

EvoluChem™ LUCENT360™ Advanced Photoreactor

October 2020



LUCENT360™

Parallel, Batch and Flow Reactions in a Temperature Controlled Environment

- Multiple vial format options (0.3-700ml)
- Temperature controlled with thermostatic fluid
- Unparalleled light configuration and control
- Interchangeable, high-powered LED light modules available in multiple wavelengths
- Operate 4 different wavelengths and/or light intensities simultaneously
- Heavy Duty Magnetic stirring

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Industry Leading Photoreactor Design



The LUCENT360 is the most comprehensive photoreactor on the market. Its patent pending design provides the most flexibility for parallel, large batch and flow photochemistry.

Reaction vials are immersed in a thermostatic bath controlled by an external heater/chiller unit, enabling temperature controlled experiment conditions.

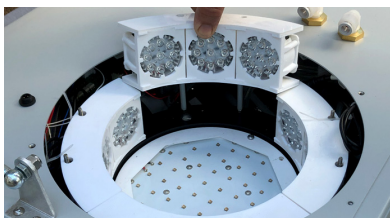
Light irradiation is provided via custom, interchangeable light modules that surround the reaction chamber.

The reaction chamber itself is comprised of 2 glass walls (Dewar) that thermally insulate light sources from the reaction vial bath.



Temperature Controlled

Reaction vials can be thermostatically controlled via a standard heater/chiller unit.



Interchangeable Light Modules

Four light modules surround the reaction chamber and one light module sits underneath.



Thermally Insulated Reactions

Double glass walls of the reaction chamber keep reaction vials at the correct temperature.

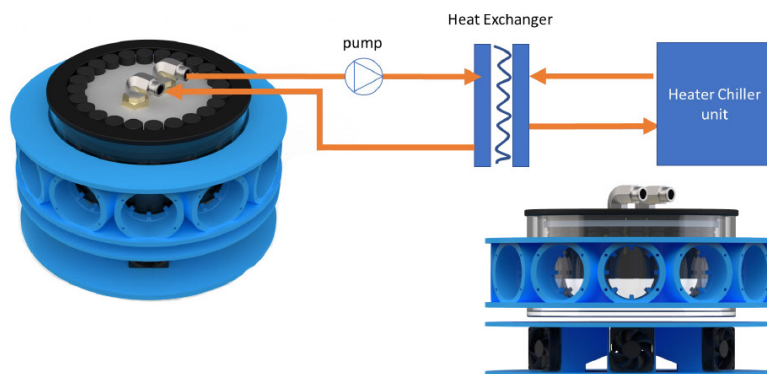
lucent adjective \ 'lū-sənt \ : glowing with light : [LUMINOUS](#)

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Temperature Controlled Environment

The LUCENT360 advanced photoreactor includes standard circulation ports on all of its vial holders as well as an internal water pump and high performance heat exchanger.



Connecting the LUCENT360 to a standard heater/chiller unit enables accurate temperature controlled reaction conditions that are insulated from the heat of light modules. A temperature probe (included) can also connect to each of the LUCENT360 vial holders, allowing for precise measurements. Fill and flow rate is controlled by the manual valves accessed on the front panel.

Multiple Reactor Vessels Enable Parallel, Batch or Flow Reactions



.3ml X 48



4ml X 24



8ml X 24



20ml X 12



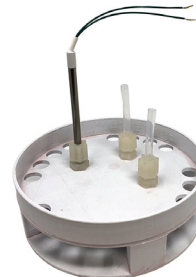
700ml Reactor

The 700ml reaction vial allows large batch photochemistry with the benefit of temperature controlled conditions.



Flow Reactors

Enables scaling of photochemistry reactions by significantly increasing surface area. Flow reactors are made of PFA tubing and are available in 20ml and 50 ml volumes.



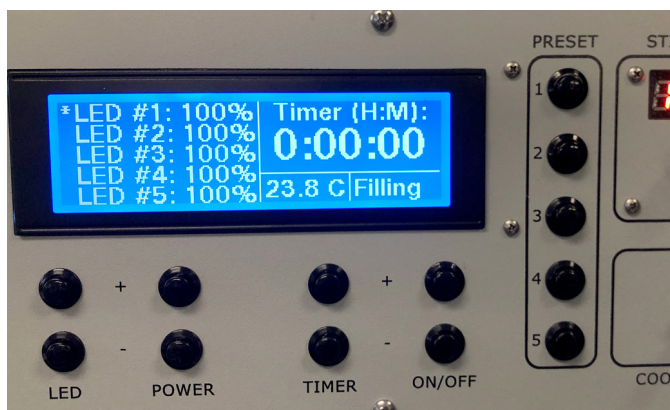
Multi-light Screener

Our unique holder enables simultaneous light wavelength (or intensity) experiments that have been impossible until now.

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Unparalleled Light Configurations and Control

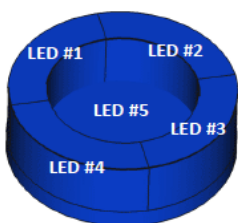


The LUCENT360 includes 5 light modules that can be controlled independently. Each module has multiple LEDs that operate at a specific wavelength.

The light modules are interchangeable and, when using one of our Multi-light screeners, enables conditions that can operate multiple wavelengths or light intensities simultaneously.

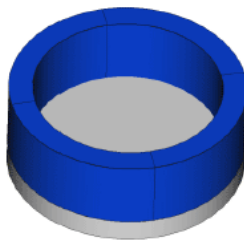
The LED monitor screen provides detailed settings for each of the photoreactor's light modules. Customized settings can be programmed as a Reaction Preset (up to 5) and activated from the front panel.

Large scale experiment



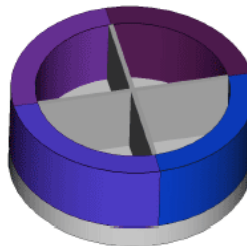
LED #1 : 100 %
LED #2 : 100 %
LED #3 : 100 %
LED #4 : 100 %
LED #5 : 100 %

Small scale parallel experiment



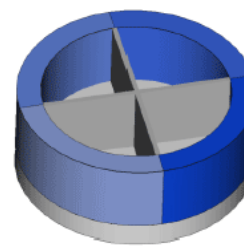
LED #1 : 100 %
LED #2 : 100 %
LED #3 : 100 %
LED #4 : 100 %
LED #5 : 0 %

Light wavelength screening



LED #1 : 365 nm
LED #2 : 380 nm
LED #3 : 405 nm
LED #4 : 450 nm
LED #5 :

Light intensity screening



LED #1 : 100 %
LED #2 : 80 %
LED #3 : 60 %
LED #4 : 40 %
LED #5 : 0 %

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Lucent360 Photoreactor and Accessories List 2020

SKU / PRODUCT ID	ITEM	DESCRIPTION
HCK1021-01-020	Lucent360 Advanced Photoreactor STARTER package	Lucent360 Advanced Photoreactor STARTER package includes: 1x Lucent 360 Advanced Photoreactor 1x Holder 4 ml vial 1x set of 450nm light modules (5 total)
HCK1021-01-021	Lucent360 Advanced Photoreactor INTERMEDIATE package	Lucent360 Advanced Photoreactor INTERMEDIATE package includes: 1x Lucent 360 Advanced Photoreactor 1x Holder 4 ml vial 1x Holder 20 ml vial 1x 4 ml screening holder 1x set of 365nm light modules (5 total) 1x set of 450nm light modules (5 total)
HCK1021-01-022	Lucent360 Advanced Photoreactor EXPERT Package	Lucent360 Advanced Photoreactor EXPERT package includes: 1x Lucent 360 Advanced Photoreactor 1x Holder 0.3 ml vial 1x Holder 2 ml vial 1x Holder 4 ml vial 1x Holder 8 ml vial 1x Holder 20 ml vial 1x 700 ml photoreactor 1x 20 ml flow cell 1x 2 ml screening holder 1x 4 ml screening holder 1x 8 ml screening holder 1x set of 365nm light modules (5 total) 1x set of 380nm light modules (5 total) 1x set of 405nm light modules (5 total) 1x set of 450nm light modules (5 total)
HCK1021-01-023	Julabo Corio-CD 200F	External Heater/chiller to control Lucent360 Advanced Photoreactor Temperature
HCK1021-01-001	Lucent360 Advanced Photoreactor	Lucent 360 Advanced Photoreactor (does not include any vial holder, reactor vessel or light modules)
HCK1021-01-002	Lucent360 Vial Holder (0.3 ml)	Vial Holder for 48 x 0.3 ml vials (6 mm diameter)

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Lucent360 Photoreactor and Accessories List 2020 (cont'd)

SKU / PRODUCT ID	ITEM	DESCRIPTION
HCK1021-01-003	Lucent360 Vial Holder (2 ml)	Vial Holder for 24 x 2 ml vials (12 mm diameter)
HCK1021-01-004	Lucent360 Vial Holder (4 ml)	Vial Holder for 24 x 4 ml vials (15 mm diameter)
HCK1021-01-005	Lucent360 Vial Holder (8 ml)	Vial Holder for 24 x 8 ml vials (17 mm diameter)
HCK1021-01-006	Lucent360 Vial Holder (20 ml)	Vial Holder for 12 x 20 ml vials (28 mm diameter)
HCK1021-01-007	Lucent360 700 ml Reactor	Large format 700 ml reactor
HCK1021-01-008	Lucent360 20 ml Flow Cell Reactor	PFA Tubing, 20 ml Flow Reactor
HCK1021-01-009	Lucent360 2 ml Multi-light Chamber	Multi-light Chamber with 4 quadrants of 4 x 2 ml (12 mm diameter) vial holders
HCK1021-01-010	Lucent360 4 ml Multi-light Chamber	Multi-light Chamber with 4 quadrants of 4 x 4 ml (15 mm diameter) vial holders
HCK1021-01-011	Lucent360 8 ml Multi-light Chamber	Multi-light Chamber with 4 quadrants of 4 x 8 ml (17 mm diameter) vial holders
HCK1021-01-012	Side LED Module (365 nm)	One (1) Side LED Light Module at 365 nm <i>(Side LED modules are interchangeable)</i>
HCK1021-01-013	Side LED Module (380 nm)	One (1) Side LED Light Module at 380 nm <i>(Side LED modules are interchangeable)</i>
HCK1021-01-014	Side LED Module (405 nm)	One (1) Side LED Light Module at 405 nm <i>(Side LED modules are interchangeable)</i>
HCK1021-01-015	Side LED Module (450 nm)	One (1) Side LED Light Module at 450 nm <i>(Side LED modules are interchangeable)</i>
HCK1021-01-016	Bottom LED Module (365 nm)	One (1) Bottom LED Light Module at 365 nm for Lucent360
HCK1021-01-017	Bottom LED Module (380 nm)	One (1) Bottom LED Light Module at 380 nm for Lucent360
HCK1021-01-018	Bottom LED Module (405 nm)	One (1) Bottom LED Light Module at 405 nm for Lucent360
HCK1021-01-019	Bottom LED Module (450 nm)	One (1) Bottom LED Light Module at 450 nm for Lucent360

