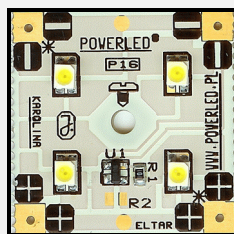


**POWERLED® L4** is a module 30 x 30 x 4 mm in dimensions, containing four highly efficient diodes LED. It can be used for spatial advertisement lighting (inside and outside). It can also be used for artistic and decorative lighting (also traffic lights, evacuation or emergency lighting etc.).



# POWERLED® L4 MODULE

TECHNICAL PARAMETERS		OPTICAL PARAMETERS <sup>1</sup>			
<b>Physical dimensions</b> length/width/height	30 mm x 30 mm x 4 mm (screw hole: 3,5mm)	<b>Available colours</b>	<b>Symbol</b>	<b>Flux of light and angle of light</b>	
		white cold (ca. 5400K)	L4-WH-18-PS	typ. 20 lm	
<b>Module weight</b>	ca. 3,5 g	white warm (ca. 3200K)	L4-WW-18-PŻ	typ. 20 lm	
		blue	L4-BL-18-IS	typ. 8 lm	
<b>LED diodes quantity</b>	4 pcs.	green	L4-GR-18-MS	typ. 20 lm	
		yellow	L4-YL-10-OS	typ. 12 lm	
<b>Way of fixing</b>	silicon glue, sticky tape, mounting screw (hole diameter 3,5 mm)	yellow <b>NEW!</b>	L4-YL-10-OH	typ. 20 lm	
		orange	L4-OR-10-OS	typ. 12 lm	
		orange <b>NEW!</b>	L4-OR-10-OH	typ. 35 lm	
		amber <b>NEW!</b>	L4-AM-10-OH	typ. 20 lm	
		red	L4-RD-10-SS	typ. 8 lm	

<sup>1</sup> based on diode LED producer catalogue data

2θ<sub>1/2</sub> = 120°  
(for a single diode LED)

ELECTRICAL PARAMETERS							
Module type	Current input I <sub>Z</sub> [mA] +/- 5%	Supply voltage U <sub>Z</sub> [V]	Power input P [W]	Electrical efficiency factor <sup>2</sup> : η [%]	Current change I <sub>Z</sub> vs. voltage change U <sub>Z</sub> factor <sup>3</sup> : I <sub>U</sub> [%/%]	Current change I <sub>Z</sub> vs. temperature change T factor <sup>4</sup> : I <sub>T</sub> [%/K]	PWM modulation possibility
L4-WH-18-PS	ca. 23 mA	<b>18 VDC</b>	ca. 0,5W	min. 70 %	max. 1	typ. -0,3 $\frac{\%}{K}$	yes f <sub>clock</sub> ≤ 4 kHz
L4-WW-18-PŻ	ca. 23 mA		ca. 0,5W				
L4-BL-18-IS	ca. 23 mA		ca. 0,5W				
L4-GR-18-MS	ca. 25 mA		ca. 0,5W				
L4-YL-10-OS	ca. 50 mA	<b>10 VDC</b>	ca. 0,5W	min. 80 %			
L4-YL-10-OH	ca. 50 mA		ca. 0,5W				
L4-OR-10-OS	ca. 50 mA		ca. 0,5W				
L4-OR-10-OH	ca. 50 mA		ca. 0,5W				
L4-AM-10-OH	ca. 50 mA		ca. 0,5W				
L4-RD-10-SS	ca. 27 mA		ca. 0,3W				

Explanatory note:

- 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%).
- Current change I<sub>Z</sub> vs. voltage change U<sub>Z</sub> factor (I<sub>U</sub>) 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).
- Current change I<sub>Z</sub> vs. temperature change T factor (I<sub>T</sub>) 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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