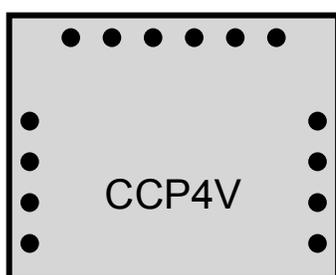

Luzchem Photoreactor Model CCP-4V

Luzchem's CCP-4V photoreactor package is designed for organic photochemistry and photobiology applications. Two complete sets of UVA (350 nm) and UVC (254 nm) lamps are provided with the photoreactor unit, as well as a safe exhaust system, one pair of safety goggles, an installed drive motor, a carousel for liquid samples, a turntable for solid samples, a recessed magnetic stirrer, and a Power Sensor.



Configuration:

The LZC-4V photoreactor is equipped with 6 top lamps, and 8 side lamps.



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Phone: (613) 749-2442
Fax: (613) 749-2393
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Luzchem Research, Inc.

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Ottawa, Ontario
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Unit Specifications:

Dimensions:	<i>External:</i> 18" wide, 21" deep (with exhaust) and 16.5" high (46 x 53 x 42 cm) <i>Internal:</i> 12" wide, 12" deep and 8.5" high (30 x 30 x 22 cm)
Weight:	32 lbs. / 15 kg
Power Rating:	110 VAC/220VAC, 50/60 Hz cycle, 3 Amps Ships with North American-style power cable
Housing Material:	<i>External:</i> Stainless Steel <i>Internal (chamber):</i> Al 5052-H32 (aluminum alloy)
Ambient Temperature:	Must be between 10 °C and 35 °C
Chamber Temperature:	Maintained to 3-4 °C above room temperature
Humidity:	Must be between 0% and 95% (non-condensing)

Lamps: The CCP-4V photoreactor package includes two complete sets of UVC and UVA lamps (14 of each). See separate sheet for lamp specifications.

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Options Included:

Option	Specifications
Built-in Drive	<ul style="list-style-type: none">• Software Controlled• Can support the Luzchem carousel and turntable• Max speed: 7 RPM
Carousel	<ul style="list-style-type: none">• Designed to accommodate samples in test tubes of up to 16 mm in diameter.• Diameter: 5"• Bottom plate height: 1 in. above chamber floor• Can hold 16 tubes
Turntable	<ul style="list-style-type: none">• Diameter: 9 3/16"• Height: 1 in. above chamber floor
Magnetic Stirrer	<ul style="list-style-type: none">• Software Controlled• Speed: adjustable• Min speed: 100 RPM• Max speed: 1000 RPM• Max volume that can be stirred: 0.26 gallons (1L)• Magnet not included
Timer	<ul style="list-style-type: none">• Software controlled• Allows unattended exposure times from 1 min to 99 hrs, 99 min
Gas Inlet	<ul style="list-style-type: none">• Rear mounted bulkhead gas connector• Only recommended for non-flammable, non-toxic gases• Gas should not dissipate in the chamber, should be used with environmental chamber only.
Hour Meter	<ul style="list-style-type: none">• Built-in to the unit• Keeps track of the number of hours the unit has been in operation
Safe Exhaust	<ul style="list-style-type: none">• Material: galvanized aluminum• Exhaust tube provided: 4" diameter, max length: ~ 8'• Built-in fan: 3100 RPM, Airflow: 110 CFM
Safety Interlock	<ul style="list-style-type: none">• Turns off lamps when door is open• Indicator LED's signal if the door is open and if power is running to the lamps
UV Protecting Goggles	<ul style="list-style-type: none">• Yellow safety goggles, with 400 nm cut-off

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LPD-CCP Power Sensor

LPD-CCP	Specifications
Calibration	<ul style="list-style-type: none">• Calibrated against a NIST-traceable Luzchem spectroradiometer (SPR-4001)• Valid for one year from date of calibration
Calibrated for use with Luzchem lamps*	<ul style="list-style-type: none">• LZC-VIS• LZC-UVA• LZC-UVB• LZC-UVC• LZC-420 <p>*Lamp types cannot be mixed for calibration to apply</p>
Measurement units	<ul style="list-style-type: none">• mW/m^2 for the selected wavelength region• calculated by CCP software
Accuracy	<ul style="list-style-type: none">• $\pm 15\%$ (+/-10% of SPR values)
Connectivity	<ul style="list-style-type: none">• connects directly to CCP photoreactor chamber
Power requirements	<ul style="list-style-type: none">• 5V DC, supplied by CCP unit
Dimensions	<ul style="list-style-type: none">• 4 x 3 x 1 inches (approximate)
Weight	<ul style="list-style-type: none">• 110 g (approximate)

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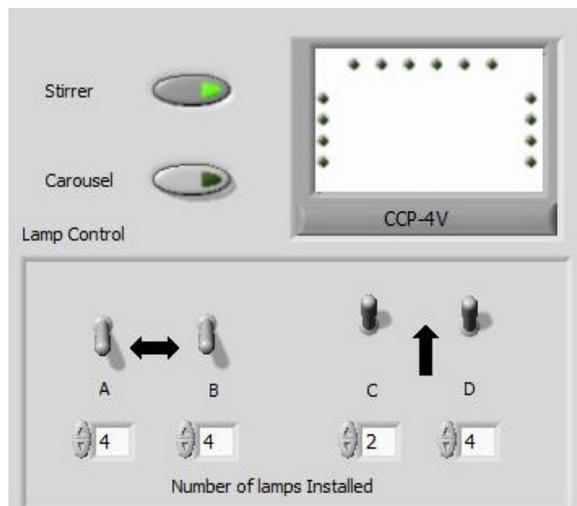
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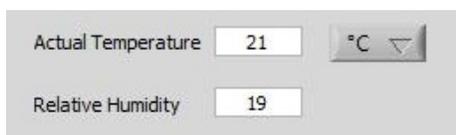
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Software:

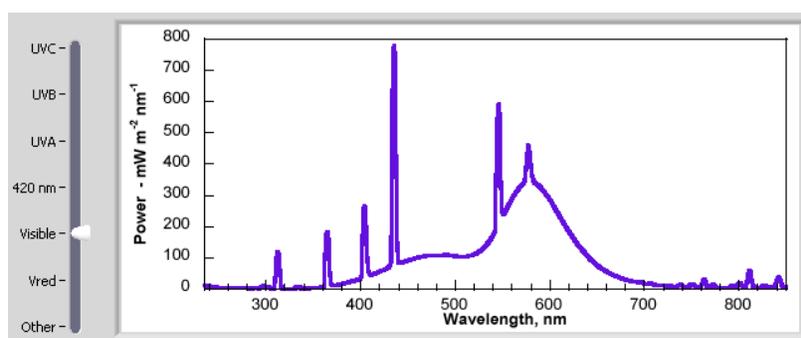
The lamps can be turned on and off using the switches in the *Photoreactor Settings* box, and the stirrer and carousel/turntable can be turned on or off with the toggles.



The CCP-4V photoreactor is also equipped with a temperature and relative humidity (RH) monitor, which displays the temperature and RH inside the chamber at all times.



Selecting the lamp type will display the irradiance spectrum for these lamps in the chart.

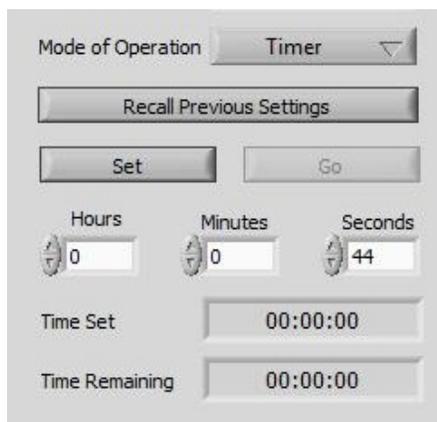


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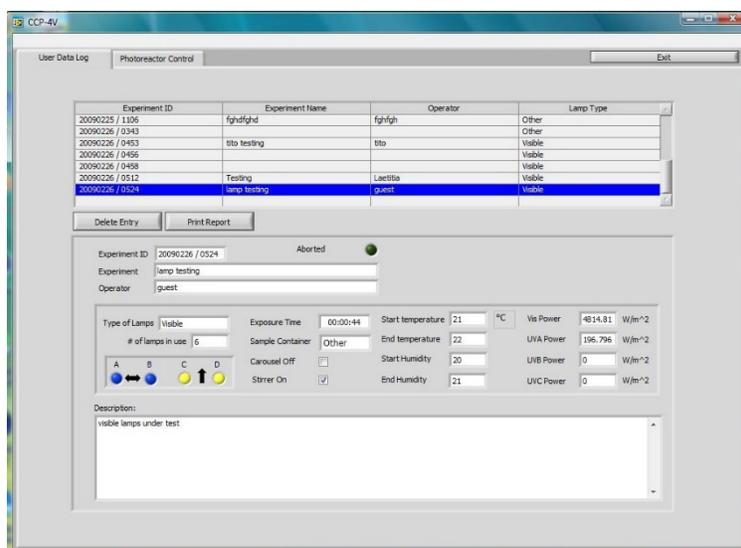
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In Timer mode, the irradiation parameters can be set using the switches and dials in the *Photoreactor Settings* box (the lights and motors will only be turned on when the timer countdown is started).



The irradiation parameters and lamp type for each timed experiment will be recorded in the User Data Log, as well as any additional information entered in the data log information boxes.



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