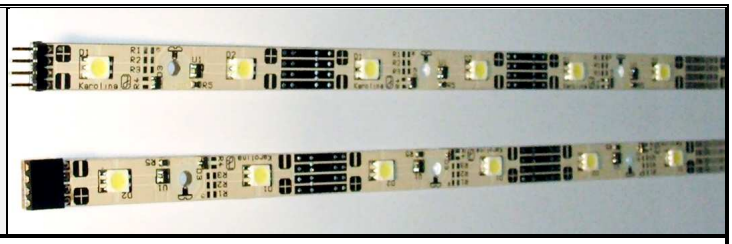
POWERLED® L10/30 STRIP



POWERLED® L10/30 is the module in the shape of strip where ten broad-angled multichip diodes LED are installed. These diodes are of "long life" type and medium power (10 x 250 mW)*. It was possible to achieve a very high flux of light at extremely low power consumption thanks to very high electrical efficiency factor (above 80 %) and high light efficiency of diodes used (more than 85lm/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. Light emitted by the strip can be easily adjusted (PWM modulation, range from 0 to 100 %) with the processor controllers (e.g. one-channel controller "MINI_PCB").

The strip is ended with a four-pin socket and a plug which allows joining modules in long lines (even up to 30 strips could be joined together powered from one terminal). The strip can also be easily divided into five independent pieces having two diodes LED each, long for 78 mm (power supply is not changed).

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

Physical dimensions length/width/height	390mm x 10mm x 4mm (screw hole: 3,5mm every 78mm)
Diodes quantity	10 (raster: 39 mm)
Module weight	ca. 12 g
Way of fixing	silicon glue, sticky tape, mounting screw (5 holes with diameter of 3,5 mm)

OPTICAL PARAMETERS [1]

[1] based on diode LED producer catalogue data

Available colours	Symbol	Flux of light and angle of light	
white cold (above 6000K)	L10/30-WH-24-IH	typ. 180 lm	$2\theta_{½}=120^{O}$ (for a single diode LED)
white neutral (ca. 5000K)	L10/30-WH-24-CR	typ. 280 lm	
white warm (ca. 3000K)	L10/30-WW-24-IH	typ. 150 lm	
blue	L10/30-BL-24-IH	typ. 60 lm	
green	L10/30-GR-24-IH	typ. 180 lm	
red	L10/30-RD-15-IH	typ. 70 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
L10/30-WH-24-IH	24 VDC	ca.100 mA	ca. 2,5 W	min. 80 %	max. 1	typ. -0,3 $\frac{\%}{K}$	yes $f_{clock} \leq 4$ kHz
L10/30-WH-24-CR		ca.180 mA	ca. 4,5 W				
L10/30-WW-24-IH		ca.100 mA	ca. 2,5 W				
L10/30-BL-24-IH		ca.100 mA	ca. 2,5 W				
L10/30-GR-24-IH		ca.110 mA	ca. 2,7 W				
L10/30-RD-15-IH	15 VDC	ca.120 mA	ca. 2 W				

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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 Iz 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 current negative thermal compensation extending diodes LED life time).

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