**pE-300 Series**

**Microscopy Illumination**

A range of LED Illumination systems for Fluorescence, Optogenetics, Electrophysiology and other high speed applications.

**LEDs last longer**

Intensity from a conventional lamp decreases through its life, which means that illumination varies dramatically over time. The lifetime of LEDs far exceeds that of these older lamps, and intensity remains broadly constant throughout its life providing a stable, repeatable light source.

**pE-300 Series for Fluorescence**

Some of the many fluorophores excited by the pE-300 Series

- DAPI
- FITC
- Cy3
- TRITC
- GFP
- Cy5
- Hoechst
- ChR
- Calcofluor
- Auramine
- RFP
- TxRed
- mCherry

**pE-300 lite - Simple White Light**

Designed to fit most microscopes, the pE-300 lite is a compact system at a cost which makes it accessible to all.

- Simple to buy: Configured for your everyday fluorophores such as DAPI, FITC, TRITC & Cy5 and affordable through your lab consumables budget.
- Simple to fit: Direct fit means the pE-300 lite just attaches straight onto your microscope's epi-fluorescence port in seconds with a once-only simple adjustment that optimises the light output for your microscope.
- Simple to use: Instant On/Off with the ability to optimise intensity and minimise sample damage via the simple desktop Control Pod.

**pE-300white - Everyday Controllable Illumination**

The pE-300 white adds greater control options to the platform.

- The 3-channel control pod allows selection and control of excitation wavelengths whether it’s to balance your FITC against your TRITC or to minimise bleaching by exciting only the markers you are working with today. Support from popular imaging software provides integrated control with your imaging set up time after time.

- An additional benefit of the pE-300 white is that stains can be viewed either individually or in combination, without filter cube changes. This makes it ideal for use with multi-band filter sets as the screening process can be simplified when fewer filter cubes are used. Independent control of the three LED channels means that the user can control the level of excitation of each fluorescent stain independently on a multi-stained sample, potentially removing the need for single band filter sets altogether.

**pE-300 ultra - Fast Controllable Illumination**

The pE-300 ultra is the most controllable member of the pE-300 Series. In addition to the great features of the pE-300 and the pE-300 white, it offers precise control over wavelength, intensity and shuttering. Up to now these benefits have only been accessible to users of high end, highly sophisticated illuminators such as the CoolLED pE-4000.

Triggering multiple TTL inputs coupled with the ability to mount inline excitation filters provides microsecond switching of pre-filtered excitation light. This, when paired with today’s high performance multi band filter sets, facilitates imaging traditionally done via a white light source and a filter wheel, with all the benefits of LEDs, and most excitingly at speeds not previously so affordable.

An additional feature of the pE-300 ultra is that it includes CoolLED’s "Sequence Runner" multiple channel excitation mode. Users can define the order of their fluorophore capture using their pE-300 ultra Control Pod, then the pE-300 ultra light source can accept a single TTL output from the experiment set-up’s camera to initiate the step-through of a sequence of excitation channels. This feature is independent of the individual channel TTL inputs on the light source. This offers users the facility to run through a sequence of excitation channels using a camera which has only a single TTL output.

**Features**

<table>
<thead>
<tr>
<th>Features</th>
<th>pE-300lite</th>
<th>pE-300white</th>
<th>pE-300 ultra</th>
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<tbody>
<tr>
<td>Broad spectrum</td>
<td>✔</td>
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<td>✔</td>
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<tr>
<td>Simple to fit and use</td>
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<td>Instant on/off</td>
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<tr>
<td>No bulb replacement</td>
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<td>Direct or Light Guide delivery options</td>
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<tr>
<td>Stable &amp; Repeatable - 0-100% intensity control</td>
<td>✔</td>
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<tr>
<td>Long lifetime</td>
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<tr>
<td>Stable &amp; Repeatable - 0-100% intensity control</td>
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<td>Mercury free</td>
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<tr>
<td>Individual channel intensity control</td>
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<td>Individual channel selection</td>
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<tr>
<td>Integration with imaging software</td>
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<tr>
<td>Global remote triggering (TTL, microsecond)</td>
<td>✔</td>
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<tr>
<td>Individual channel triggering (TTL, microsecond)</td>
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<td>Removable inline filter holders</td>
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<td>Sequence Runner</td>
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A microscope which is populated with a number of single band (‘SB’) filter sets will typically have DAPI excitation at 365 nm and a microscope with multi-band (‘MB’) filter sets will have excitation at 405 nm. The user can specify the configuration which is appropriate for their microscope.

To Order

- E-300 UT-D-SB-Y2-Z2
  - pE-300™ Illumination System. Direct fit single band filter configuration. Includes Light Source, Control Pod, Power Supply, YYY Adaptor & ZZ Plug

- E-300 UT-D-MB-Y2-Z2
  - pE-300™ Illumination System. Direct fit multi-band filter configuration. Includes Light Source, Control Pod, Set of three Excitation Filter holders (25 mm dia.), Power Supply, YYY Adaptor & ZZ Plug

- E-300 UT-L-SB-Z2
  - pE-300™ Illumination System. Single band filter configuration. Includes Light Source, Control Pod, Power Supply, YYY Adaptor & ZZ Plug

- E-300 UT-L-MB-Z2
  - pE-300™ Illumination System. Multi-band filter configuration. Includes Light Source, Control Pod, Set of three Excitation Filter holders (25 mm dia.), Power Supply, YYY Adaptor & ZZ Plug

- E-300 UT-D-MB-YYY-ZZ
  - pE-300™ Illumination System. For use with 3 mm Liquid Light Guide. Single band filter configuration. Includes Light Source, Control Pod, Set of three Excitation Filter holders (25 mm dia.), Power Supply, YYY Adaptor & ZZ Plug

- E-300 UT-D-SB-YYY-ZZ
  - pE-300™ Illumination System. For use with 3 mm Liquid Light Guide. Multi-band filter configuration. Includes Light Source, Control Pod, Set of three Excitation Filter holders (25 mm dia.), Power Supply, YYY Adaptor & ZZ Plug

- E-300 UT-D-LSB-ZZ
  - pE-300™ Illumination System. Single band filter configuration. Includes Light Source, Control Pod, Power Supply, YYY Adaptor & ZZ Plug

- E-300 UT-D-MBSB-ZZ
  - pE-300™ Illumination System. Multi-band filter configuration. Includes Light Source, Control Pod, Set of three Excitation Filter holders (25 mm dia.), Power Supply, YYY Adaptor & ZZ Plug

- E-300-UT-D-SB-YYY-ZZ
  - pE-300™ Illumination System. Single band filter configuration. Includes Light Source, Control Pod, Power Supply, YYY Adaptor & ZZ Plug

- E-300-UT-D-MBSB-ZZ
  - pE-300™ Illumination System. Multi-band filter configuration. Includes Light Source, Control Pod, Set of three Excitation Filter holders (25 mm dia.), Power Supply, YYY Adaptor & ZZ Plug

- E-300-UT-L-SB-ZZ
  - pE-300™ Illumination System. Single band filter configuration. Includes Light Source, Control Pod, Power Supply, YYY Adaptor & ZZ Plug

- E-300-UT-L-MB-ZZ
  - pE-300™ Illumination System. Multi-band filter configuration. Includes Light Source, Control Pod, Set of three Excitation Filter holders (25 mm dia.), Power Supply, YYY Adaptor & ZZ Plug

- E-300-UT-D-MBSB-YYY-ZZ
  - pE-300™ Illumination System. Multi-band filter configuration. Includes Light Source, Control Pod, Set of three Excitation Filter holders (25 mm dia.), Power Supply, YYY Adaptor & ZZ Plug

- E-300-UT-D-SB-PPP-ZZ
  - pE-300™ Illumination System. Single band filter configuration. Includes Light Source, Control Pod, Power Supply, YYY Adaptor & ZZ Plug

- E-300-UT-D-MBSB-PPP-ZZ
  - pE-300™ Illumination System. Multi-band filter configuration. Includes Light Source, Control Pod, Set of three Excitation Filter holders (25 mm dia.), Power Supply, YYY Adaptor & ZZ Plug

- E-300-UT-L-SB-PPP-ZZ
  - pE-300™ Illumination System. Single band filter configuration. Includes Light Source, Control Pod, Power Supply, YYY Adaptor & ZZ Plug

- E-300-UT-L-MB-PPP-ZZ
  - pE-300™ Illumination System. Multi-band filter configuration. Includes Light Source, Control Pod, Set of three Excitation Filter holders (25 mm dia.), Power Supply, YYY Adaptor & ZZ Plug

www.CoolLED.com

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

- +44 (0) 1264 323040 (Worldwide)
- 1-800-877-0128 (USA/Canada)
- info@CoolLED.com

www.CoolLED.com

Simply Better Control

Mercury free and Laser free illuminators. CoolLED’s products have the following benefits:

- Mercury-free and Laser-free
- No special disposal regulations or issues
- Quiet operation
- No bulb replacements
- Reduced risk of eye damage
- Long lifetime
- Easy to use
- Reduced power consumption
- Designed to be future proof
- Simply Better Control

pE-300 Series
Microscopy Illumination

- A range of LED Illumination systems for Fluorescence, Optogenetics, Electrophysiology and high speed microscopy applications

For more information visit www.CoolLED.com

To specify microscope adaptor (ZZ): see Adaptors (http://www.coolled.com/product-detail/adaptors-2/)

To specify local power cable (ZZ): 10 = Australia, 30 = Europe, 10 = UK, 40 = USA

Warranty:

- System Warranty: 36 months
- LED Warranty: 36 months

Control & Interface

Manual:
- Manual control pod

Remote:
- pE-300™ via global TTL: <20 μs at full power
- pE-300™ via global and individual channel TTL: <20 μs at full power
- pE-300™ & pE-300™ remote via USB (B type) for imaging software control

Sequence Runner:
- pE-300™ single TTL input to step through user defined sequence: <20 μs at full power

Power

Power Requirements:
- 100-240VAC, 50/60Hz, 1.4A

Power Consumption:
- Standby Max 2 W
- 1 band (GFR) at 100% intensity – Max 20 W
- 2 bands (BLU & GYR) at 100% intensity – Max 38 W
- White (all 3 bands) at 100% intensity – Max 46 W

Dimensions

- Light Source: 77 mm (w) x 186 mm (d) x 162 mm (h) Weight 1.40 kg
- Control Pod: 77 mm (w) x 125 mm (d) x 37 mm (h) Weight 0.32 kg
- Liquid Light Guide: 1.5 m long, 3 mm diameter liquid light guide

Environment & Safety

LED products are more sustainable and energy efficient than conventional illumination. CoolLED’s products have the following benefits:

- Mercury Free and Laser Free
- Energy Efficient: 60% less power
- Long Lifetime
- No Bulb Replacements
- Reduced Risk of Eye Damage
- Quiet Operation
- No Special Disposal Regulations or Issues
- ACT Labelled

For more information contact us now:

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