

BRIGHTENER LED M STREET AND ROAD LIGHTING



NG



FG

TECHNICAL PARAMETERS

Supply voltage:	230 V
Line frequency:	50 Hz
IP security level:	IP 66
IK security level:	IK 08
Energy class:	A+ / A++ / A+++
Electrical security level:	I, II
Body material:	Aluminum, Powder painted
Net weight:	4,6 ÷ 5,0 kg ⁽¹⁾
RAL color:	7024 ⁽²⁾ / 7035
Color temperature:	4000 K, 5000 K
Mounting method:	Horizontal / Vertical -30° ÷ +30°
Optic lens material:	PMMA
Optics:	Exchangeable modules
Light source:	LED
Version:	FG ⁽³⁾ / NG ⁽⁴⁾
Rated power:	21 ÷ 75 W
Luminous Flux FG:	4.150 ÷ 12.000 lm
Efficiency FG:	148 ÷ 168 lm/W
Luminous Flux NG:	4.250 ÷ 12.500 lm
Efficiency NG:	154 ÷ 173 lm/W
Size without handle:	505x200x100 mm (LxWxH)
Size with handle I:	620x200x132 mm (LxWxH)
Size with handle II:	620x200x136 mm (LxWxH)
Pipe fixation $\phi^{(5)}$ range:	I: 38÷51 mm or II: 38÷61 mm

PRODUCT CHARACTERISTICS

Two-chamber LED road lighting fixture of various colors, with independent energy-saving LED panels, is characterized by high luminous flux efficiency and easy replacement of both LED chip PCB and driver.

The body and handle are made by high pressure aluminum casting. The whole was powder coated.

The lighting fixture uses directional lenticular matrices made of PMMA, thanks to which it is possible to obtain a light distribution requirements defined in the PN-EN 13201: 2007 standard.

Characteristics: durability of LED panels above 50.000 hours, $t_a=25^{\circ}\text{C}$. Initial luminous flux - tolerance +/- 10%.

Components operational in temperatures from -40°C to $+85^{\circ}\text{C}$.

The lighting fixture is characterized by a very high degree of protection IP66 and resistance to mechanical impacts IK08.

Integrated, step-adjustable handle allows vertical and horizontal adjustment in the range of -30° ÷ $+30^{\circ}$ in the pitch every 5° .

The lighting fixture is available in versions with: tempered flat glass made of glass that breaks into small pieces with PMMA optic lens material and versions without tempered glass.

The industrial design registered at the Patent Office under number Wp.27815.

CODING

5-digit product description {ABCDE}

A) Name: {2} Brightener LED M;

B) Construction: {0} Flat glass, {1} No glass;

C) Electrical protection: {1} class I, {2} class II;

D) Light color: {4} 4000K, {5} 5000K;

E) Dimming function:

{0} No dimming regulation,

{1} Potentiometer (option: 0~10VDC + 10V PWM + resistance),

{2} DALI,

{3} ZigBee⁽⁸⁾ lighting controller,

{4} ZigBee⁽⁸⁾ lighting controller with photocell⁽⁷⁾,

{5} LoRa⁽⁹⁾ lighting controller,

{6} LoRa⁽⁹⁾ lighting controller with photocell⁽⁷⁾,

{7} NB⁽¹⁰⁾,

{8} Twilight sensor⁽¹¹⁾.

{9} Smart timer dimming with programmable function⁽¹²⁾.

APPLICATION

The lighting fixture is designed for use in open areas for lighting: highways, expressways, city streets, local roads and intersections.

CONTROL

Two types of "Standard⁽⁶⁾" and "Photocell⁽⁷⁾" controllers using communication technology such as "ZigBee⁽⁸⁾", "LoRa⁽⁹⁾" and "NB⁽¹⁰⁾" enabling to lighting infrastructure management from a single control panel creating "Smart City" environment. Photocontroller⁽¹¹⁾ ensures autonomy of operation and the programmable timer⁽¹²⁾ provides additional electricity savings.

Intelligent control reduces energy consumption reducing nighttime illumination during minimal traffic by autonomously management of the lighting infrastructure.

(1) Product weight varies depending on power version,

(2) RAL 7024 is standard color, RAL 7035 color selection must be specified when ordering,

(3) design with flat glass,

(4) Design without glass,

(5) Standard pipe fixation range diameter type is I, type II need to be specified during order request,

(6) Light controller with following functions: switch, dimming, fault alarm, current and voltage detection, local strategy, scene strategy,

(7) Light-controller with additional automatic dimming function according to outside illuminance,

(8) ZigBee – Wireless data transmission with about 500 access points, range of up to 3 km, data transmission speed up to approx. 250 kps,

(9) LoRa – Wireless data transmission with about 5.000 access points, range of up to 5 km, data transmission speed up to approx. 50 kps,

(10) NB – Wireless data transmission with about 200.000 access points, range of up to 15 km, data transmission speed up to approx. 250 kps,

(11) Photocontroller with automatically switch on and off function according to outside illuminance,

(12) Programmable switching on, off and setting various intensities according to individual time intervals.

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AVAILABLE PRODUCT TYPES FOR NOMINAL POWER (BEFORE THE DRIVER) UP TO 75W

Index	Max rated power	Color temp.	Luminous stream	Optics	Color influence	Version	Protection class	Dimming function	Energy class	LED qty
20140	75W	4000K	12.000lm	1xmodule	Ra>70	Flat glass „FG”	I	No	A++	24
20240	75W	4000K	12.000lm	1xmodule	Ra>70	Flat glass „FG”	II	No	A++	24
20141	75W	4000K	12.000lm	1xmodule	Ra>70	Flat glass „FG”	I	Manual	A++	24
20241	75W	4000K	12.000lm	1xmodule	Ra>70	Flat glass „FG”	II	Manual	A++	24
20142	75W	4000K	12.000lm	1xmodule	Ra>70	Flat glass „FG”	I	DALI	A+++	24
20242	75W	4000K	12.000lm	1xmodule	Ra>70	Flat glass „FG”	II	DALI	A+++	24
20143	75W	4000K	12.000lm	1xmodule	Ra>70	Flat glass „FG”	I	ZigBee ⁽⁶⁾	A+++	24
20243	75W	4000K	12.000lm	1xmodule	Ra>70	Flat glass „FG”	II	ZigBee ⁽⁶⁾	A+++	24
20144	75W	4000K	12.000lm	1xmodule	Ra>70	Flat glass „FG”	I	ZigBee ⁽⁷⁾	A+++	24
20244	75W	4000K	12.000lm	1xmodule	Ra>70	Flat glass „FG”	II	ZigBee ⁽⁷⁾	A+++	24
20145	75W	4000K	12.000lm	1xmodule	Ra>70	Flat glass „FG”	I	LoRa ⁽⁶⁾	A+++	24
20245	75W	4000K	12.000lm	1xmodule	Ra>70	Flat glass „FG”	II	LoRa ⁽⁶⁾	A+++	24
20146	75W	4000K	12.000lm	1xmodule	Ra>70	Flat glass „FG”	I	LoRa ⁽⁷⁾	A+++	24
20246	75W	4000K	12.000lm	1xmodule	Ra>70	Flat glass „FG”	II	LoRa ⁽⁷⁾	A+++	24
20147	75W	4000K	12.000lm	1xmodule	Ra>70	Flat glass „FG”	I	NB ⁽⁶⁾	A+++	24
20247	75W	4000K	12.000lm	1xmodule	Ra>70	Flat glass „FG”	II	NB ⁽⁶⁾	A+++	24
20148	75W	4000K	12.000lm	1xmodule	Ra>70	Flat glass „FG”	I	Twilight ⁽¹¹⁾	A++	24
20248	75W	4000K	12.000lm	1xmodule	Ra>70	Flat glass „FG”	II	Twilight ⁽¹¹⁾	A++	24
20149	75W	4000K	12.000lm	1xmodule	Ra>70	Flat glass „FG”	I	Programmable ⁽¹²⁾	A+++	24
20249	75W	4000K	12.000lm	1xmodule	Ra>70	Flat glass „FG”	II	Programmable ⁽¹²⁾	A+++	24
21140	75W	4000K	12.500lm	1xmodule	Ra>70	No glass „NG”	I	No	A++	24
21240	75W	4000K	12.500lm	1xmodule	Ra>70	No glass „NG”	II	No	A++	24
21141	75W	4000K	12.500lm	1xmodule	Ra>70	No glass „NG”	I	Manual	A++	24
21241	75W	4000K	12.500lm	1xmodule	Ra>70	No glass „NG”	II	Manual	A++	24
21142	75W	4000K	12.500lm	1xmodule	Ra>70	No glass „NG”	I	DALI	A+++	24
21242	75W	4000K	12.500lm	1xmodule	Ra>70	No glass „NG”	II	DALI	A+++	24
21143	75W	4000K	12.500lm	1xmodule	Ra>70	No glass „NG”	I	ZigBee ⁽⁶⁾	A+++	24
21243	75W	4000K	12.500lm	1xmodule	Ra>70	No glass „NG”	II	ZigBee ⁽⁶⁾	A+++	24
21144	75W	4000K	12.500lm	1xmodule	Ra>70	No glass „NG”	I	ZigBee ⁽⁷⁾	A+++	24
21244	75W	4000K	12.500lm	1xmodule	Ra>70	No glass „NG”	II	ZigBee ⁽⁷⁾	A+++	24
21145	75W	4000K	12.500lm	1xmodule	Ra>70	No glass „NG”	I	LoRa ⁽⁶⁾	A+++	24
21245	75W	4000K	12.500lm	1xmodule	Ra>70	No glass „NG”	II	LoRa ⁽⁶⁾	A+++	24
21146	75W	4000K	12.500lm	1xmodule	Ra>70	No glass „NG”	I	LoRa ⁽⁷⁾	A+++	24
21246	75W	4000K	12.500lm	1xmodule	Ra>70	No glass „NG”	II	LoRa ⁽⁷⁾	A+++	24
21147	75W	4000K	12.500lm	1xmodule	Ra>70	No glass „NG”	I	NB ⁽⁶⁾	A+++	24
21247	75W	4000K	12.500lm	1xmodule	Ra>70	No glass „NG”	II	NB ⁽⁶⁾	A+++	24
21148	75W	4000K	12.500lm	1xmodule	Ra>70	No glass „NG”	I	Twilight ⁽¹¹⁾	A++	24
21248	75W	4000K	12.500lm	1xmodule	Ra>70	No glass „NG”	II	Twilight ⁽¹¹⁾	A++	24
21149	75W	4000K	12.500lm	1xmodule	Ra>70	No glass „NG”	I	Programmable ⁽¹²⁾	A+++	24
21249	75W	4000K	12.500lm	1xmodule	Ra>70	No glass „NG”	II	Programmable ⁽¹²⁾	A+++	24

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Index	Rated power	Color temp.	Luminous stream	Optics	Color influence	Version	Protection class	Dimming function	Energy class	LED qty
20150	75W	5000K	12.000lm	1xmodule	Ra>70	Flat glass „FG”	I	No	A++	24
20250	75W	5000K	12.000lm	1xmodule	Ra>70	Flat glass „FG”	II	No	A++	24
20151	75W	5000K	12.000lm	1xmodule	Ra>70	Flat glass „FG”	I	Manual	A++	24
20251	75W	5000K	12.000lm	1xmodule	Ra>70	Flat glass „FG”	II	Manual	A++	24
20152	75W	5000K	12.000lm	1xmodule	Ra>70	Flat glass „FG”	I	DALI	A+++	24
20252	75W	5000K	12.000lm	1xmodule	Ra>70	Flat glass „FG”	II	DALI	A+++	24
20153	75W	5000K	12.000lm	1xmodule	Ra>70	Flat glass „FG”	I	ZigBee ⁽⁶⁾	A+++	24
20253	75W	5000K	12.000lm	1xmodule	Ra>70	Flat glass „FG”	II	ZigBee ⁽⁶⁾	A+++	24
20154	75W	5000K	12.000lm	1xmodule	Ra>70	Flat glass „FG”	I	ZigBee ⁽⁷⁾	A+++	24
20254	75W	5000K	12.000lm	1xmodule	Ra>70	Flat glass „FG”	II	ZigBee ⁽⁷⁾	A+++	24
20155	75W	5000K	12.000lm	1xmodule	Ra>70	Flat glass „FG”	I	LoRa ⁽⁶⁾	A+++	24
20255	75W	5000K	12.000lm	1xmodule	Ra>70	Flat glass „FG”	II	LoRa ⁽⁶⁾	A+++	24
20156	75W	5000K	12.000lm	1xmodule	Ra>70	Flat glass „FG”	I	LoRa ⁽⁷⁾	A+++	24
20256	75W	5000K	12.000lm	1xmodule	Ra>70	Flat glass „FG”	II	LoRa ⁽⁷⁾	A+++	24
20157	75W	5000K	12.000lm	1xmodule	Ra>70	Flat glass „FG”	I	NB ⁽⁶⁾	A+++	24
20257	75W	5000K	12.000lm	1xmodule	Ra>70	Flat glass „FG”	II	NB ⁽⁶⁾	A+++	24
20158	75W	4000K	12.000lm	1xmodule	Ra>70	Flat glass „FG”	I	Twilight ⁽¹¹⁾	A++	24
20258	75W	4000K	12.000lm	1xmodule	Ra>70	Flat glass „FG”	II	Twilight ⁽¹¹⁾	A++	24
20159	75W	5000K	12.000lm	1xmodule	Ra>70	Flat glass „FG”	I	Programmable ⁽¹²⁾	A+++	24
20259	75W	5000K	12.000lm	1xmodule	Ra>70	Flat glass „FG”	II	Programmable ⁽¹²⁾	A+++	24
21150	75W	5000K	12.500lm	1xmodule	Ra>70	No glass „NG”	I	No	A++	24
21250	75W	5000K	12.500lm	1xmodule	Ra>70	No glass „NG”	II	No	A++	24
21151	75W	5000K	12.500lm	1xmodule	Ra>70	No glass „NG”	I	Manual	A++	24
21251	75W	5000K	12.500lm	1xmodule	Ra>70	No glass „NG”	II	Manual	A++	24
21152	75W	5000K	12.500lm	1xmodule	Ra>70	No glass „NG”	I	DALI	A+++	24
21252	75W	5000K	12.500lm	1xmodule	Ra>70	No glass „NG”	II	DALI	A+++	24
21153	75W	5000K	12.500lm	1xmodule	Ra>70	No glass „NG”	I	ZigBee ⁽⁶⁾	A+++	24
21253	75W	5000K	12.500lm	1xmodule	Ra>70	No glass „NG”	II	ZigBee ⁽⁶⁾	A+++	24
21154	75W	5000K	12.500lm	1xmodule	Ra>70	No glass „NG”	I	ZigBee ⁽⁷⁾	A+++	24
21254	75W	5000K	12.500lm	1xmodule	Ra>70	No glass „NG”	II	ZigBee ⁽⁷⁾	A+++	24
21155	75W	5000K	12.500lm	1xmodule	Ra>70	No glass „NG”	I	LoRa ⁽⁶⁾	A+++	24
21255	75W	5000K	12.500lm	1xmodule	Ra>70	No glass „NG”	II	LoRa ⁽⁶⁾	A+++	24
21156	75W	5000K	12.500lm	1xmodule	Ra>70	No glass „NG”	I	LoRa ⁽⁷⁾	A+++	24
21256	75W	5000K	12.500lm	1xmodule	Ra>70	No glass „NG”	II	LoRa ⁽⁷⁾	A+++	24
21157	75W	5000K	12.500lm	1xmodule	Ra>70	No glass „NG”	I	NB ⁽⁶⁾	A+++	24
21257	75W	5000K	12.500lm	1xmodule	Ra>70	No glass „NG”	II	NB ⁽⁶⁾	A+++	24
21158	75W	5000K	12.500lm	1xmodule	Ra>70	No glass „NG”	I	Twilight ⁽¹¹⁾	A++	24
21258	75W	5000K	12.500lm	1xmodule	Ra>70	No glass „NG”	II	Twilight ⁽¹¹⁾	A++	24
21159	75W	5000K	12.500lm	1xmodule	Ra>70	No glass „NG”	I	Programmable ⁽¹²⁾	A+++	24
21259	75W	5000K	12.500lm	1xmodule	Ra>70	No glass „NG”	II	Programmable ⁽¹²⁾	A+++	24

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Version FG – Tempered flat glass



Version FG – Tempered flat glass + Controller



Version NG - No glass cover



Version NG - No glass cover + Controller

Producer reserves the right to change in the standard product improvement process and design changes or modernization in the presented product. The technical data sheet of the product is not a commercial offer.