

## Mounted Leds ML-6 Datasheet

Mounted LEDs ML-6 is a microscopy collimated multi-LEDs light source which be used to increase the sensitivity/contrast/resolution of the image or for fluorescence applications. The intensity of all its 6 light sources can be controlled simultaneously by the user, until the optimal irradiation parameters are achieved for the interest sample. The source has a fanless design and it can be easily adapted on any microscope (please let us know the microscope model that you have at the ordering time).



### Applications:

- Optimising light illumination by adjusting the intensity of each wavelength individually with the aim of obtaining optimal contrasted images
- Optimising absorption in sample illumination for resolution enhancement
- Fluorescence excitation



Microscope adapters compatible with: Nikon, Leica, Zeiss, Olympus and others

### Product Details:

Colour (dominant wavelength)	Luminous Flux ( $\Phi$ )
Blue (451 nm)	95 lm
Cyan (500 nm)	135 lm
Green (520 nm)	180 lm
Amber (590 nm)	140 lm
Red (623 nm)	95 lm
Lime (wide range)	310 lm

Flux tolerance :  $\pm 10\%$

Aperture:  $\varnothing 48.3$  mm

Diffuser: N-BK7 ground glass diffuser, 1500 grit (removable)

Manual, parallel powerful control for all LEDs

Colling: passive

Typical Lifetime: 10 000 h

Electrical Power: 60 W (at full, all LEDs simultaneous irradiance)

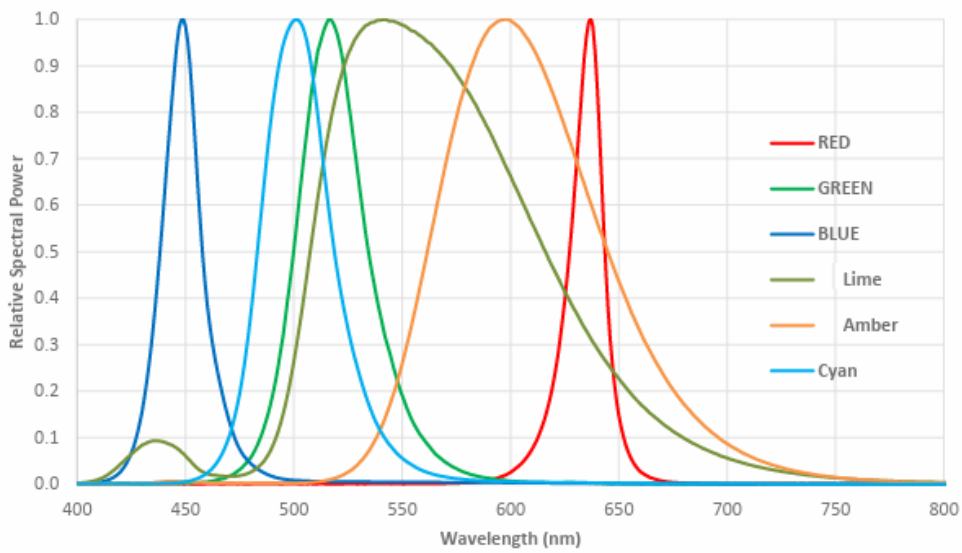
Power requirements: 110VAC@ 60Hz/230VAC@ 50Hz

Operating temperature:  $-40^{\circ}\text{C}$  to  $+125^{\circ}\text{C}$

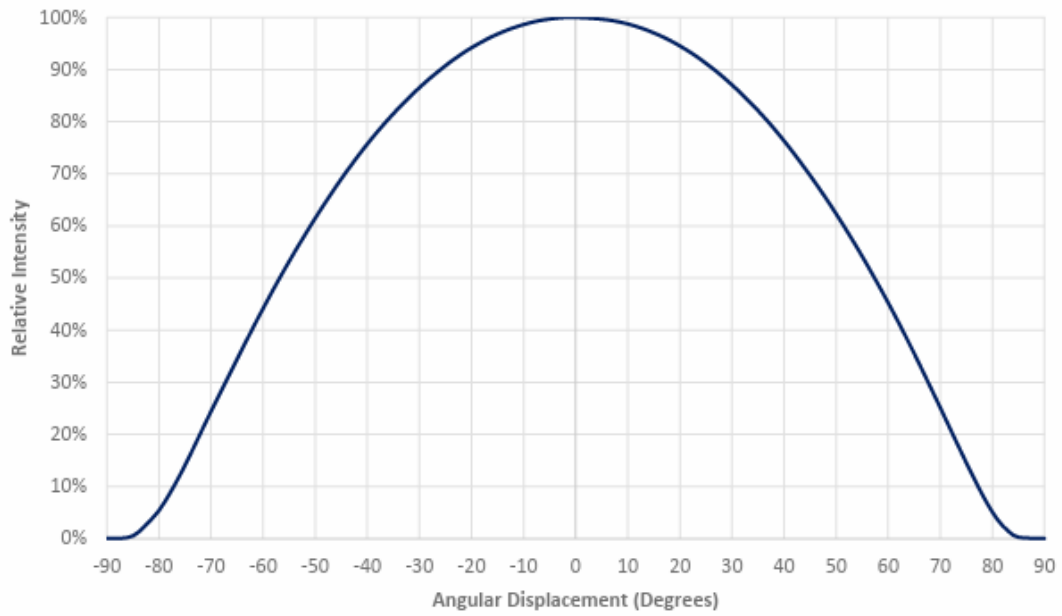
Warranty: 12 months

Product designed and made in the UK

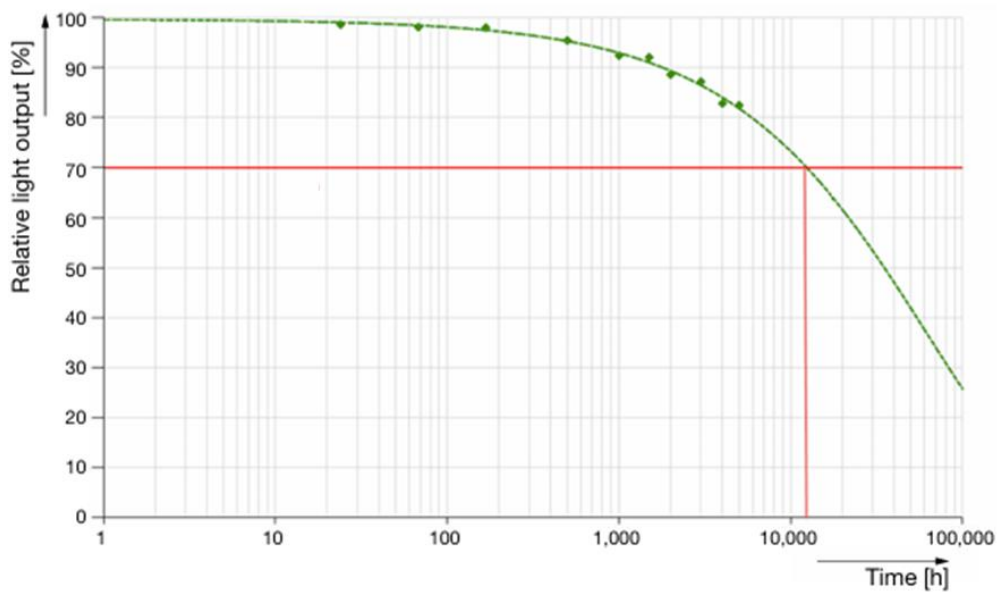
The light beam is collimated through a large  $\varnothing 48.3$  mm aperture that can be attached via an adapter (customer will specify the model of the microscope at the ordering time) to the epillumination paths of many commercial available industry-standard microscopes. The collimator is an assembly between LB1723-A (N-BK7 bi-convex lens,  $\varnothing 2"$ ,  $f = 60.0$  mm) and ACL25416U-A (aspheric condenser lens,  $\varnothing 1"$ ,  $f=16$  mm,  $\text{NA}=0.79$ ), lenses made by Thorlabs® Inc.



Typical relative spectral power vs. wavelength



Typical representative spatial radiation pattern (all LEDs on) – before collimation



Lifetime and degradation curve

### Safety:

The evaluation of eye safety occurs according to the standard IEC 62471:2016 (photo biological safety of lamps and lamp systems). Within the risk grouping system of this IEC standard, the device specified in this datasheet falls into the class moderate risk. Under real circumstances, it is assumed that no endangerment to the eye exists from these devices. As a matter of principle, however, it should be mentioned that intense light sources have a high secondary exposure potential due to their blinding effect. When looking at bright light sources, temporary reduction of visual acuity and afterimages can occur, leading to irritation, annoyance, visual impairment, and even accidents, depending on the situation.

### Dimensions:

