third-party-imaging-software
Graphical user interface (GUI):	pE-400^{max} LightBridge operates via USB to allow: On/off control; LED selection; real time irradiance control; Sequence Runner; save and load pre-sets; pE-400^{max} start-up settings
Sequence Runner:	pE-400^{max} single TTL input to step through sequence defined via Control Pod, LightBridge or compatible imaging software. Speeds <10 µs at full power. Optional filter holders are available (see To Order)
Connectivity:	USB (Type B) for PC connection; TTL inputs via BNC
Light delivery:	Direct Fit variant Liquid Light Guide variant (via the standard 3 mm liquid light guide). An optional pE-Universal Collimator and microscope adaptor can also be selected

Environment & Safety

LED products help laboratories become more sustainable, saving energy and reducing the carbon footprint when compared with conventional illuminators. CoolLED's products have the following benefits:

- Mercury-free and laser-free
- Energy Efficient
- Long lifetime
- No bulb replacements
- Reduced risk of eye damage
- Quiet operation
- No special disposal regulations or issues

Scan here to find us on WeChat

For more information on how CoolLED products can help you, contact us now:

t: **+44 (0)1264 323040** (Worldwide)
w: **www.CoolLED.com**
e: **info@CoolLED.com**

CoolLED
Simply Better Control

All data correct at time of publication

2403002
Mar 24
FM656664