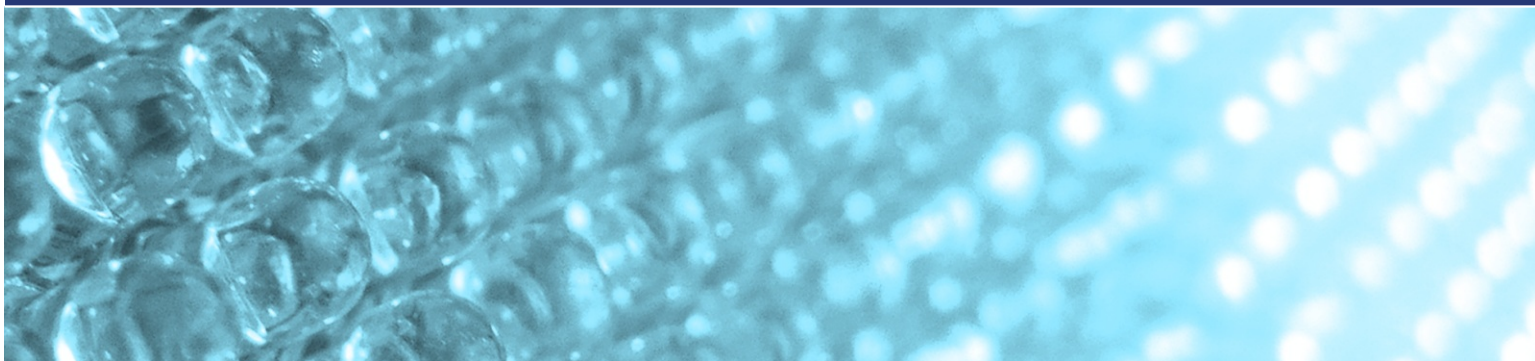


LED ARRAYS

Selective precise UV irradiation



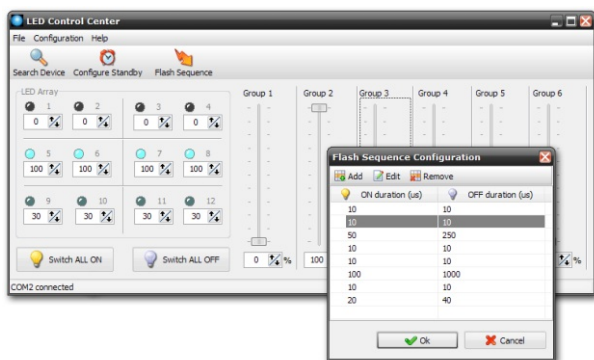
Selective controllable UV irradiation in microfluidic and laboratory environments

Requirement

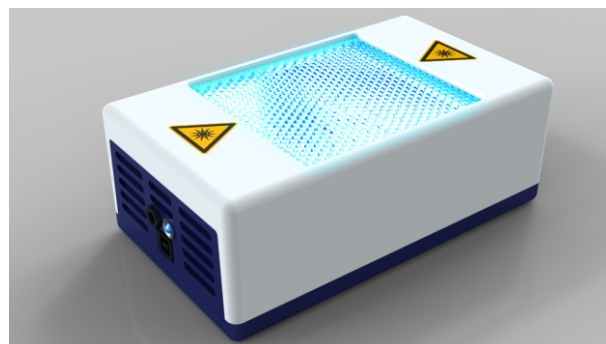
In various applications, i.e. in microfluidic environments, the precise selective UV irradiation of certain exactly zoned areas is required.

Solution

For precise selective UV irradiation cetoni offers special LED array modules. Single LEDs, LED rows or columns, entire blocks of LEDs or customized combinations of LEDs are precisely controllable. This enables the automated selective irradiation of well defined areas in user applications. The included software supports configuration and control of LED groups in an easy way.



UV LED Array Control Center Software



Standard UV LED Array module with 672 LEDs

Your benefits at a glance

- selective irradiation of up to 12 separate sectors
- customizable irradiation sectors
- luminosity adjustable with a resolution of 100 stages
- two different standard array modules (12 and 672 LEDs - other sizes and designs on request)
- easy to use control software
- customizable wavelength and intensity of irradiation
- support for grouping of radiation sectors into radiation groups
- configurable flash function
- trigger output (i.e. for triggering an external camera)
- configurable standby timer for automatic shutoff

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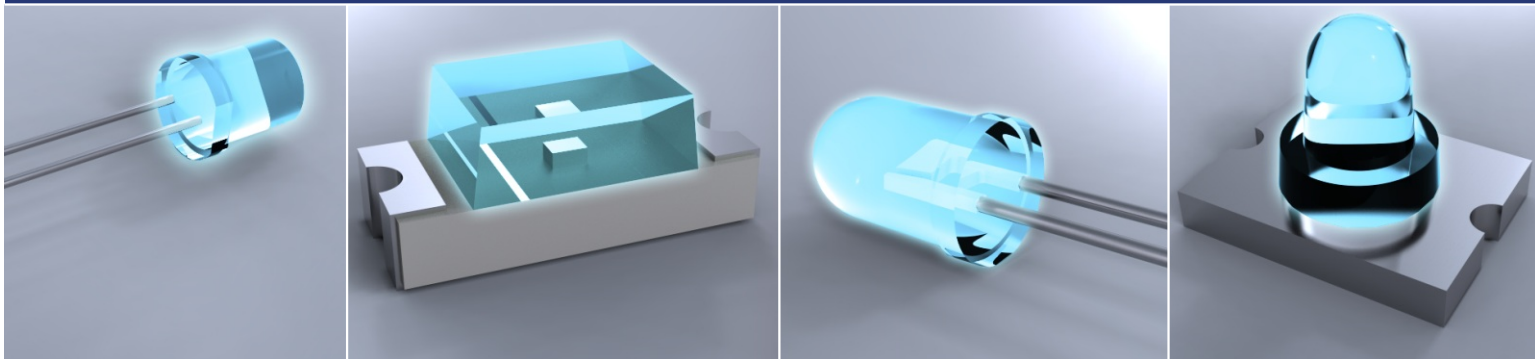
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LED ARRAYS

Customizable LED configurations



Different wavelengths for different applications customized to your needs

Configuration

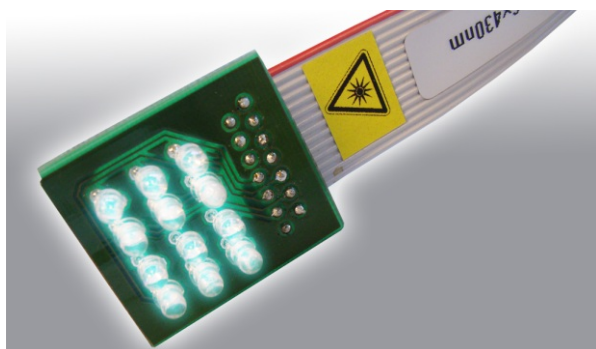
Each application requires a specific wavelength. Therefore the LEDs used to build the array modules are freely definable by the user. Thus it is possible to realize very different wavelengths (i.e. infrared) in different LED array modules or to realize a combination of different wavelengths in one single LED array module.

Advantages of LEDs to common lamps

- compact design
- energy-efficient
- controllable radiated power
- well defined spectrum
- longevity

Example LED configurations

Wavelength	Optical Output	Shape
255 nm	101-150 μ W, 20 mA	Flat window \varnothing 5mm
265 nm	201-350 μ W, 20 mA	Flat window \varnothing 5mm
280 nm	551-650 μ W, 20 mA	Flat window \varnothing 5mm
310 nm	301-525 μ W, 20 mA	Flat Window \varnothing 5mm
340 nm	201-350 μ W, 20 mA	Flat window \varnothing 5mm
360 nm	1.2-1.8 mW, 20 mA, 15°	5mm clear UV resistant epoxy
370 nm	3.0 mW, 20 mA, 15°	5mm clear UV resistant epoxy
385 nm	3-5 mW, 20 mA, 30°	5mm clear epoxy
405 nm	10 mW, 20 mA, \pm 9°	5mm clear epoxy
470 nm	7-9 mW, 20mA, 20°	5mm clear epoxy



Standard UV LED Array Module with 12 LEDs

Example applications

- selective sterilization (i.e. in microfluidic environments)
- air purification
- photochemical reactions
- curing / fixing of adhesives / lacquer
- fixing of surface coatings

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