

Case Study. Velarium for TheoPoint shop in the Barilla shopping center Parma.

Backlight the display counters of a high-tech computer store.

The need of DFN customer, a specialized contractor for shop furnishing, was backlighting the top of 5 display counters in a computer shop located inside the Barilla shopping Center in Parma. The main issue for this project was the delivery time. The contractor, in fact, needed the display counter backlighting solution in just few days, in order to achieve the project schedule and shop opening.

The 5 display counters are made of: a wood bearing structure a dedicated compartment where place the backlighting lamp (under the glass top) and some other compartments used to store the goods. In the middle of display counter there is a door made of glass that provides the way to power and link the phones, tablets and computers on display.



TheoPoint high-tech computer shop.

The backlighting intensity of 5 display counters can be controlled through a remote knob placed in a dedicated compartment, allowing the best settings for any ambient light condition.

At glance

- 5 display counters (14 mq tot)
- No reflective back
- Velarium™ LED curtain backlight
- Overall weight 10 Kg
- Light flux 165000 lm maximum
- CCT 4000K, CRI >80
- Total power consumption 1500 Watt
- Remote dimming for each display counter

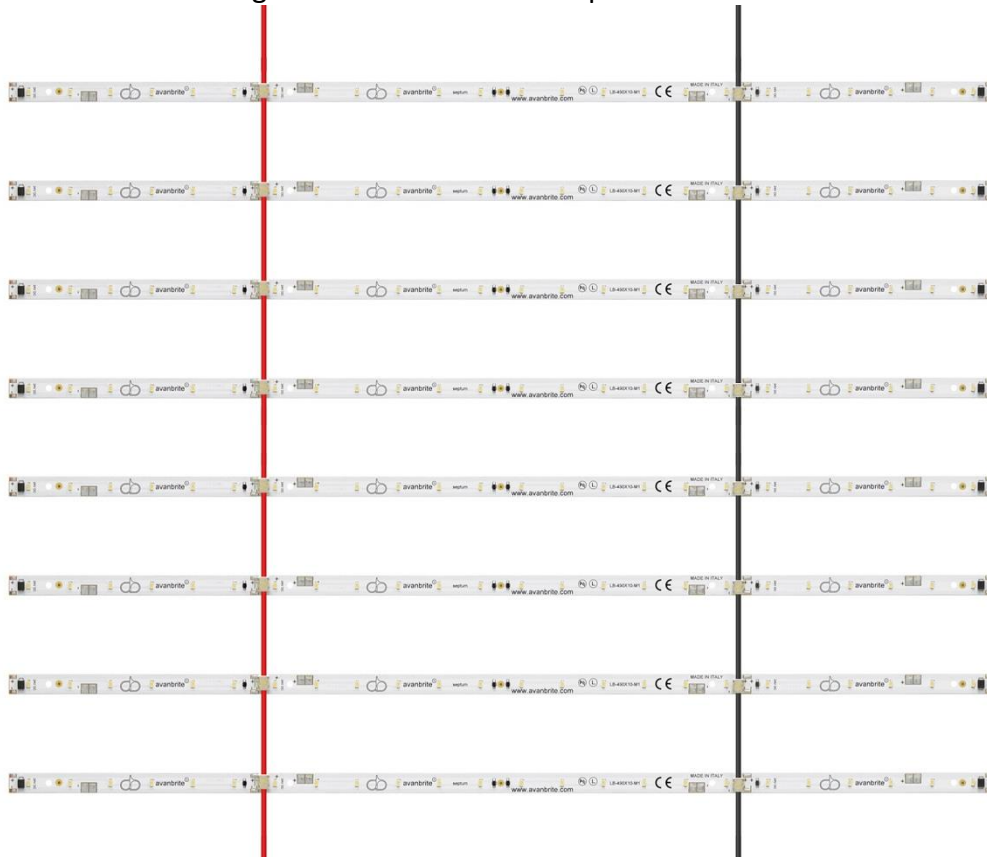


The Velarium™ backlighting lamp installed in the display counter.

Another issue was the height of dedicated compartment for backlighting lamp placement: only 5 cm. Not many if compared to 2,5cm thickness of display counter top and surface finishing: opaque white.

DFN: “Today delivery dates for furnishing projects in the retail business are so tight for this reason it is fundamental to rely on reliable suppliers. Thanks to Velarium LED modules we achieved our goal.”

The AvanBrite proposal was the Velarium™ LED curtain as backlighting lamp. The Velarium™ LED curtain is a backlighting module consisting of a set of rigid LED bars connected to two electrical wires, which provide power as well as structural support. The few space available between the backlighting lamp and display counter top surface has requested a pitch (also customizable) between bars of 5 cm. The light emitted from display counters is intense and homogeneous without any glare or halo, this has been achieved thanks to wide emission angle of LED used and short pitch between LEDs: 2 cm.



The Velarium™ LED curtain module.

Even if the shapes of display counters are rectangles, the high modularity of Velarium™ allowed a big time reduction during the installation. The length of bars which is made Velarium™ is 49 cm, but can be easily divisible as 12,5 cm, 24,5 cm and 26,75 cm: it allows to use as much space as possible in the dedicated compartment for backlighting lamp, getting a homogeneous light emission without dark areas.

The advantage of Velarium™ solution compared to classic LED panels is no need for custom PMMA and aluminum tray (which is made a LED panel) in order to cover and fit all the surface available.

The contractor, once placed the purchasing order to AvanBrite, received within a few days of ordering curtain LED modules already to length and width required. Additional fine settings however are still possible in field.

During the pre-installation phase the contractor, once received the goods, just unrolled and wired the Velarium™ modules as described in the provided electrical diagram.

The LED bars of which is made the Velarium™ module have been fixed to the shelf of dedicated compartment through double-sided tape and screws. The horizontal installation

and intrinsic light weight of Velarium™ didn't require brackets or fixture normally used to keep in place the classic large LED panels.



Functional test at DFN facility.

The electrical diagram provides a balanced distribution of 15 power supplies 150 Watt rated. Each power supply is wired in series with a dimmer to allow a PWM dimming of Velarium™ modules voltage supply.

Dimmer layout provides a master-slave topology: the output of a dimmer defined master, controlled through a potentiometer, is "copied" by slave devices. It allows a parallel and simultaneous control of all 5 display counters in the shop.

Due to total amount of power required the power supplies used are specific to LED constant voltage driving with PWM feature: no noise at audible frequencies is guaranteed.



TheoPoint high-tech computer shop.

The LED module Velarium™ allowed to respect the project schedule thanks to ease of installation and support provided.





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