

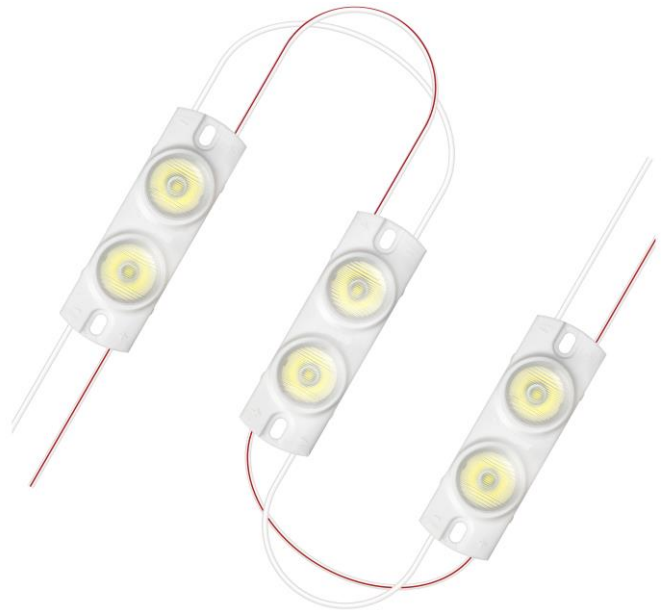
BoxLED M Core Product G5

24 V Sidelighting modules

SPECIFICATION DATASHEET

Product Description

BoxLED M CP G5 family provides high light output flux and the best light effect for outdoor advertising light box sidelighting applications.



Benefits

Upgraded flux output up to 247 lm.
Over mold module structure for reliability.
Special light pattern design for uniformity of sidelighting applications.

Applications

Sidelighting of medium and large light boxes, wall washing or grazing.



Approvals



When not printed on product label, they are under evaluation.

Product Features

- LED chain comprising 32 LED modules connected by flexible cables
- Each LED module contains 2 LEDs
- LED module pitch 302 mm
- Compatible with INVENTRONICS OPTOTRONIC constant voltage drivers / dimmers
- Color consistency of 3 SDCM
- Special sidelighting Lens technology
- 6500K, 4000K and 3000K options available
- IP66 rating
- Lifetime L80B10 50,000 h @ Tc 75°C
- 5 years warranty

TECHNICAL INFORMATION DATA FOR ENTIRE CHAIN

Product Name	Order Code [EAN10]	Color	CCT [K]	Voltage [V DC]	Power [W]	Lum. Flux [lm]	Modules per chain
BX-M-CP-865-G5	6937186140807	Cool White	6500	24	89.6	7725	32
BX-M-CP-840-G5	6937186140821	Neutral White	4000	24	89.6	7910	32
BX-M-CP-830-G5	6937186140845	Warm White	3000	24	89.6	7571	32

TECHNICAL OPERATING DATA FOR SINGLE MODULE

Product Name	CCT [K]	CRI	Power [W]	Flux Output [lm]	Efficacy [lm/W]	Beam Angle [° FWHM]
BX-M-CP-865-G5	6500	>80	2.8	241	86	26°x 16°
BX-M-CP-840-G5	4000	>80	2.8	247	88	26°x 16°
BX-M-CP-830-G5	3000	>80	2.8	237	85	26°x 16°

GENERAL

Dimmable	Yes 1%...100%, via Pulse Width Modulation (PWM)
Binning	Single bin fine white, 3 SDCM
Lifetime	up to 50,000 h (L80B10, @ Tc max)
Warranty	5 years ¹⁾
Ingress protection	IP66 ²⁾
Adhesive tape on backside	Yes
Complementary systems	OPTOTRONIC CV drivers and dimmers, INVENTRONICS LMS
Certifications	CE, ENEC, c-UR-US, BIS ³⁾

¹⁾: Five-year warranty is provided only when the module is installed with proper screws or other suggested installation methods (e.g. mounting profile) on back plane.

²⁾: The LED modules must not be operated in places which are directly exposed to atmospheric conditions. For outdoor applications, hence the LED module must be protected by appropriate sealed enclosures or covers. Operation in or under water is prohibited.

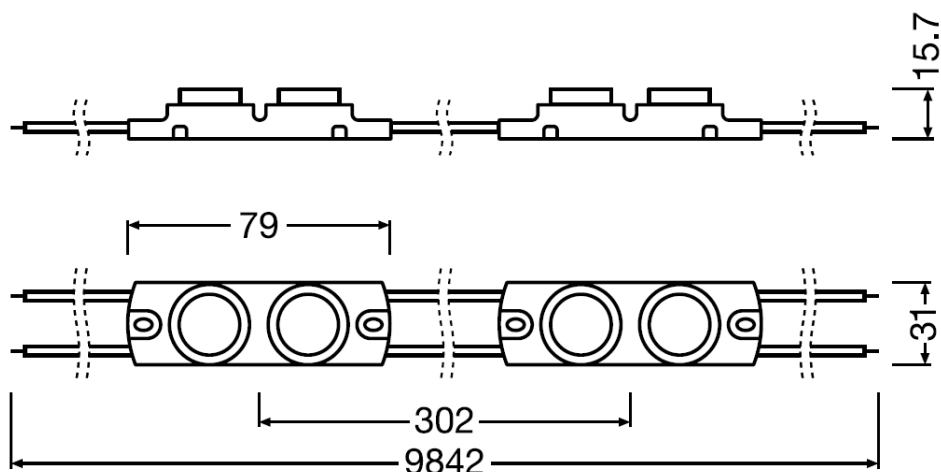
³⁾: When not printed on product label, they are under evaluation

OPERATING CONDITIONS

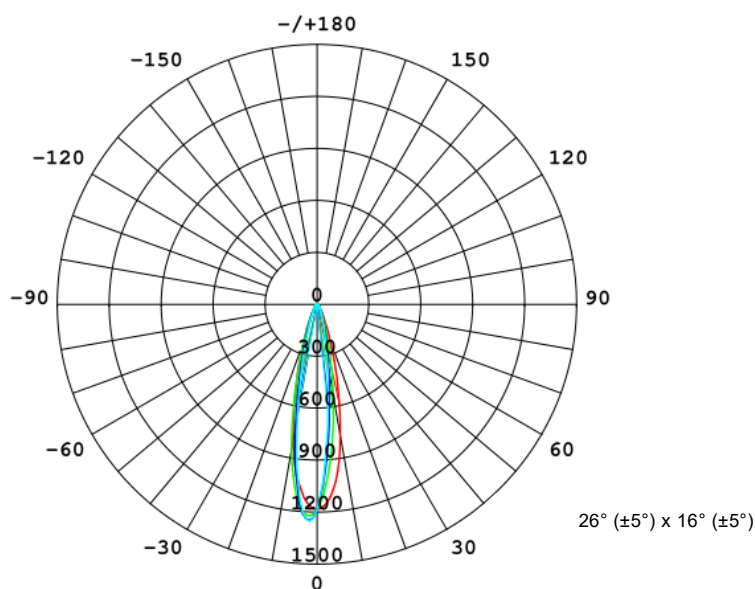
Operating temperature Tc-Max (measured at Tc-Point) [°C]	-25 ... +75
Storage temperature [°C]	-25 ... +85
Voltage range [V DC]	23 ... 25 SELV

- Exceeding maximum ratings for operating and storage temperature will reduce the expected lifetime or destroy the LED modules.
- Exceeding maximum ratings for operating voltage will cause hazardous overload and will likely destroy the LED modules.
- The temperature of the LED modules must be measured at the Tc-point according to EN60598-1 in a thermally constant status with a temperature sensor or a temperature sensitive label. For exact location of the Tc-point see product user instruction.

MECHANICAL DRAWINGS AND DIMENSIONS



LIGHT DISTRIBUTION



LAYOUT GUIDELINE

Product Name	Box depth [mm]	Suggested module pitch [mm] with translucency material of:		
Diffuser Type		Acrylic	Acrylic	Acrylic
Target Intensity		300Cd/m ²	350Cd/m ²	420Cd/m ²
Translucency		41%	41%	41%
BX-M-CP-8xx-G5	100	111	100	83
	180	100	83	n.a.
	260	83	n.a.	n.a.

Suggestions based on box dimensions of xx m x yy m, with modules positioned in the middle of box frame.

This guideline is only an approximation. The actual luminance and uniformity results can deviate due to many different application parameters, e.g. including but not limited to reflection of box inner surface, overall box/letter dimensions, optical parameters of the light emitting surface, ... etc.

INVENTRONICS suggests testing the module performance in your eventual project design to make sure of brightness, uniformity and final colour appearance.

INVENTRONICS professional team is available for final layouting suggestions. Contact INVENTRONICS support team or your sales representative.

SAFETY INFORMATION

- The LED module itself and all its components must not be mechanically stressed.
- Assembly must not damage or destroy conducting paths on the circuit board.
- To avoid mechanical damage, the LED modules should be attached securely to the intended substrate. Heavy vibration should be avoided.
- Once modules are glued by means of their tapes on the application surface, modules must not be removed and re-located. This would lead to mechanical stress and IP rate may not be granted as well as lifetime.

The LED module incorporates no protection against short circuits, overload or overheating.

In order to drive INVENTRONICS LED-Modules safely, it is absolutely necessary to operate them with an electronically stabilized power supply protecting against short circuits, overload and overheating.

OPTOTRONIC® electronic control gear complies to all relevant standards and guarantees safe operation.

For dimming applications attention should be paid to specific references in "OPTOTRONIC® Technical Guide".

To also ease the luminaire/installation approval, electronic control gear for LED or LED modules must carry the CE mark.

In Europe LED modules declaration of conformity must include the following standards:

CE: IEC/TR 62778, IEC/EN 61347-1, IEC/EN 60529, IEC/EN 62031, IEC/EN 60598-1, IEC/EN 61347-1, IEC/EN 61547, IEC/TR 62778.

Please see the relevant application guides for more detailed information.

- Installation of LED modules (with power supplies) needs to be made with regard to all applicable electrical and safety standards.
- Observe correct polarity! Incorrect polarity will lead to no light emission and may cause damage of the LED module.
- Parallel connection is highly recommended as safe electrical operation mode. Serial connection is not recommended. Unbalanced voltage drop can cause hazardous overload and damage the LED module.
- Electrical contact is achieved with the contact cables.
- Cutting within the chain is only allowed between the wiring of the modules.
- Pay attention to ESD steps when mounting the module.
- When using power supplies other than OPTOTRONIC® LED drivers, in order to ensure continuous safe operation, the input voltage at modules has to be 23...25 V.
- LED modules are dimmable by means of PWM (pulse width modulation). It is recommended using OPTOTRONIC® 24 V dimmable drivers or following INVENTRONICS constant voltage dimmers: OPTOTRONIC® OT DIM, OTi DALI DIM 1-4CH D, OT BLE DIM.
- The LED modules must not be operated in places which are directly exposed to atmospheric conditions. For outdoor applications, hence the LED modules have to be protected by appropriate sealed enclosures or covers. Operation in or under water is prohibited.
- Each LED module is equipped with a pre-mounted double-sided adhesive tape which allows optional or additional mounting aid. Due to varying properties of adherents and multiple external influences during the operation of the modules, INVENTRONICS assumes no liability and provides no guarantee for a permanent adherence of the modules to the surface. INVENTRONICS recommends fixation of the modules by means of suitable screws or compatible INVENTRONICS mounting profile.
- To ensure uniform illumination, a reflective matt white surface is generally recommended for all internal frame walls and back panels of light boxes.
- This product is considered to be a "containing product" in the sense of Regulations (EU) 2019/2020 and (EU) 2019/2015.
- Tolerances of the reported values, are according to LED Modules Performance standard IEC/EN 62717
- In general, the replacement of the contained light sources without permanent damage to the product with the use of common available tools is possible in the final application when they can be dismantled from the installation environment and substituted for the necessary number of light sources restoring its full electrical/mechanical/thermal/optical functionality by means of a professional installer.
- Dismantling of light sources from containing products at end of life: Containing products with light sources which are scalable in length can be cut to the length of the contained light source and if applicable mechanically detached from protective and/or optical covers. Containing products shall be separated from building material and/or from other additional mounting accessories by means of a professional installer. Separate control gear and light sources must be disposed of at certified disposal companies in

accordance with Directive 2012/19/EU (WEEE) in the EU and with Waste Electrical and Electronic Equipment (WEEE) Regulations 2013 in the UK. For this purpose, collection points for recycling centres and take-back systems (CRSO) are available from retailers or private disposal companies, which accept separate control gear and light sources free of charge. In this way, raw materials are conserved and materials are recycled.

ORDERING CODES

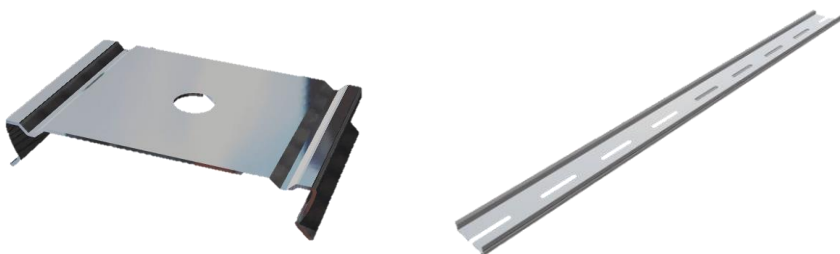
Description	EAN10*	EAN40	S-UNIT** (pcs)
BX-M-CP-865-G5	6937186140807	6937186140814	8
BX-M-CP-840-G5	6937186140821	6937186140838	8
BX-M-CP-830-G5	6937186140845	6937186140838	8

* EAN 10: Ordering number per single sale unit bag

** S-Unit: EAN10 number per shipping unit (EAN40)

ACCESSORIES

Description	EAN10*	EAN40	S-UNIT** (pcs)
BX-MP-M-CP-G5-2M	6937186140548	6937186140555	50
BX-CLIP-M-G5	6937186140562 (100 pcs)	6937186140579	10



SALES AND TECHNICAL SUPPORT

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