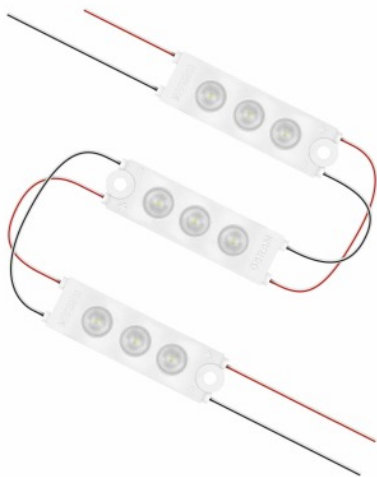


## BackLED M Plus

LED modules for light advertising and backlighting



### Areas of application

- Signage and illuminated advertising
- Backlighting of single and double-sided light boxes
- Backlighting of medium size channel letters
- Permanent outdoor use in enclosed light boxes or channel letters

### Product benefits

- Modules are compatible with BackLED mounting profile
- Uniform illumination at high LED pitches thanks to Flat Ray technology
- Significantly better application efficiency compared to systems without lenses
- Several options for quick and simple mounting: bolting or snap-in
- Excellent module efficacy
- Very long lifetime

### Product features

- Chain of 40 LED modules with three LEDs each
- Connected with flexible cables
- Maximum length of one chain: 8.0 m
- Protection class of LED module: IP66
- Special robust encapsulation
- Fully integrated heat sink



# Product family datasheet

## Technical data

### Electrical data

Product description	Nominal voltage	Nominal wattage	Nominal wattage per LED module	Reverse Voltage	Input voltage range
BA03MA -W4F-765	12.0 V	28.8 W	0.72 W	13 V	11...13 V
BA03MA -W4F-840	12.0 V	28.8 W	0.72 W	13 V	11...13 V
BA03MA -W4F-830	12.0 V	28.8 W	0.72 W	13 V	11...13 V
BA03MA -O2	12.0 V	28.8 W	0.72 W	13 V	11...13 V
BA03MA -R2	12.0 V	28.8 W	0.72 W	13 V	11...13 V

### Photometrical data

Product description	Color temperature	Color rendering index Ra	Light color (designation)	Light color LED	Nominal dominant wavelength	Luminous flux per module chain
BA03MA -W4F-765	6500 K	>70	Daylight	White	-	3000 lm
BA03MA -W4F-840	4000 K	>80	Cool White	White	-	2520 lm
BA03MA -W4F-830	3000 K	>80	Warm White	White	-	2200 lm
BA03MA -O2			Orange	Orange	603 nm	960 lm
BA03MA -R2			Red	Red	625 nm	720 lm

Product description	Luminous flux per LED module	Luminous efficacy
BA03MA -W4F-765	75 lm	104.2 lm/W
BA03MA -W4F-840	63 lm	87.5 lm/W
BA03MA -W4F-830	55 lm	76.4 lm/W
BA03MA -O2	24 lm	33.3 lm/W
BA03MA -R2	18 lm	25 lm/W

### Light technical data

Product description	Beam angle
BA03MA -W4F-765	155 °
BA03MA -W4F-840	155 °
BA03MA -W4F-830	155 °
BA03MA -O2	155 °
BA03MA -R2	155 °

# Product family datasheet

## LED module information

Product description	Number of LEDs per module	Number of LED modules per chain	Minimum operable number of LED modules
BA03MA -W4F-765	3	40	1
BA03MA -W4F-840	3	40	1
BA03MA -W4F-830	3	40	1
BA03MA -O2	3	40	1
BA03MA -R2	3	40	1

## Dimensions & weight

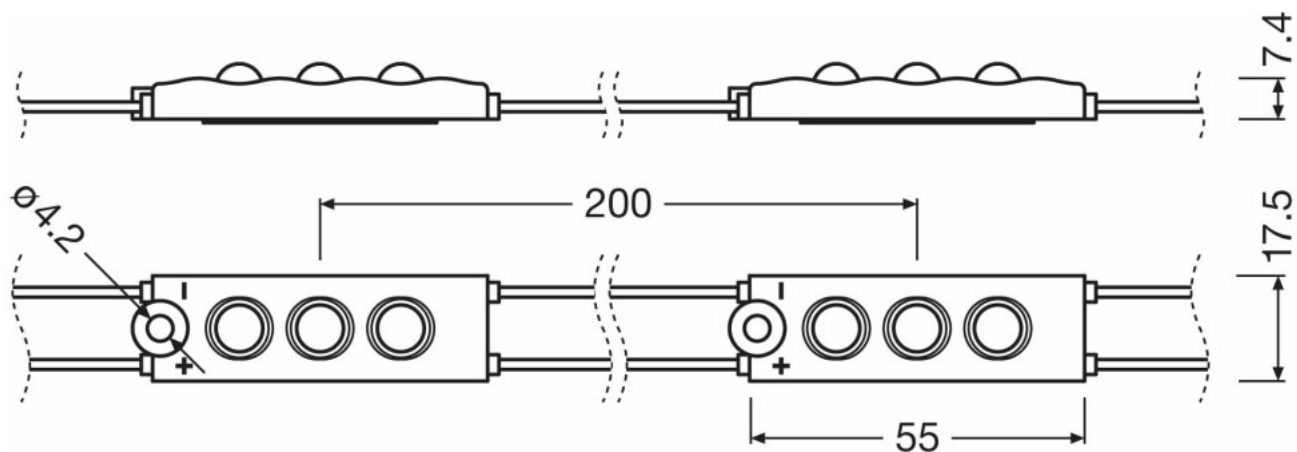
Product description	Length	Width	Height	Product weight
BA03MA -W4F-765	8000 mm <sup>1)</sup>	17.5 mm	7.4 mm	435.00 g <sup>2)</sup>
BA03MA -W4F-840	8000 mm <sup>1)</sup>	17.5 mm	7.4 mm	435.00 g <sup>2)</sup>
BA03MA -W4F-830	8000 mm <sup>1)</sup>	17.5 mm	7.4 mm	435.00 g <sup>2)</sup>
BA03MA -O2	8000 mm <sup>1)</sup>	17.5 mm	7.4 mm	435.00 g <sup>2)</sup>
BA03MA -R2	8000 mm <sup>1)</sup>	17.5 mm	7.4 mm	435.00 g <sup>2)</sup>

<sup>1)</sup> Maximum LED pitch 200 mm

<sup>2)</sup> Per chain

# Product family datasheet

## Product line drawing



BA03MA -W4F-765, BA03MA -W4F-840, BA03MA -W4F-830, BA03MA -O2, BA03MA -R2

## Temperatures

Product description	Temperature range in operation	Temperature range at storage
BA03MA -W4F-765	-25...70 °C <sup>1)</sup>	-25...85 °C
BA03MA -W4F-840	-25...70 °C <sup>1)</sup>	-25...85 °C
BA03MA -W4F-830	-25...70 °C <sup>1)</sup>	-25...85 °C
BA03MA -O2	-25...75 °C <sup>1)</sup>	-25...85 °C
BA03MA -R2	-25...75 °C <sup>1)</sup>	-25...85 °C

<sup>1)</sup> At the  $T_c$  point

## Lifespan

Product description	Lifespan
BA03MA -W4F-765	50000 h <sup>1)</sup>
BA03MA -W4F-840	50000 h <sup>1)</sup>
BA03MA -W4F-830	50000 h <sup>1)</sup>
BA03MA -O2	50000 h <sup>1)</sup>
BA03MA -R2	50000 h <sup>1)</sup>

<sup>1)</sup> L70/B50 at  $T_c$  70 °C

## Product family datasheet

### Capabilities

Product description	Dimmable	Dimming range
BA03MA -W4F-765	Yes	5...100 %
BA03MA -W4F-840	Yes	5...100 %
BA03MA -W4F-830	Yes	5...100 %
BA03MA -O2	Yes	5...100 %
BA03MA -R2	Yes	5...100 %

### Certificates & standards

Product description	Energy consumption	Energy efficiency class	Type of protection
BA03MA -W4F-765	1 kWh/1000h	A++	IP66
BA03MA -W4F-840	1 kWh/1000h	A++	IP66
BA03MA -W4F-830	1 kWh/1000h	A++	IP66
BA03MA -O2			IP66
BA03MA -R2			IP66

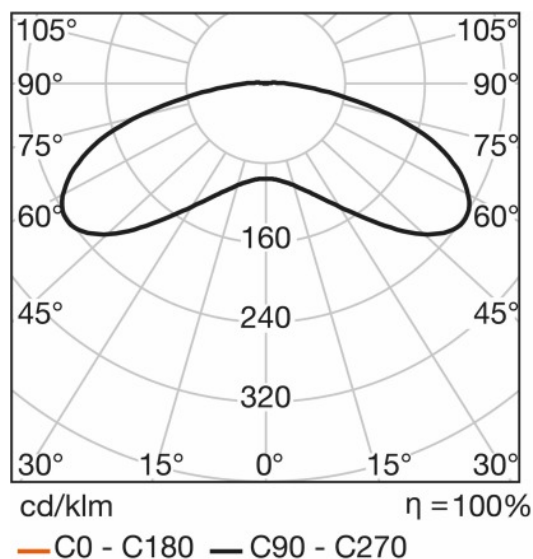
Product description	Standards
BA03MA -W4F-765	Acc. to EN 61347-2-13/Acc. to EN 55015/Acc. to EN 61547/Acc. to EN 61000-3-2
BA03MA -W4F-840	Acc. to EN 61347-2-13/Acc. to EN 55015/Acc. to EN 61547/Acc. to EN 61000-3-2
BA03MA -W4F-830	Acc. to EN 61347-2-13/Acc. to EN 55015/Acc. to EN 61547/Acc. to EN 61000-3-2
BA03MA -O2	Acc. to EN 61347-2-13/Acc. to EN 55015/Acc. to EN 61547/Acc. to EN 61000-3-2
BA03MA -R2	Acc. to EN 61347-2-13/Acc. to EN 55015/Acc. to EN 61547/Acc. to EN 61000-3-2

### Logistical data

Product description	Temperature range at storage
BA03MA -W4F-765	-25...85 °C
BA03MA -W4F-840	-25...85 °C
BA03MA -W4F-830	-25...85 °C
BA03MA -O2	-25...85 °C
BA03MA -R2	-25...85 °C

## Product family datasheet

### Light Distribution



BA03MA -W4F-765, BA03MA -W4F-840, BA03MA -W4F-830,  
BA03MA -O2, BA03MA -R2

### Equipment / Accessories

- Several types of OPTOTRONIC 12 V power supplies available

### Application advice

For more detailed application information and graphics please see product datasheet.

### Additional product information

- Installation of LED modules (with power supplies) needs to be made under consideration of all valid regulations and norms.
- Installation by qualified electrician only.
- Please see the relevant application guides and instructions sheets for more detailed safety and mounting information. Additional information is available on request.
- Complies with IEC/EN 61547
- Complies with IEC/EN 61000-3-2
- Complies with EN 55015, CISPR 15
- Complies with IEC/EN 61347-1
- Complies with IEC/EN 61347-2-13
- LED modules are dimmable by means of PWM (pulse width modulation). It is recommended using the following OSRAM control gears: OPTOTRONIC OT DIM, OT DALI DIM or OPTOTRONIC 24 V power supplies with integrated 1...10 V dimming interface.
- Parallel connection is mandatory for safe electrical operation. Serial connection of LED modules is strongly discouraged.

## Product family datasheet

Unbalanced voltage drop in serial connection can cause hazardous overload and damage the LED module.

- Electrical contact is achieved with the contact cables or the terminals of the module. Please refer to the technical data for maximum number of LED modules that can be operated on one control gear.
- In order to operate OSRAM LED modules safely, it is absolutely necessary to operate them with an electronically stabilized power supply that protects against short circuits, overload and overheating.
- In case other power supplies than OSRAM OPTOTRONIC are used, compliance to the necessary operating parameters (voltage, current, power) has to be ensured.
- Pay attention to polarity! Wrong polarity can cause destruction or malfunction of the module.
- Conducting paths on the circuit board must not be damaged or destroyed during installation.
- The LED module itself and all its components must not be stressed mechanically.
- Operation in or under water is prohibited.
- To avoid mechanical damage, the LED modules have to be attached securely to the intended mounting surface. It is recommended to avoid heavy vibration.
- In case that the LED module is equipped with a pre-mounted double-sided adhesive tape, OSRAM assumes no liability and provides no guarantee for a permanent adherence of the modules to the surface. OSRAM recommends fixation of the modules by means of suitable screws.
- Complies with IEC 61347-1 cl. 18.3, cl. 18.4, IEC 60695-2-10, IEC 60695-11-5, IEC 60695-11-10 (classification V-0)












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### Sales and Technical Support






Sales and Technical Support [www.osram.com](http://www.osram.com)

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### Download Data

File	
	Brochures APP GUIDE BackLED (GB)
	Brochures Technical application guide - IP codes in accordance with IEC 60529 (GB)
	Declarations of conformity EC - Declaration of Conformity BackLED Plus
	Declarations of conformity EC-DoC BackLED S-M-L Plus
	Declarations of conformity EC-Man_DoC BackLED S-M-L Plus
	Installation/Operation notice Installation Instruction BackLED L M S Plus
	Eulumdat BackLED M PLUS BA03MA-W4F-765
	Eulumdat BackLED M PLUS BA03MA-W4F-765
	Eulumdat BackLED M PLUS BA03MA-W4F-840
	Eulumdat BackLED M PLUS BA03MA-W4F-840
	Eulumdat BackLED M PLUS BA03MA-W4F-830

## Product family datasheet

	Eulumdat BackLED M PLUS BA03MA-W4F-830
	Eulumdat BackLED M PLUS BA03MA-O2 ORANGE
	Eulumdat BackLED M PLUS BA03MA-O2 ORANGE
	Eulumdat BackLED M PLUS BA03MA-R2 RED
	Eulumdat BackLED M PLUS BA03MA-R2 RED

### Logistical Data

Product code	Product description	Packaging unit (Pieces/Unit)	Dimensions (length x width x height)	Volume	Gross weight
4008321848284	BA03MA -W4F-765	Shipping carton box 5	450 mm x 258 mm x 146 mm	16.95 dm <sup>3</sup>	3049.00 g
4008321848208	BA03MA -W4F-840	Shipping carton box 5	450 mm x 258 mm x 146 mm	16.95 dm <sup>3</sup>	3049.00 g
4008321848123	BA03MA -W4F-830	Shipping carton box 5	450 mm x 258 mm x 146 mm	16.95 dm <sup>3</sup>	3049.00 g
4008321848383	BA03MA -O2	Shipping carton box 5	450 mm x 258 mm x 146 mm	16.95 dm <sup>3</sup>	3049.00 g
4008321848369	BA03MA -R2	Shipping carton box 5	450 mm x 258 mm x 146 mm	16.95 dm <sup>3</sup>	3049.00 g

The mentioned product code describes the smallest quantity unit which can be ordered. One shipping unit can contain one or more single products. When placing an order, for the quantity please enter single or multiples of a shipping unit.

### Disclaimer

Subject to change without notice. Errors and omission excepted. Always make sure to use the most recent release.