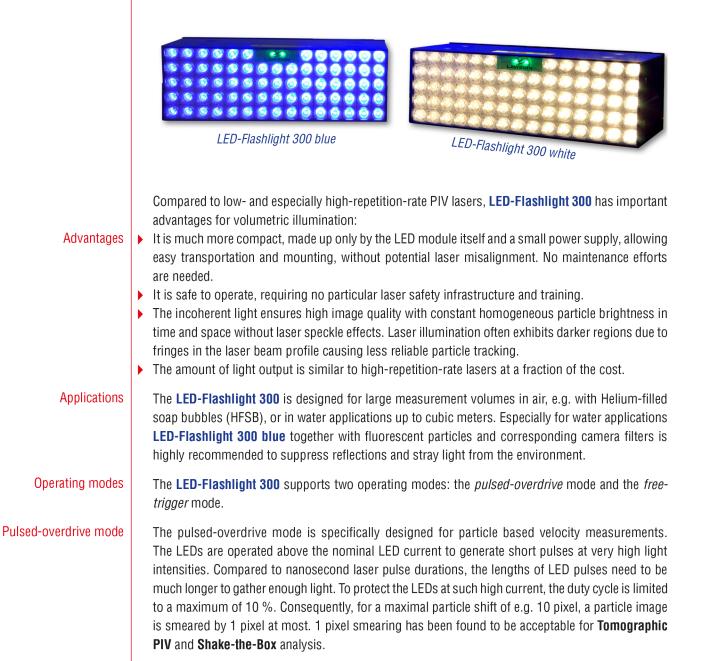


LED-Flashlight 300

White and blue light sources for volumetric flow field measurements

For volumetric flow field measurement techniques like **Tomographic PIV** and **Shake-the-Box** the usual laser illumination can often be replaced by high-power LED illumination. The **LED-Flashlight 300** provides an array of 72 white or blue high-power LEDs in an area of $300 \times 100 \text{ mm}^2$. The small divergence angle of +/- 5° allows the illumination of measurement volumes with a cross section of about $300 \times 100 \text{ mm}^2$ at 1 m working distance. Optional Fresnel lenses can be used for smaller or larger cross sections.



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Free-trigger mode

In the free-trigger mode at lower peak power, the **LED-Flashlight 300** can either be used for constant illumination (100 % duty cycle), e.g. for experimental adjustment, or can be triggered with an arbitrary pulse sequence, e.g. for dual-pulse or multi-pulse illumination.

Multiple **LED-Flashlight 300** modules are seamlessly combined to obtain larger cross sections with different aspect ratios, e.g. with four modules a cross section of 600 x 200 mm² or 400 x 300 mm² can be readily obtained.



Size Weight

Specifications

LEDs
Opening angle
Working distance
Electrical power
Efficiency
Light pulse trigger
Jitter
Mode selection
Safety features



337 x 117 x 153 mm³
5.3 kg (LED module)
1.6 kg (power supply)
72 white or blue high-power, high efficiency LEDs
10° (+/- 5°)
typ. 500 mm – 2000 mm
avg. 300 W
20 % (free-trigger), 10 % (pulsed-overdrive)
0 – 20 kHz, TTL-level
< 15 ns
manual switch or remote (TTL)
temperature control, LED trigger protection

Mode	Power emitted light	Duty cycle	Max. pulse energy	Pulse length
Pulsed-overdrive	290 W	0 - 10 %	145 mJ @ 200 Hz 29 mJ @ 1 kHz 2.9 mJ @ 10 kHz	2.5 µs – 335 µs
Free-trigger (white)	60 W	0 - 100 %	60 W x ∆t	2.5 µs - ∞(cw)

Ordering information

Part number	Description	
1103445	LED-Flashlight 300 white	
1103446	LED-Flashlight 300 blue	

Data provided by LaVision is believed to be true. However, no responsibility is assumed for possible inaccuracies or omissions. All data are subject to change without notice.

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