

BackLED AREA G1 900 540x270 TW

Tunable White 24V Constant Voltage

LED rigid board

The perfect choice for fast installation on dynamic white large and shallow backlit areas, easily fitting any measures and shape of box with great uniformity results.

Benefits

Uniformly illuminate low depth ceilings and boxes down to 40mm at high luminance¹⁾

CCT range 2700K ... 6500K with CRI >90

Very good color consistency (<3 SDCM)

Reduced installation time compared to other tunable white light sources for low depth backlighting

2 x Connectors on board for easy jumper-connections (up to 4 pcs in series)

Fit all the spaces by splitting in 4 usable parts, cutability between each finger-bar possible

Easily shapeable by cutting finger-bars where marked



L	540 mm	Length
B	270 mm	Width
H	3 mm	Height

Applications

Hospitality / restaurants – luminous ceilings

Shops – indoor signage, luminous ceilings

High-end Residential – luminous ceilings, custom luminaires

Approval marks



Product Features

- Easy positioning by means of 7 screws
- Quickly cover dynamic white large areas
- Fit standard sized luminaires
- Easily cuttable between finger-bars²⁾
- Cut finger-lines on specific marks³⁾
- Connect up to 4 tiles in series
- 0,1~100% dimming with OTi TW drivers⁴⁾
- Wide T_a range -25 / +55 °C
- 60'000 h @ T_a 55°C (L80/B10)
- 5Y guarantee

¹⁾: different materials and transmittance properties or multi-layered diffusers may lead to different - or even lower - depths for optimized uniformity

²⁾: consumption of cut item vary according to cutting position

³⁾: nippers are suggested. Cutting finger-lines don't reduce item consumption. See next pages for details.

4): this product must be driven by OPTOTRONIC DALI DT8 power supply or OT Wi devices with TW profile

Technical Operating Data

Product	CCT range [K]	CRI	Voltage [V _{DC}]	Luminous flux [Lm]*	Max Power [W]*	Actual power consumption [W]*	Efficiency [lm/W]
BA-AR-G1 900 540x270 TW	2700-6500	>90	24	925 ¹⁾	17,6 ¹⁾	8.8 ¹⁾	105 ¹⁾

Channel	CCT [K]	Power [W]*	Luminous flux [Lm]*	Efficiency [lm/W]
WW	2770	9,0 ¹⁾	900 ¹⁾	100
CW	6918	8,6 ¹⁾	950 ¹⁾	110

*: on middle CCT (approx. 4500K) at max output level (100%). Due to the special conditions of the manufacturing processes of LED the typical data of technical parameters can only reflect statistical figures and do not necessarily correspond to the actual parameters of each single product which could differ from the typical data.
Cutting between finger-bars changes functioning product power consumption; cutting of finger-bars don't change product power consumption.
All values are tested at T_a 25 °C

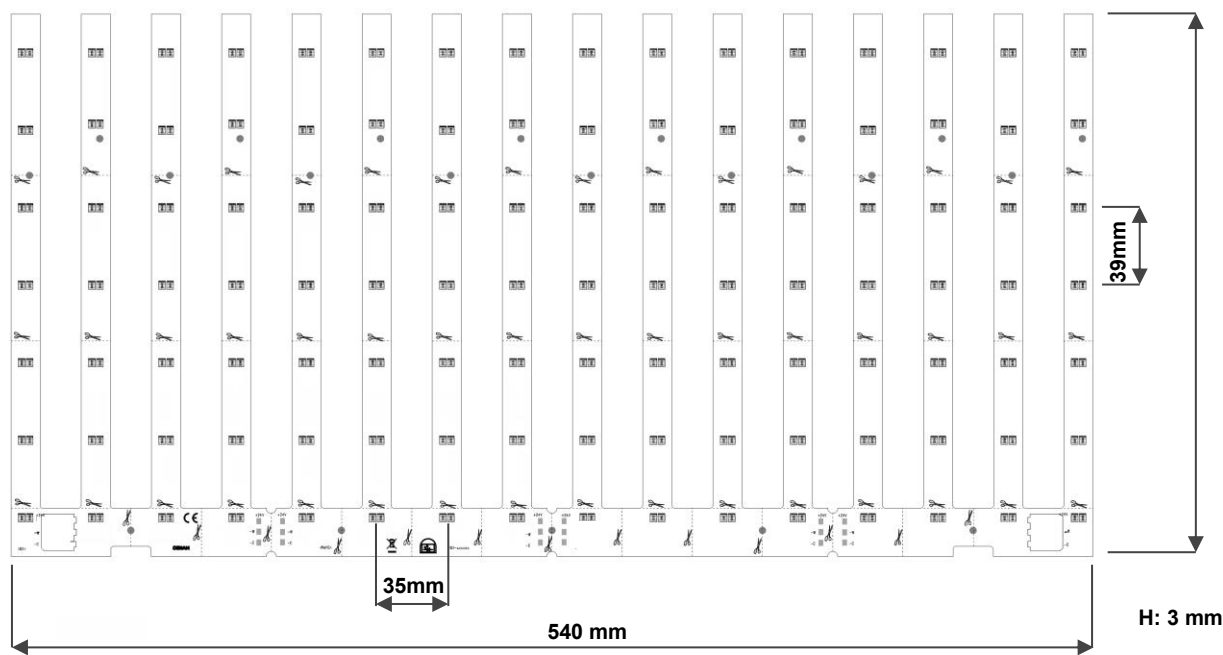
¹⁾: this product must be driven by a DALI DT8 power supply or INVENTRONICS BLE devices with TW lamp profiles to keep lumen output flux steady across CCTs and the consumption among recommended limits. The Max Power declared value is the driver perceived load for each board, but due to DT8 PWM behavior of TW drivers or BLE lamp profiles, at middle CCT the actual consumption from the mains will be halved.

Minimum / Maximum Ratings

Product	Max operating Temperature at Tc-Point [°C]*	Operating ambient Temperature [°C]*	Storage Temperature [°C]*	Voltage Range [V _{DC}]	Reverse Voltage [V _{DC}]
BA-AR-G1 900 540x270 TW	75	-25 / +55	-30 / +80	23 - 25	25

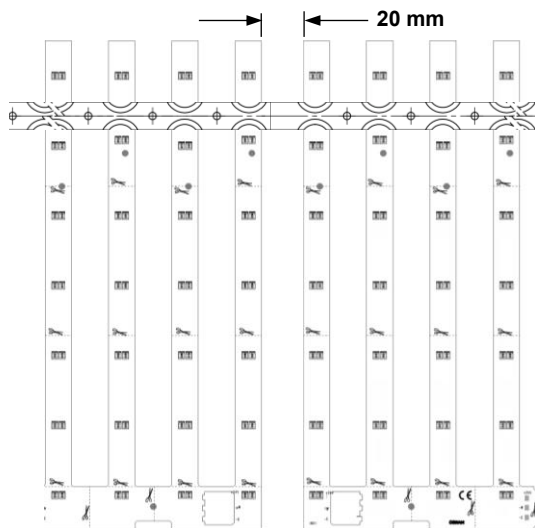
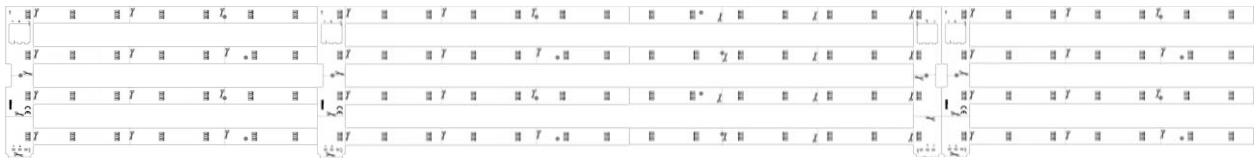
*) Exceeding maximum ratings for operating and storage temperature will reduce expected lifetime or destroy the LED Modules.
Exceeding maximum ratings for operating voltage will cause hazardous overload and will likely destroy the LED Modules.
The temperature of the LED modules must be measured at the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

Dimensions



Boards installing / spacing

Horizontal boards installation will keep LED pitch constant by leaving no space between single boards.

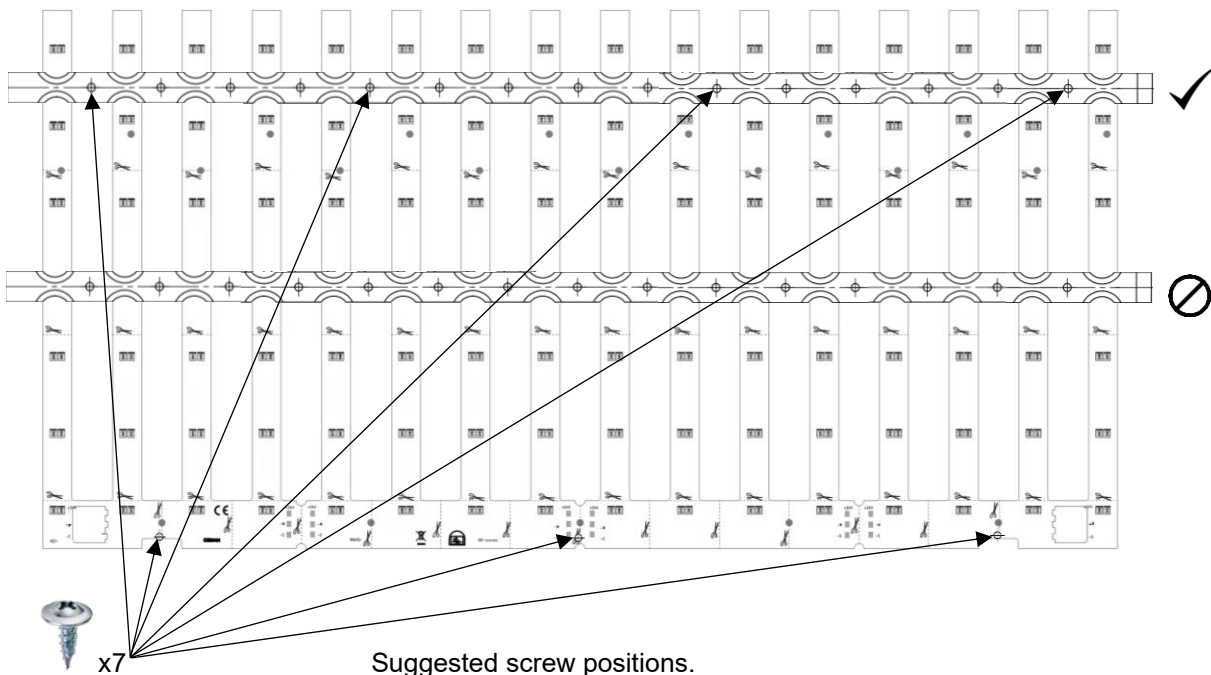


Vertical boards installation will keep LED pitch constant by leaving 20mm space between single boards.

The provided holding bar will ensure correct positioning of boards and reduce the installation time by using a minimum quantity of screws for placing the products on the installation surface.



Place the holding bar where the board is free of components. Do not place the holding bar on top of LEDs or other electrical components of the product.



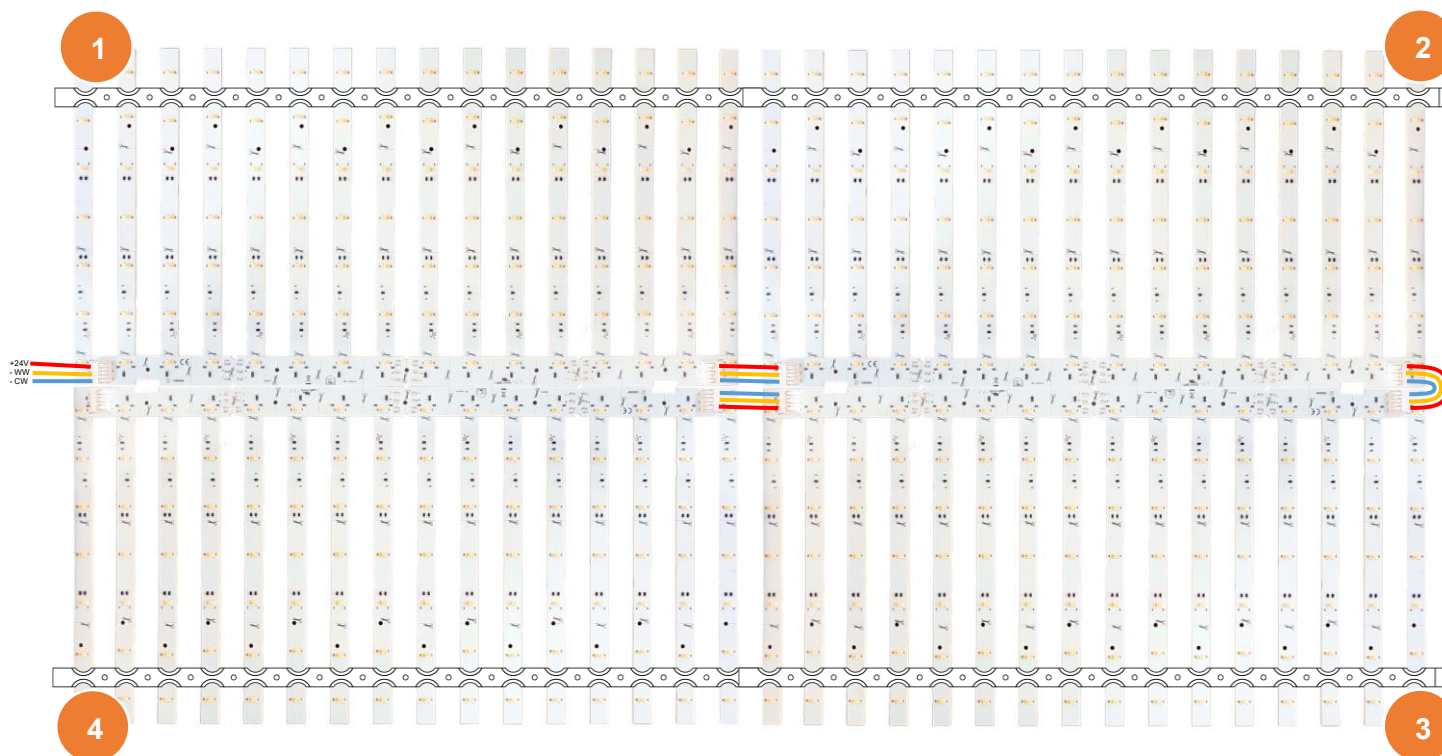
A minimum of 7 screws are sufficient for installing one entire board with the use of the holding bar. Flanged headed screws are suggested in order to distribute the pressure generated by screw tightening. Use the minimum sufficient torque to tighten the screw while installing the product. Excessive torque may crack the board, permanently damaging it.

Up to 8 entire boards (or equivalent) can be connected in series by means of provided connectors. Free connection pads are available for board segments soldered connections.

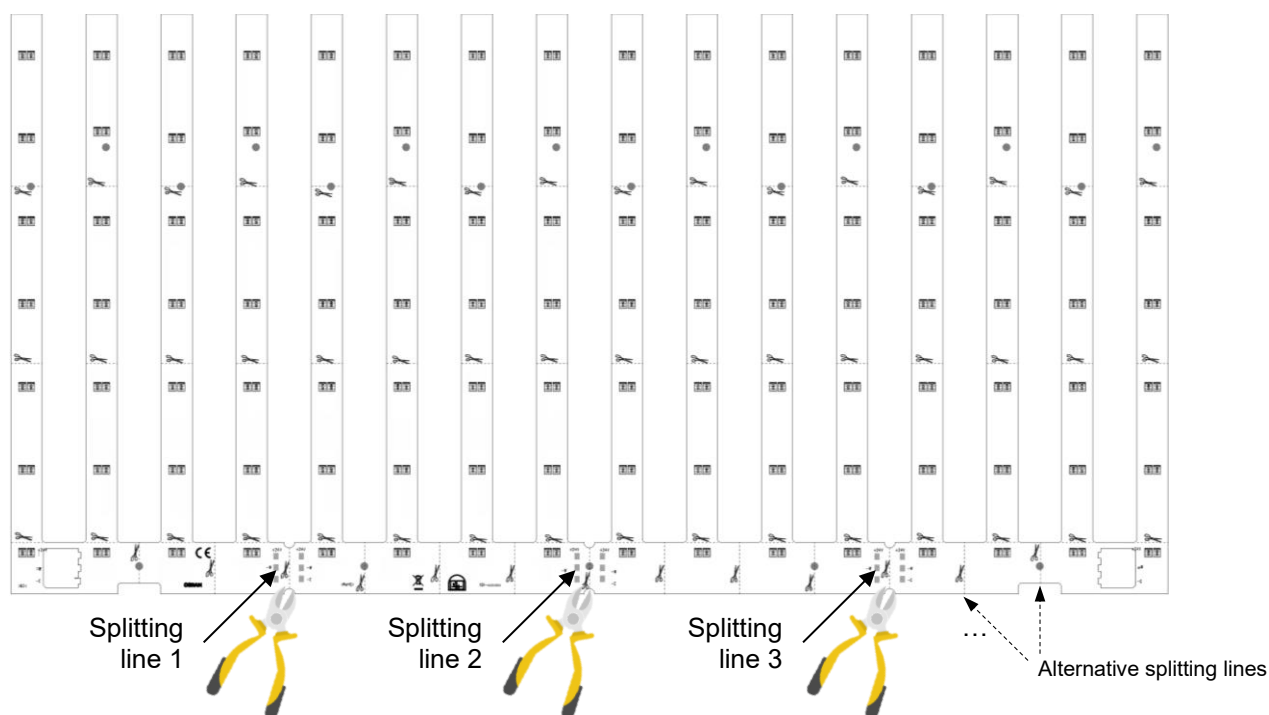
Cable and wire preparation

- Input wires cross section: 0.5 ... 1,5 mm² / 20 ... 16 AWG (peeling of 7 ... 10 mm)

See following scheme for assembly, connection and wiring information.



Cutting specifications

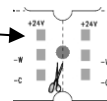


BackLED AREA board is designed to be split in 4 re-usable separate smaller boards, to be used where small areas of the luminaire are left uncovered by entire boards.

Boards can be cut (nippers are necessary) on marked cutting lines. Middle boards can be re-used and can be connected by means of soldering pads on the boards.

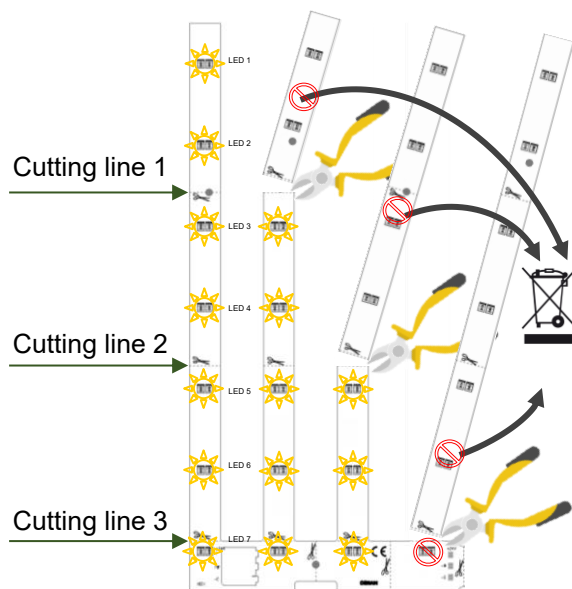
Boards can be also cut between each finger-line (nippers are necessary).

In this case and under certain cutting conditions, remaining boards may not be re-usable as soldering pads may not be available for further connections.



Split boards will reduce consumption proportionally.

Holding bar can be cut according to board splitting.



Finger-lines are composed by a 7 LED couples in series.

Finger-lines can be cut on marked cutting lines (nippers are suggested for cleaner cutting lines).

Cutting lines 1 and 2 allow remaining LEDs connected to main board to continue working (LED 3*, 4*, 5, 6, 7). Cut offs can't be re-connected to the main board and must not be re-used. Please observe local regulation for electrical waste.

*: LED 3 and 4 not working when board is cut at line 2

Boards with finger-lines cut on cutting lines 1 and/or 2 will keep power consumption unaltered.

Finger-lines cut at line 3 will stop the last remaining LED 7 couple on the board from working.

Use of the holding bar is suggested when finger-lines are used entirely or cut at cutting line 1. When fingers are cut at cutting line 2 there is no need to install the holding bar.

Safety information

- The LED board 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.
- Installation of LED modules (with power supplies) needs to be made with regard to all applicable electrical and safety standards.
- Classification acc. to IEC 62031 - Built-in
- Observe correct polarity! Incorrect polarity will lead to no light emission and may cause damage of the LED board.
- Parallel connection is highly recommended as safe electrical operation mode. Serial connection is limited to 8 boards or equivalent. Unbalanced voltage drop can cause hazardous overload and damage the LED module.
- Electrical contact is achieved with the contact cables.
- A maximum of 13 boards can be operated on one OPTOTRONIC® OT SLIM 250.
- A maximum of 8 boards can be operated on one OPTOTRONIC® OT SLIM 160.
- A maximum of 5 boards can be operated on one OPTOTRONIC® OT SLIM 100.
- A maximum of 16 boards can be operated on one OPTOTRONIC® OTi DALI 160 (in DT8 mode).
- A maximum of 8 boards can be operated on one OPTOTRONIC® OTi DALI 80 (in DT8 mode).
- Cutting of board is only allowed where specifically marked.
- Pay attention to ESD steps when mounting the module.
- LED boards are dimmable by means of PWM (pulse width modulation). It is recommended using the following OPTOTRONIC® control gears: OTi DALI drivers in DT8 – TW operation, OT DALI DIM 1-4CH D (in DT8 – TW operation), OT Wi DIM 5CH CA (in TW or 2xTW profile), OT Wi 50/80/160.
- The LED modules must not be operated in outdoor applications or in possible presence of condensation
- To ensure uniform illumination, a reflective matt white surface is generally recommended for all internal frame walls and back panels of light boxes.

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 gears comply to all relevant standards and guarantee 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 62471, IEC 60598-1, EN 60529, EN 62031, EN 55015, EN 61547.

Please see the relevant application guides for more detailed information.

Ordering information

Product name	EAN10	EAN40	S-Unit
BA-AR-G1 900 540x270 TW	6937186131584	6937186131591	16

Accessory information

Product name	EAN10	EAN40	Pcs
BA-BAR 16PCS KIT	6937186140500	6937186140517	16

Disclaimer

Subject to change without notice. Errors and omission excepted. Make sure to use the most recent release. All values are average typical and cannot be used as reference for compliance tests. Always refer to the official data on web site: www.inventronics-light.com

* The color uniformity shown is a result of internal theoretical and statistical evaluation under specific conditions; it is intended to provide our customers with an estimation of color uniformity in real applications.

Due to variability of each single chip and statistical distribution, this indication cannot be considered as legally binding. The guaranteed color consistency claim can be found inside the official data sheets of every product.

** Always ensure that Tc will not exceed the maximum allowed value.

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The logo for Inventronics, featuring the word "inventronics" in a bold, orange, sans-serif font.