

POWERLED® L2/6 MODULE



POWERLED® L2/6 is a lighting module where two broad-angled ($2\theta_{1/2}=120^\circ$) multichip diodes LED are installed. These diodes are of “long life” type and medium power ($2 \times 250 \text{ mW}$)*. It was possible to achieve a very high flux of light at extremely low power consumption thanks to a very high electrical efficiency factor (above 80 %) and high light efficiency of diodes used (more than 85 lm/W)*. **This module is one of the most efficient sources of light produced by our company.** The electronic units used in the module, control diodes’ LED work conditions and provide optimum power value. This module long life time (comparable to diodes’ LED life time declared by their producer) is possible because of used negative thermal power compensation, supplying the diodes.

Usage: line lighting, decorative lighting, advertising lighting (spatial letters lighting), LED lamps, traffic lights, evacuation lighting, architectural lighting etc.

* parameters are given for the module with diodes LED “long life” type emitting white cold light (produced from 2010).

TECHNICAL PARAMETERS		OPTICAL PARAMETERS ¹					
		¹ based on diode LED producer catalogue data					
Physical dimensions length/width/height	50mm x 10mm x 4mm (screw hole: 3,5mm)	Available colours	Symbol	Flux of light and angle of light			
Module weight	ca. 2 g	white cold (above. 6000K)	L2/6-WH-24-IH	typ. 35 lm	$2\theta_{1/2}=120^\circ$ (for a single diode LED)		
		white neutral (ca. 5000K)	L2/6-WH-24-CR	typ. 56 lm			
		white warm (ca. 3000K)	L2/6-WW-24-IH	typ. 30 lm			
Way of fixing	silicon glue, sticky tape, mounting screw (hole diameter 3,5 mm)	blue	L2/6-BL-24-IH	typ. 12 lm			
		green	L2/6-GR-24-IH	typ. 36 lm			
		red	L2/6-RD-15-IH	typ. 15 lm			
ELECTRICAL PARAMETERS							
Module type	Supply voltage U_Z [V] +/- 5%	Current input I_Z [mA]	Power input P [W]	Electrical efficiency factor ² η [%]	Current change I_Z vs. voltage change U_Z factor ³ I_U [%/%]	Current change I_Z vs. temperature change T factor ⁴ I_T [%/K]	PWM modulation possibility
L2/6-WH-24-IH	24 VDC	ca. 20 mA	ca. 0,5W	min. 80 %	max. 1	typ. $-0,3 \frac{\%}{K}$	yes $f_{\text{clock}} \leq 4 \text{ kHz}$
L2/6-WH-24-CR		ca. 35 mA	ca. 0,85W				
L2/6-WW-24-IH		ca. 20 mA	ca. 0,5W				
L2/6-BL-24-IH		ca. 20 mA	ca. 0,5W				
L2/6-GR-24-IH		ca. 22 mA	ca. 0,55W				
L2/6-RD-15-IH	15 VDC	ca. 24 mA	ca. 0,4W				

Explanatory note:

² The electrical efficiency factor (η) is assigned as, expressed in percentage, the proportion of power provided for diodes LED to total power consumed by a module (the higher rate of this factor the better, max. value is 100%).

³ Current change I_Z vs. voltage change U_Z factor (I_U) represents the relation of module LED current relative change as a result of supply voltage relative value change (the lower value the better, in good solutions the value of this factor does not exceed 1).

⁴ Current change I_Z vs. temperature change T factor (I_T) represents module LED current relative change (given in percentage) at the increase of temperature of 1 degree (the value of this factor should be very low, negative value proves the use of the power negative thermal compensation extending diodes LED life time).

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