

# Collimated beam



Collimated beam



LED technology



Adjustable  
radiation intensity

## The equipment

Apria Systems has designed a series of flexible collimated beam photoreactors with **LED technology**. We offer a wide range of **tabletop** models to adapt the equipment to the needs of our clients.

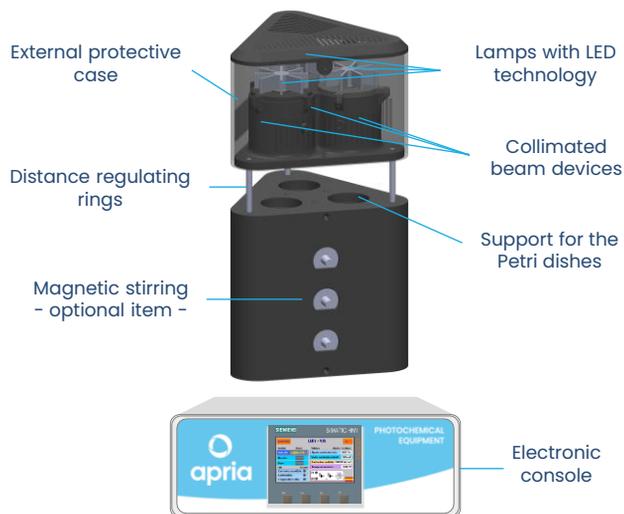
Each photoreactor has **3 sources of light** with independent control and different wavelength. Thus, allowing the user to perform up to 3 experiments simultaneously.

The **radiation intensity** of each lamp can be easily adjusted to suit the needs of each treatment. Thanks to its **Petri Dish Factor above 0.9**, the system provides exceptionally uniform irradiation across Petri dishes up to 5 cm in diameter, ensuring highly homogeneous light intensity on the sample.

Additionally, the **distance** from the lamps to the reaction system **can be modified**.



## Elements of the system



## Operation

1. Adjust the distance from the collimated beam device to the Petri dishes
2. Place the Petri dishes in their corresponding well
3. Turn-on the electronic console
4. Select the working type of light, adjust its radiation intensity, and switch-on the lamp
5. Perform the photochemical treatment

We offer a wide range of alternatives to adjust our equipment to your needs

## Reactor characteristics

<b>Operation mode</b>	Batch
<b>Configuration</b>	Triple wavelength –quadruple wavelength available under request-
<b>Volume (mL)</b>	30 – 100 (with each lamp)
<b>Irradiated area</b>	3 Petri dishes with diameters up to 5 cm each
<b>Number of LEDs</b>	3 –4 under request-
<b>Adjustable radiation intensity</b>	Yes, through an electronic console with PLC
<b>Adjustable distance</b>	Yes, through rings: 0 – 3.5 cm
<b>Optional items</b>	Magnetic stirring / portable radiometer

## Source of light

Type of light	$\lambda$ (nm)	$\lambda_{\text{peak}}$ (nm)	$\Phi$ / LED
UV-C	263 – 268	265	100 mW
	268 – 280	275	
UV-B	295 – 305	300	32 mW
UV-A	365 – 370	365	1,200 mW
Violet	400 – 410	405	1,260 mW
White	400 – 700	450	315 lm
Blue	453 – 460	457	1,350 mW
Green	520 – 530	523	450 mW
Yellow	587 – 598	590	470 lm
Red	618 – 630	623	935 mW

\*Infrared lamps can not be collimated.

