



“Transforming a **technological promise** into an **industrial reality**.”

An interview with **Félix Marchal**, *Chief Sales & Marketing Officer at Aledia*, on the future of microLED technology and its place on the screen market of tomorrow and after tomorrow.

How is the evolution of screens guiding your strategic choices?

Félix Marchal —

Our approach is based on the conviction that microLEDs can be fitted into all types of screens, regardless of their size. The current trend is to dematerialize objects and functionalize screens, inserting contextual information directly into image displays. This is the case, for example, in augmented reality glasses or car dashboards. Another orientation involves using microLEDs to replace copper: between chips in optical communications, and between racks in digital systems. Such are the two pillars of our strategy.



Aledia in a few figures

Date launched: 2011

Location: Champagnier (Isère department, France)

Offer: microLEDs for new generation screens

Technology: 3D and silicon nanowires
www.aledia.com

On which innovation priorities are you working?

F. M. —

We are focusing on two priorities, efficiency and power consumption. The first one is really the crux of the matter! To equip screens with ever-smaller and lighter screens that also produce maximum resolution, microLED sizes must be reduced, all the while making sure that they remain as efficient as possible. The second priority is about power consumption. A microLED optical link on a CMOS, and encapsulated with a transmitter/receiver, consumes up to 50% less than current architectures, with a reliability comparable to that of copper, an extended range, and an ultra-high, scalable bandwidth, thanks to dense, high-speed optical channels. The challenge is to use these sources of light punctually, and to increase their lighting frequency, in order to maximize data exchange rates. The CEA provides differentiating technological strengths that recently allowed us to offer a product boasting unique features.

Could you tell us a few words about your news?

F. M. —

At the beginning of the year, we released FlexiNova®, a high-voltage microLED platform designed to be integrated into high-performance screens, both small and large, using small-sized chips. This achievement was made possible thanks to support from

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the CEA and the France 2030 program. It transforms the technological promise of microLEDs into an industrial reality. In fact, it is currently being used by several leading screen stakeholders to make sure that performance claims are the same in operation conditions.

In concrete terms, how will our everyday life be changed by these technologies?

F. M. —

Imagine that you will no longer have a physical screen in front of you, and that everything will be in your glasses. These glasses will allow you to work, drive, be entertained, or to interact with your environment. Given the acceleration of technological innovations, which could make interactions a lot more fluid thanks to artificial intelligence, this could become a reality within the next ten years. In this period of change, microLEDs will be a market strength.

Finally, what is your view on your relationship with the CEA?

F. M. —

It's an extremely supportive view! The CEA helps us explore and evaluate new concepts by conducting trials and tests. It's crucial for enriching our knowledge and our mastery of technologies, as evidenced by the launch of FlexiNova®. ●