

lumiblade

insider

The OLED Lighting Magazine

Issue 02/2016

The philosophical approach

Discussing OLED technology and design philosophy with Design Group Italia

“Truly listen, then question and respond appropriately”

Jason Bruges about his design approach

The irresistible force of simplicity

Slender design by Inertia Projects

Focus:
Design

the details
are not
the details.
they make
the design.

Charles Eames

Dear reader,

OLEDs have done more than make previously unimagined technical solutions possible – since they appeared on the global lighting stage, they have been setting designers' pulses racing too. They are adjustable and adaptable and as capable of making a spectacular appearance as of providing more restrained, barely perceptible lighting.

That is why we have dedicated this issue of Lumiblade Insider to designers. We have followed the most incredible projects and great ideas through the realm between unbridled creativity and technical possibilities. We present an OLED installation with a “welcome function” on a scale never seen before (page 38–41) as well as a wonderfully elegant and simple bedside lamp (page 12–15), to mention only the perhaps most contradictory projects. However, the journey it takes to get to a finished product is often just as exciting as the product itself. Learn more about developing and discarding ideas, looking at things holistically, and waiting for the right moment on pages 22–23.

For the American company OLEDWorks, the right moment for a commitment in Aachen came in 2015 when Philips decided to separate itself from the OLED division. The Aachen-based Lumiblade team and OLEDWorks will be burning a new trail together from November 2015 (page 16–21). The teams on both sides of the Atlantic share a strong passion for OLEDs and the resulting synergies will certainly lead to exciting new innovations.

But enough introduction. We wish you an enlightening read about OLEDs and innovation and hope you gain new insights and ideas.

Your Lumiblade and OLEDWorks team

#02/2016



12



28

06 **Is this how you work?**
The designers featured in this issue offer us an exclusive look at the way they work

08 **Lines are the new curves**
The C7OLED by T*RED and Romolo Stanco

12 **The irresistible force of simplicity**
Slender design and careful manufacturing take time – and are well worth the wait in the case of products by British designer David Oxley

16 **OLEDWorks**
There is something special about the only US-based company that manufactures OLED lighting panels

22 **The philosophical approach**
Discussing the potential of OLED technology in the Internet of Things and design philosophy with Design Group Italia's Carlo D'Alesio

26 **Dedicated to the (organic) diode**
Dennis McCarthy: the internationally known OLED evangelist

28 **“Truly listen, then question and respond appropriately”**
We spoke to Jason Bruges, one of the first lighting-designers to work with OLEDs, about his design approach

38 **“OLED for lighting is an inevitability”**
hatec collaborates with Berlin architects Eike Becker and project developer Groß + Partner

42 **Floating light for a luxury yacht**
Promotech worked with Rossinavi and the interior yacht designer Alessandro Pulina to create an undulating ceiling

46 **The universe of Dieter Rams**
10 principles of good lighting

48 Preview

50 Imprint



38



42

Is this how you work?

The designers featured in this issue offer us an exclusive look at the way they work. We discovered, perhaps unsurprisingly, that designers' workspaces are as individual as their products. Here's a small peek behind the creative curtain.



Romolo Stanco, Smarrita Camilla Architectural Workshop, Piacenza, Italy, C7OLED (T^{RED})
 "I work everywhere since my mind never stops. These pictures capture the moment I first saw the C7OLED prototype. Creativity lies in observing, questioning, and reworking my own ideas in a non-linear process that also involves other professionals hundreds of kilometers away."

Jason Bruges Studio,
 Green Mews, England,
 London, United Kingdom



"My favorite creative space is my studio where I'm surrounded by my very talented multidisciplinary team - it consists of the following disciplines: Artists, architects, lighting designers, electrical engineers, industrial designers, mechanical engineers, and creative technologists."



"Why doesn't that work?" Andreas Frei, Staufen, Germany, working on the first drafts for the new OLED lights in cooperation with hatec.

Lines are the new curves

The C7OLED by T°RED and Romolo Stanco

One thin, continuous line. A carbon-fiber overhang housing two Lumiblade OLEDs. A base made of solid marble. The C7OLED, Romolo Stanco's new design for T°RED and Lumiblade OLED Lighting, is formal, down-to-earth, exceptional, and deceptively simple.

The composite materials were not chosen for their appearance but their sophisticated properties. They are what makes it possible to integrate OLEDs into a geometrically balanced object using a skillful combination of weight and tension. The 89-centimeter overhang seemingly separates the lamp from the support, transforming it visually into a hanging light.

However, the quest for technical and aesthetic balance is far removed from the ostentatious show of hi-tech materials and components. The lamp con-

ceals the complexity of the components within a single element: The structure, wiring, light source and ergonomic design have all been integrated into a four-millimeter-thick wafer of molded carbon fiber using a patented process. The marble base is another example of modern alchemy that combines materials, centers of gravity, functions, and electronics. While providing the lamp with stability, the base also houses a sensor that adjusts the strength of the light when the marble surface is touched.

We spoke with Romolo Stanco, designer of the C7OLED, and Erica Marson, general manager at T°RED, about design.

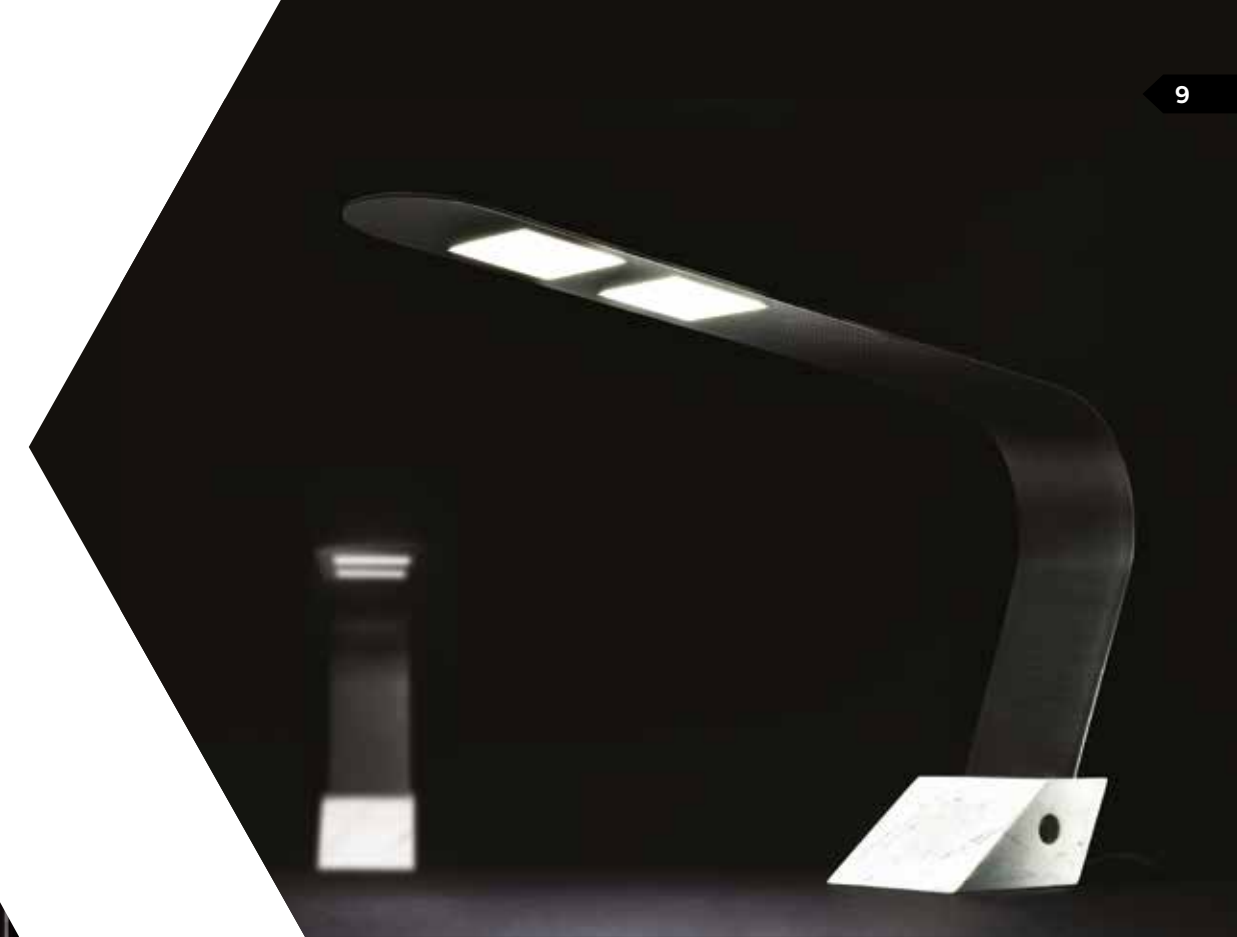


Romolo Stanco, Designer

Romolo, can you tell us a bit about yourself and your work?

Romolo Stanco: It's simple: I design things. I switched from studying classics to physics and then made a degree in architecture. However, passion and curiosity led me to start my career at the border between creativity and research – between intuition and experimentation. I can't resist the challenge of matching what doesn't exist today with what we desire. I don't work toward meeting an expressed or latent need but toward a vision of the future in which nothing is as we imagine today.

C7OLED is a perfect manifesto for what I'm trying to achieve: It is not a nice table lamp that incorporates new technology but an entirely new way to use light – a way that no one imagined before. My job is to make it real, concrete ... and maybe attractive too!



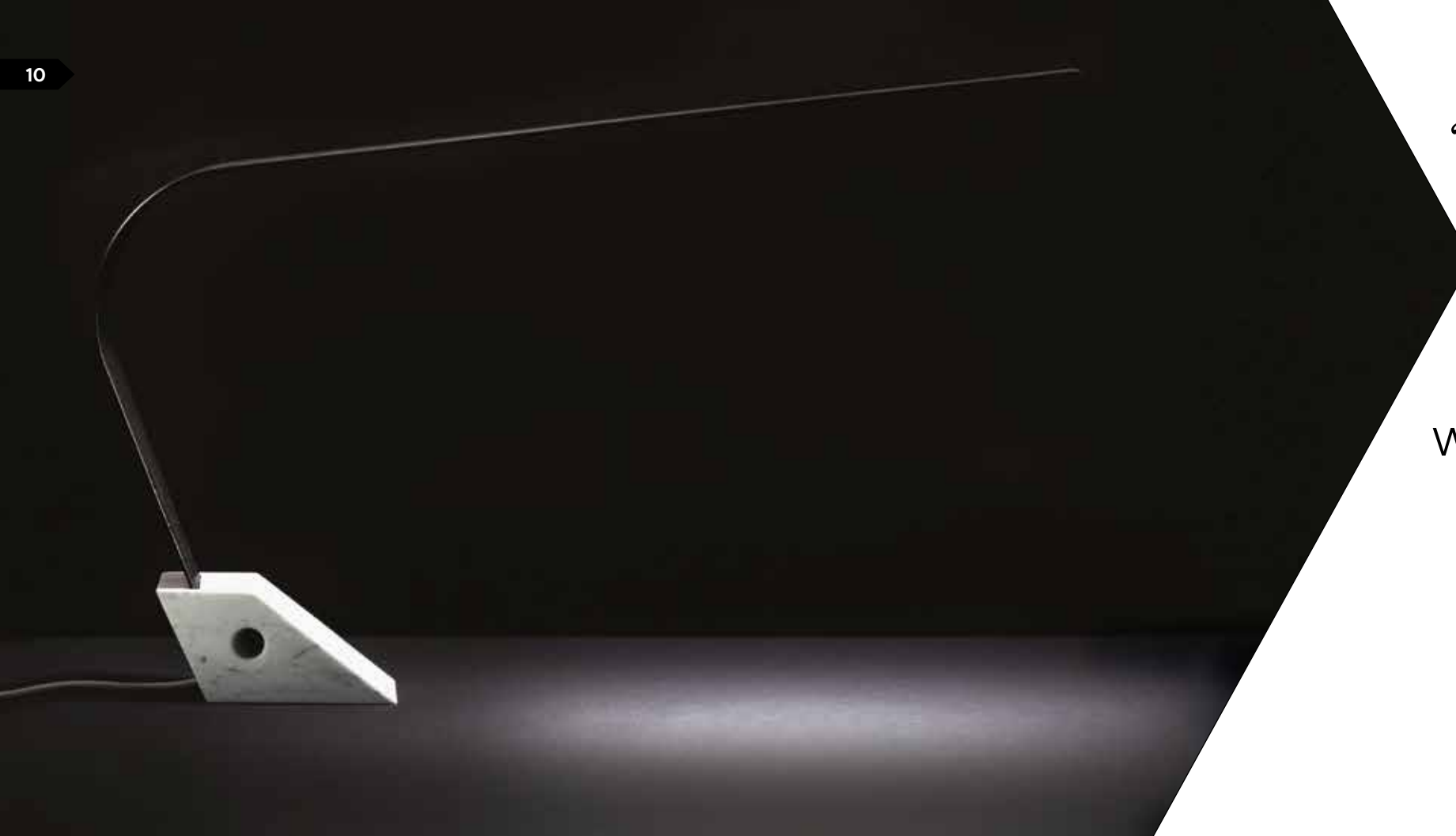
Erica, T°RED designs everything from bracelets to architectural installations such as e-QBO. Why such a broad range?

Erica Marson: We started the company with a clear focus: to investigate and explore the world around us. We work between design, research, and technology, so it is natural to seek solutions independently from the scale or function of a single object. Rather than choose a line of products, we follow research and technology, and take inspiration from the world around us and the unexpressed needs we identify.

e-QBO came about because it is difficult to express the concept of a smart city. The architecture produces energy and distributes power to the city without needing to connect physically to either the city or the grid. We care about a world in which beauty and technology meld for the benefit of people in any field of their lives, from the wearable to living and mobility. It is the logic of "taking care" typical of Japanese culture. It typifies our work.



Erica Marson, General Manager



“We started the company with a clear focus: to investigate and explore the world around us.”

What would you design or develop if time and money played no role?

Romolo Stanco: I would design a new way to move around cities. Not a vehicle or propulsion system, but a system that returns to people the space currently dedicated to moving. Our homes are located in streets, avenues, and alleys. In spite of ourselves we have a culture of streets and not squares. I'd like to rethink the spaces in which we live and transform the time and space spent moving into a time and space of experiences and emotions.

Is there a particular subject that influences your work?

Romolo Stanco: I was born in the analog era. I love the possibilities of the 21st century but I feel the need strongly to find a new physicalization of everything this millennium has offered us. The ability to interact over great distances and to access information quickly has not been matched with places or tools that make such experiences tangible.

My feeling is that the evolution of functions has far exceeded that of the objects. This discrete evolution is far from what we do at T°RED, since we expect objects, whatever their scale and function, to express the dignity of our time.

Which part of the design process do you enjoy the most?

Romolo Stanco: Traditionally, designers start with an idea and develop it with the available technology while considering cost, feasibility, and market opportunities. At T°RED the birth of a new project is like falling on a web of ideas, ongoing processes, materials research, laboratory experiments, experiences, everyday needs, and new industrial processes. This creates a short circuit that becomes the concept around which the expertise at T°RED and its partners starts to develop solutions that become objects, products or spaces. Everything happens in sync and in no particular order. The different actors make a contribution to something that does not yet exist.

Erica Marson: I love finding and working with the suppliers that help us to develop and deliver new projects. It lets me discover interesting companies and people that become friends and partners by the end of the project. Lumiblade is a great example: We asked for some technical information to see if our idea was feasible and we ended up co-creating the new lamp!

I also love the moment we introduce a new product to the market and display it. I love seeing the eyes and expressions of people looking at it. You can see the astonishment in their faces, the discovery of something impossible made possible. It happens with bikes, lamps, earrings... I keep those expressions in my mind. They provide a great boost to keep working even in hard times.



The irresistible force of simplicity

Club member #028

Slender design and careful manufacturing take time – and are well worth the wait in the case of products by British designer David Oxley.

The British designer David Oxley is the man behind Inertia Projects. “Inertia is one of the fundamental principles of classical physics used to describe the motion of objects and how they are affected by applied forces,” explains Oxley. “Inertia also describes the tendency to move in straight lines, which reflects Inertia Projects’ aesthetic. So for me, it was the perfect name.”

Oxley designs and painstakingly assembles his lamp designs at a small workshop in Newcastle in the north of England. To finance his first product, the LED desk lamp “Harvey”, Oxley turned to the creative crowdfunding platform Kickstarter. One year later, his 155 backers were the proud and

delighted owners of the flawless finished product.

Many consider Kickstarter a smart way to realize ideas on a smaller scale. But what impact does the Kickstarter route have on design and production?

“Kickstarter is a very supportive community and a great experience for new designers,” Oxley says. “It really was an ideal starting point for me. You get instant feedback on your products and many backers are happy to provide new ideas and share their experiences. Backers are always supportive and optimistic and are as interested in helping new designers as much as they are in acquiring new products.”



‘Tilt’ is available in right hand or left hand versions. Opposing pairs are sold for bedside use. The base is made from black, soft-touch silicone, which means the lamp switches between positions silently. Simple, discreet, and beautiful.

Crowdfunding often plays a crucial role in financing new and often ambitious projects. For example, Oxley was faced with major initial costs for the tooling needed to create “Harvey”. “It just would not have been possible without Kickstarter,” he states. Furthermore, for Oxley, the platform offers much more than access to funding: “It is also a dynamic place with new ideas and products launching all the time. That is a great motivator. As Kickstarter has grown, it has pushed me to produce designs that reflect my philosophy as well as being innovative.”

While Oxley approaches design in a very concise and austere way, there is always an element of playful irony. Perhaps the most obvious exam-

ple of this can be seen in his modern take on the classic banker’s lamp. His design philosophy? “It’s important to keep things fun. Whilst I do strive for simple, pared back design that affirms the importance of materials, this modernist approach can be a little bit sterile sometimes and maybe too serious. I want the user to have fun with my products and at the same time own something that is high-quality, has longevity, and embodies my honest approach to design.”

Oxley’s interest in engineering is another important influence: “Engineering formed a considerable part of my university degree, so it is perhaps always in the background. Having said that, I think my main motivation is a simple aesthetic and the honesty

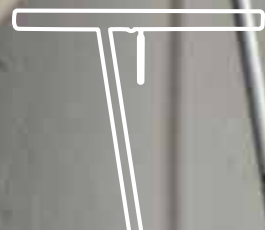
“Importantly, it is more about the context in which the lamp is used and making products that sit well in their surroundings.”

of the materials that I use. Today, you find lots of products that include gizmos like USB ports or wireless charging on the lamp base, but for me it is about having fewer features. Importantly, it is more about the context in which the lamp is used and making products that sit well in their surroundings.”

Being the curious person he is, it didn't take long for OLED technology to make it on to his radar. “I'm always looking into the latest lighting technology and I came across the Lumiblade starter kit back in 2012. I found the small circle and square amazing and immediately wanted to design around them. There were limited applications for the earlier panel because of its brightness but the new panel has overcome this with its high lumen output.”

Fast forward to September 2015 when Oxley proudly launched his OLED design “Tilt” at the Maison&Objet exhibition in Paris. The lamp's stylishly simple square frame is elegant while the polished, machined metal surface lends the lamp a luxurious feel that can enhance any decor. Gently tilting the frame turns the light on or off. The lamp employs the latest in OLED technology to perfection, producing a new quality of light that is soft yet bright, non-dazzling, energy-efficient, and environmentally sustainable.

Unlike Oxley's Kickstarter backers, you won't need to wait a year to get your hands on the finished product: “Tilt” is in stock now and delivery takes just a few days.



OLED Works

A customer once said that he told his friend, “watch this, it’s like moths to a flame,” as he pointed to OLED light panels in a window at night. People just turned and gravitated towards them.

There is something about that OLED light. Beautiful. Pure. Bright.

And there is something about the only US-based company that manufactures OLED lighting panels. Innovative. Passionate. Nimble. Committed. And, with the acquisition of key Philips OLED assets and team, extraordinaire.

OLEDWorks LLC, based in Rochester, New York, is the realization of a unique and innovative business plan developed by Dr. Michael Boroson, Dr. John Hamer, and President David DeJoy. In 2010, these visionary co-founders saw an opportunity to contribute significantly to the energy-efficient lighting solutions landscape while establishing competitive manufacturing in the United States.

Bolstered by an exceptional concentra-

tion of pioneering OLED talent trained at the Eastman Kodak Company in Rochester where OLED was discovered, OLEDWorks brings a novel approach to manufacturing OLED lighting panels. “This is a team that produced the world’s first active matrix OLED display,” says CEO David DeJoy. “At the same time, they were doing groundbreaking work on OLED lighting and realized that the principles of OLED display manufacturing had to be significantly transformed in order to meet the cost and reliability requirements of the lighting industry.” The result is a versatile, affordable approach that readily scales with the demands of the lighting market.

Across the ocean in Aachen, Germany, Philips’ Lumiblade OLED group fostered a complementary entrepreneurial

OLED lighting innovation. With their long history of excellence in functional lighting, the Lumiblade team challenged the paradigm of limiting OLED brightness to about 3000 cd/m² for low glare. “The goal is not only to deliver superior performance at more than double the light output of competing OLED light panels, but also to provide exceptional reliability and color stability with viable energy efficiency,” says Eric Meulenkamp, former R&D manager for Philips Lumiblade and now general manager at OLEDWorks GmbH. “The result is a compelling light engine that provides a wide range of illumination for broad market adoption.”

When Royal Philips decided to part with their Lumiblade OLED technology, the Rochester contingent was intrigued. The synergy between the two

Collaboration and commitment

OLEDWorks fosters strong partnerships and collaboration to accelerate technology advancements and facilitate OLED integration with our customers. Expanding our product portfolio for higher efficiency and new form factors is a priority. A notable strategic collaboration is the joint development partnership with Corning to develop flexible OLED light panels on 100-micron-thick Corning Willow® glass.

Additional partnerships, backed by the Department of Energy and New York State Energy Research and Development Authority, include light extraction technologies with Pixelligent. The DOE is also supporting the development of a second-generation deposition source for low-cost manufacturing.



groups, with their mutual singular focus on OLED lighting, deep fundamental understanding of OLED technology, and innovative risk taking was remarkable. "The more time we spent with the Aachen team, the more convinced we became that combining these production facilities would strengthen our OLED lighting business," says Michael Boroson, OLEDWorks CTO. "For sure, the synergy in expertise and OLED approach is compelling but we were drawn together as the result of the passion for OLED lighting that both teams share."

John Hamer, OLEDWorks COO, adds, "It was apparent that the Lumiblade

personnel and assets would prosper with a true steward of OLED lighting, one committed to growing the market and investing in portfolio expansion. OLEDWorks is that steward." This stewardship includes a deep commitment to delivering an excellent OLED experience to customers.

OLEDWorks, realizing that designers have some concern about new technologies, provides consistent customer support, encourages customer feedback, and targets product platforms that simplify integration. Luminaire manufacturers, designing unique fixtures for applications ranging from hospitality and residential to health care, are embracing the OLED promise.

bracing the OLED promise.

Ultimately, it is about the product. OLED is LED's younger cousin in solid-state lighting. With all the solid-state advantages of high efficiency and ease of control integration, OLED provides naturally diffuse broad-spectrum lighting that complements LED point source solutions. Having long surpassed performance thresholds for efficacy and reliability, OLEDs are now affordable with continued cost reductions on the horizon.

And that is good news because there is something truly special about the OLED light experience. Beautiful. Pure. Bright.

And there is something truly special about OLEDWorks LLC and OLEDWorks GmbH. Innovative. Passionate. Nimble. Committed. Extraordinary.

And now, global.



*OLEDWorks co-founders
Left: President Dave DeJoy, Center Dr. Michael Boroson, CTO, Right: Dr. John Hamer, COO*



OLEDWorks Fast Facts

Founded in 2010
by John Hamer Ph.D.,
Michael Boroson Ph.D.,
and David DeJoy.

OLED lighting production in Aachen,
Germany and Rochester, New York.

Research and development facilities in
both Germany and New York with the
Rochester site taking the lead on flexible
panels, Germany on encapsulation and
both sites driving formulation science.

OLEDWorks' staff has grown from 8 to
more than 60, representing more than
400 years of OLED experience.

The importance of OLED lighting in the
solid-state portfolio has been validated
by the U.S. Department of Energy making
multiple project awards to OLEDWorks in
support of manufacturing technology and
supply chain collaboration.

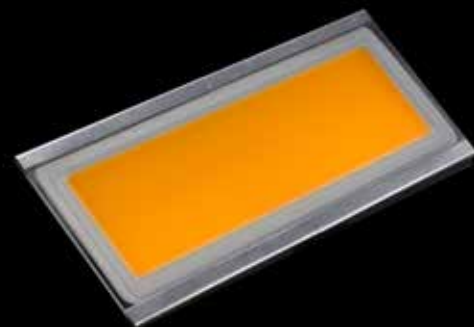
Customers include luminaire manufactur-
ers of residential and commercial lighting,
project-based installations for featured
lighting, and marker lighting for health
care.

OLEDs by OLEDWorks



AMBER 2X7

Product Dimensions: 63.5mm x 175mm x 3.2mm
Luminance efficacy: >50 lm/W
Lifetime: >25K hours at 2000 cd/m²



AMBER 1X4

Product Dimensions: 43mm x 101.6mm x 3.2mm
Luminance efficacy: >50 lm/W
Lifetime: >25K hours at 2000 cd/m²

Amber OLEDs

OLEDs can be tuned to emit specific wavelengths for a variety of colors as well as both warm and cool white light. OLEDWorks has commercialized an amber OLED product with application in the healthcare market; the next generation extends product performance for a high brightness option. Engineering Samples are available now!

The Brite FL300 OLED Family

OLEDWorks offers an entire family of OLEDs. They differ in shape or appearance when turned off.

The Brite FL300 ww with its 300 lumens enables first-time OLED applications in functional areas. With the Brite FL300 L, Lumiblade provides the same performance in a rectangular form. Finally, with the FL300 wm and FL300 L wm, Lumiblade serves all users who prioritize the aesthetic appearance of OLEDs in their off-state over the light's functionality. The OLED looks like a square or rectangular mirror.



FL300 L ww

Product Dimensions: 62.7mm x 240.6mm x 1.4mm
Luminance: 300 lm
Lifetime: 10K hours at 300lm (50K hours at 115lm)

FL300 ww

Product Dimensions: 120.5mm x 120.5mm x 1.4mm
Luminance: 300 lm
Lifetime: 10K hours at 300lm (50K hours at 115lm)

FL300 wm

Product Dimensions: 120.5mm x 120.5mm x 1.4mm
Luminance: 190 lm
Lifetime: 10K hours at 190lm (50K hours at 47lm)

The philo- sophical approach

Discussing the potential of OLED technology in the Internet of Things and design philosophy with Design Group Italia's Carlo D'Alesio.



Club
member
#050

“One does not become enlightened by imagining figures of light, but by making the darkness conscious.”

“Great projects don’t create themselves. They are the result of in-depth research and analysis, of scrupulously methodological planning, precise choices and constant optimization. Creating a successful design means more than having an outstanding idea. It means taking care over every detail of that idea. And it means rigorously managing its development to ensure that the functional, aesthetic and experiential aspects of the project work in unison (...) That’s how projects become true stories.” designgroupitalia.com

This statement embodies the uncompromising approach taken by Design Group Italia and its dedication to getting things right. With this in mind, it is perhaps not a big surprise that the Milan and New York-based group has yet to design an OLED product. Rather, its designers have chosen to take the time to create something perfect, timeless and innovative.

We spoke to Carlo D'Alesio, lighting specialist at the Yradia Lighting Lab, one of Design Group Italia's smart labs, about design processes, ideas, concepts and the undiscovered potential of OLED technology.

D'Alesio was among the first to become acquainted with OLED technology – before it was even in production: “Philips OEM held an event in 2005 where they introduced a precursor to production OLEDs. That was our first encounter with this inspirational technology. OLEDs didn’t actually go into production until a few years later.”

Nevertheless, despite being a member of the Lumiblade Innovators Club, Design Group Italia has yet to present a concept or product using the new light source. So what is keeping them? D'Alesio points to the group's philosophy: “It's never about being first to use new technologies, but instead liberating technologies based their intrinsic value and their relation to people. Creating the nth table lamp with OLED technology is not so interesting.” It seems however that Design Group Italia is investigating creating an internet-connected product: “We are still exploring how to leverage new opportunities in the evolving landscape of the Internet of Things. We believe there is still an outstanding idea that we have not yet uncovered. As CG Jung said, ‘One does not become enlightened by imagining figures of light, but by making the darkness conscious.’”

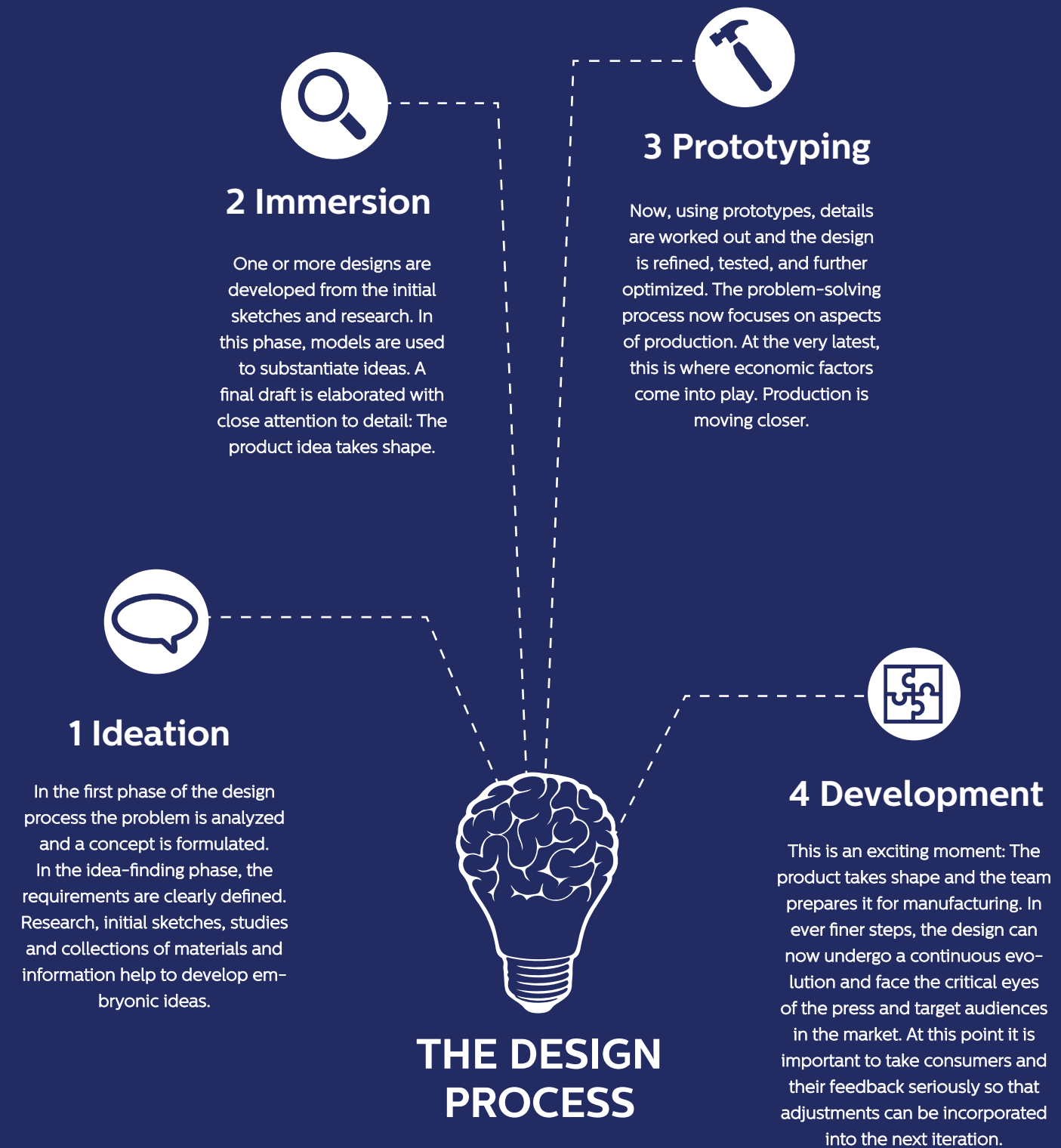
“It’s never about being first to use new technologies, but instead liberating technologies based their intrinsic value and their relation to people.”

So how far along are Design Group Italia’s ideas for OLED? “Disruptive developments in the Internet of Things landscape start at the product level. At the moment we are exploring people’s emerging needs where the inherent thinness and digital nature of OLEDs can be harnessed to provide a solution,” D’Alesio responds. The group is keeping tabs on new developments in connected tech and was present at the World Makers Fair in New York to that end.

We asked about the group’s general approach to product design from the initial idea to the development process. D’Alesio notes that the group is always curious and searching for insights and new information – and not just in relation to current projects. “We combine a broad view of how technologies and people are changing with a specific hands-on approach to experimenting with a wide vocabulary of technologies. As Design Group Italia, we don’t focus on manufactured products or isolated units sold off the shelf but instead focus on a bottom-up strategy. In order to deliver this, a design-powered and human-centric approach is needed.”

One of D’Alesio’s priorities is the field of architectural lighting design. He aims to improve the relationship between people, the environment, and architecture with light. He sees OLED technology as a big step in the right direction: “Lighting can influence behavior and reinforce a great customer experience by stimulating more active perception and interest in the environment. OLEDs emit a beautiful, diffuse light and have a very thin form factor which creates the potential for more emotional experiences.”

We look forward to seeing where their efforts lead.



Dedicated to the (organic) diode

by Dennis McCarthy

Can a simple idea help to promote OLED light? Yes, it can – if the conditions are right and all those involved want to make it happen.



I used to compare my evangelism and love for OLED to being an early Beatles fan back in that 65-67 era. These days there's a deeper dimension, an expanded appreciation of both these life-changers. It's a wholehearted and more substantial appreciation. The popularity of OLEDs has risen on merit and I wake up every day hoping to expand their appeal. Oh and are they ever appealing!

The luminance of an OLED lighting panel is natural and enveloping with tremendous photometrics. I own a hand-held spectrometer and I check the chromatic attributes of every OLED I have – there are seven of them at home currently. I'm hoping to triple the count soon!

Additionally, when I get a loaner or when I see OLEDs at a lighting industry event my tools of analysis are put into play – and all the items I've ever analyzed have exemplary SPD and CRI – CQS numbers. These great spectral attributes come about due to decades of refinements and perseverance! There is much credit and praise due to the unsung engineers and team members working diligently behind the scenes. The legions of OLED worker bees have a great deal to be proud of.

So I'm a fan. A cheerleader some might say. To many, I'm blending those elements with OLED ombudsmanship. More people all over the globe will be dealing with this new obsession or attachment... No cure available nor needed!

The body of impressive OLED fabrication successes yields scores of advocates and backers. I'm an unaffiliated, unattached OLED guy who doesn't have an allegiance. That may change at some point – but it's a refreshing thing in this age

of commerce that the OLED zealot has praise for BOE and Philips-OLEDWorks; I sing the praises of Alkilus' portable DC operated units as well as Acuity Brand's suite of OLED lighting products. I try and work like a diplomat might.

The components going into the OLED lights get my scrutiny and there too, I'm thrilled by how the quality bar is being set at Shaquille O'Neal's' eye-brow levels these days.

There is an array of reasons for my ardor; I love how these new age lights look, their topographic elegance is enticing at multiple levels. There is the allure of a light that can flex and have color tunability. They are essentially superior to lumpy LEDs on rigid PC boards crammed into an A lamp. Oh and 40,000 hour life spans are, at least for now, acceptable in my book. Competing conventional SSL wares rarely have longevity like that.

There is an element of affirmation in hearing about the growing fan club that is waiting for these OLEDs to become their go-to lights. Five years back, my social media comments touting these impressive lights got little if any traction. Nowadays my OLED list of contacts, influencers and allies is approaching one thousand. There is constant chatter about these up-and-comers and not all of it is coming from me.

These additional OLED aficionados are growing in ranks and that's a solid affirmation that bolsters my exuberance about OLED products, whether they're small Amoled displays or banks of dazzling ceiling lights! I'm inclined to think that my claims of "thin is in" and "flat is where it's at" – are the new lighting maxims. As well they should be!

Dennis McCarthy is an internationally known OLED evangelist and SSL chronicler. His OLED-related efforts range from product analysis to OLED luminaire design and from being an OLED specialist headhunter to OLED segment reporter for United Business Media. He is the rare individual who goes to bed thinking about OLEDs and wakes up to OLED lighting – eager to hear of overnight OLED segment developments.

“Truly listen,

then question and respond appropriately”



We spoke to Jason Bruges, one of the first lighting-designers to work with OLEDs, about his design approach.

Your OLED creations have a fabulous, dreamlike quality. You started with Mimosa, your first tactile and interactive OLED installation, before evoking the impression of rain reflected off the sculpted curves of a car with flickering OLEDs for the Aston Martin lightshow. Your latest creation is a water lily. Are plants and water an underlying source of inspiration to you or is this something you particularly associate with working with OLEDs because of their unique characteristics?

Natural phenomena inspire me. As a studio we often incorporate biomimicry into our design process. For example, Mimosa (2010) was inspired by the thigmonastic mechanical actuators in the mimosa plant, the OLED Waterlily experiments (2014) by the ability of plants to float on water, and Photoreception (2004) by the way insects navigate flowering plants through photoreception.

Are you planning to create products with OLEDs for everyday use?

Where appropriate we try to incorporate OLEDs into our permanent installations which are interacted with daily. Reveal (2010) for Aston Martin continues to be used and Mimosa is exhibited continuously. We are also planning to use OLEDs in a couple of infrastructure projects we are involved with where space is a premium.





Ebb & Flow (2013)
Chelsea, London

The studio was commissioned by C. P. Hart to explore the concept of water flow to fabricate a unique and dramatic sculpture. Clear, water-filled glass hemispheres hang from the ceiling and are used as lenses to create forever changing lighting patterns using computer-controlled light and fans.

“Our design approach is irrespective of technology. However the OLED technology gives us opportunities to work with a very different form factor and view light as a sculptural material.”



Waterlily (2014)

A digital water lily concept by Jason Bruges Studio in collaboration with Philips, using OLED Lumiblade technology. The lilies, which blend nature and technology, only turn on when in contact with the surface of the water. By passing electricity through the liquid, the digital lilies not only create a mesmerising luminous floating surface, but also a beautiful underwater ecosystem, similar to their organic equivalents.

Can you tell us something about your design approach in general and designing with OLEDs in particular?

Our design approach is irrespective of technology – we work in response to site and genius loci. However the OLED technology gives us opportunities to work with a very different form factor and view light as a sculptural material.

Most of your projects involve light and interaction. Where does the desire to make light interactive or create interactive experiences with something as intangible as light come from?

I have been interested in applying interaction design and cybernetics to art, design, and architecture since studying in the interactive architecture lab at the Bartlett School of Architecture where we were encouraged to prototype and test ideas surrounding an architecture that could be choreographed and perform for an audience – essentially the satisfaction comes from the joy that these designs can give their audience.

Who are your idols?

My idols come from different disciplines. Cedric Price’s reconfigurable architecture, Archigram’s living and breathing moving cities, Turrell’s illuminated spatial environments, Jim Cambell’s extraordinary LED matrices and Tatsuo Miyajima’s digital interventions.

Other than your own projects, do you have a favorite piece of OLED lighting?

My favorite piece of OLED lighting is by the Japanese architecture bureau sinato Inc (www.sinato.jp), which is based in Tokyo, called ‘Infuse’.

What developments do you expect to see in OLED lighting in the future?

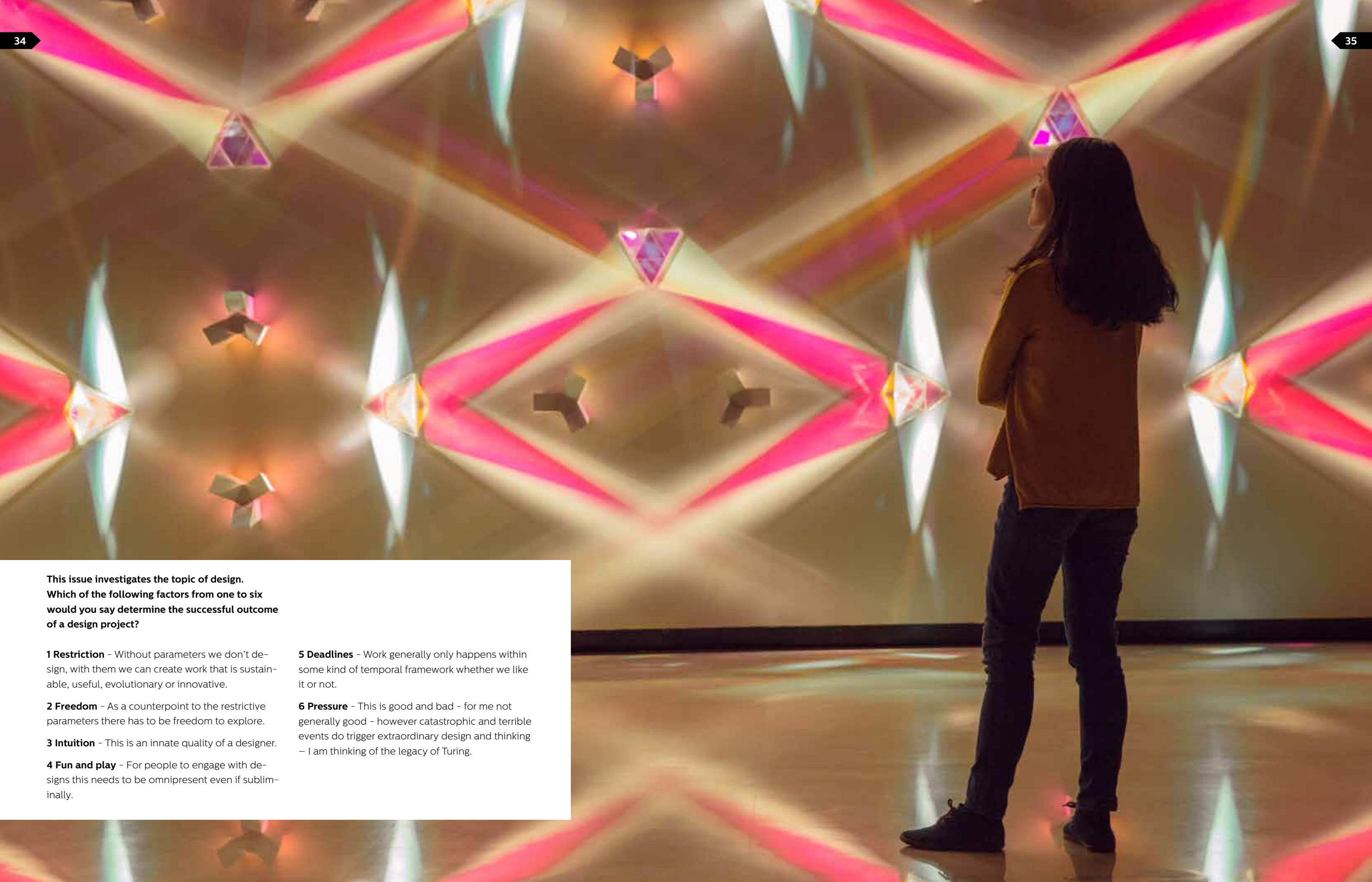
The future developments are happening now and getting more ubiquitous in front of us – color-changing, real-time shape-changing, OLED composite hybrids that multitask with opacity change and with inbuilt intelligence.

What developments should we expect in lighting in general in the future?

In turn these developments will be utilized and applied to the everyday application, as well as expanding the potential for more sophisticated artworks.

You have worked with many designers and architects: What in your opinion makes a good designer?

What makes a good designer? I think the ability to truly listen, then question and respond appropriately.



This issue investigates the topic of design.
Which of the following factors from one to six would you say determine the successful outcome of a design project?

- 1 Restriction** - Without parameters we don't design, with them we can create work that is sustainable, useful, evolutionary or innovative.
- 2 Freedom** - As a counterpoint to the restrictive parameters there has to be freedom to explore.
- 3 Intuition** - This is an innate quality of a designer.
- 4 Fun and play** - For people to engage with designs this needs to be omnipresent even if subliminally.

- 5 Deadlines** - Work generally only happens within some kind of temporal framework whether we like it or not.
- 6 Pressure** - This is good and bad - for me not generally good - however catastrophic and terrible events do trigger extraordinary design and thinking - I am thinking of the legacy of Turing.

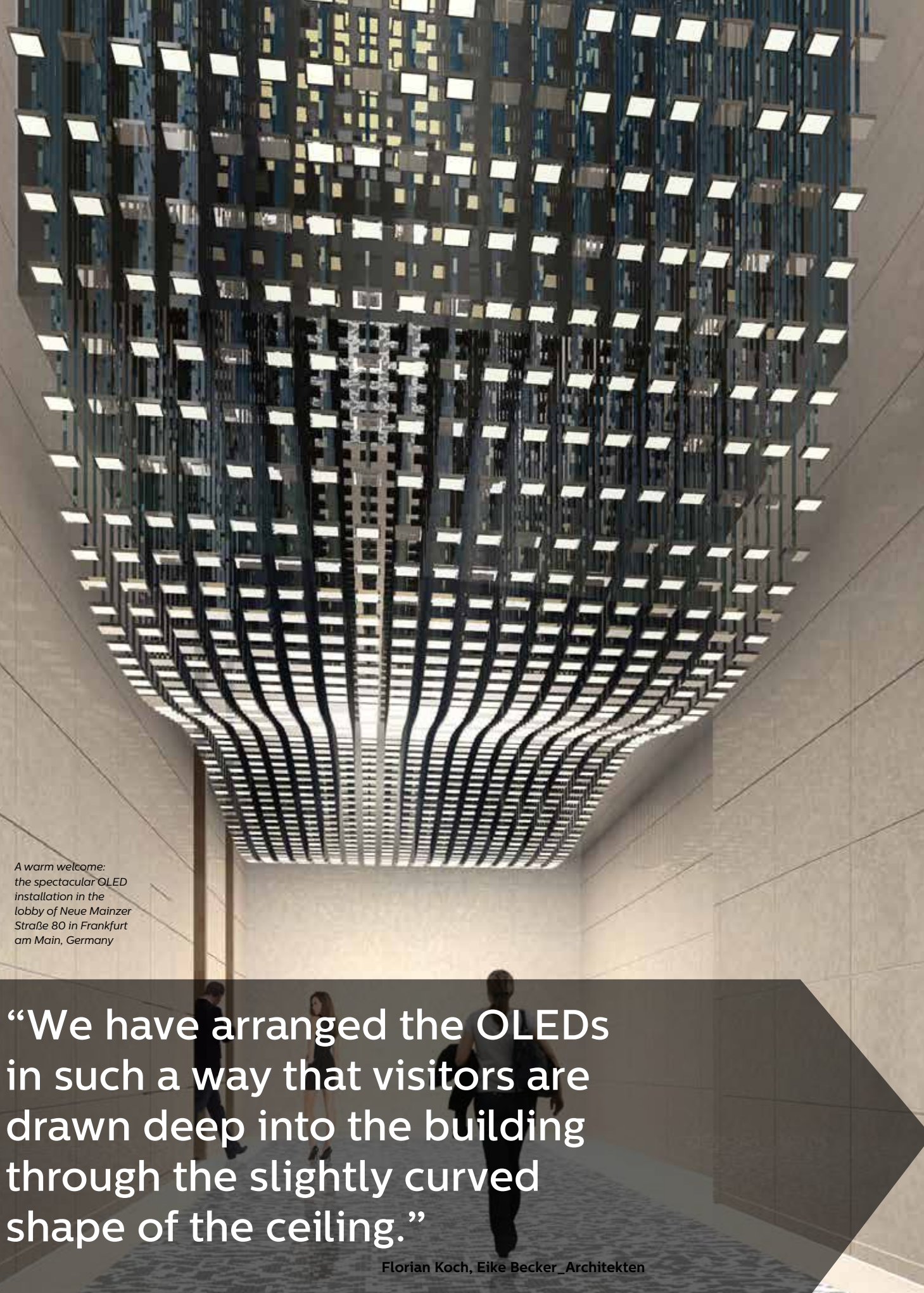


*Dichroic Blossom (2014)
Beijing China*

An interactive feature wall inspired by Chinese Plum Blossoms that changes appearance according to the time of day, different seasons and activities in and around its site in a multi-function hall.

The artwork is reminiscent of a frieze or floral painting, branching up the wall. Clusters of periscope LED light engines refract and reflect creating an amplifying effect via a network of dichroic wall sculptures.





A warm welcome: the spectacular OLED installation in the lobby of Neue Mainzer Straße 80 in Frankfurt am Main, Germany

“We have arranged the OLEDs in such a way that visitors are drawn deep into the building through the slightly curved shape of the ceiling.”

Florian Koch, Eike Becker_Architekten

Club member
#031

“OLED for lighting is an inevitability.”

The Black Forest-based company hatec collaborates with Berlin architects Eike Becker and project developers Groß + Partner from Frankfurt to realize one of Germany’s largest OLED projects.

The assessment of the company hatec, that the OLED will probably outlive the LED and that in future the widespread use of OLED for lighting is inevitable, is demonstrated quite literally in a joint project with Eike Becker_Architekten, Berlin. In Neue Mainzer Straße 80, a new residential and office complex in Frankfurt am Main, visitors entering the lobby are welcomed by a spectacular lighting installation that sweeps them into the building. Over 1,000 luminous OLED panels mixed with close to 500 unlit plates pour down from the ceiling like a waterfall of light. The installation currently rates as one of the largest OLED projects in Germany and as a milestone in architectural lighting design.

Your company was founded in 1989 and ranks among the pioneers in the field of LED lighting. Now, with the OLED, a new light source is available with a versatile range of potential uses. What is your vision for OLED technology in your company, and what challenges does it pose in your view?

Andreas Pfefferle, hatec: The OLED is not appropriate for all lighting tasks. The relationship between luminance and lumen output in an OLED panel is the most exciting challenge. The bottom line is that we have a diffuse-area light source that may well emit a mild light, but will also emit too great a luminance if energized too highly. Reflectors or other dispersion attachments would ruin the character of the flat panels. So you could say that getting a handle on this relationship between physical and electronic properties is the greatest challenge of all when working with OLED.

The OLED installation in Neue Mainzer Straße in Frankfurt is breathtaking. How did you come up with the idea?

Andreas Pfefferle, hatec: At an early stage in the project, Peter Matteo, managing director of the project developer Gross + Partner, insisted on an exclusive and sophisticated solution for the entrance of the new building – to give the architecture an unforgettable face, so to speak. Naturally, a challenge like this aroused our love for innovation.

We adore good light and have a 25-year tradition of working up unique solutions for project requirements of this kind. Our passion for innovation gives us the impetus we need to respond to unusual requests and put exciting designs into practice.

Florian Koch, Eike Becker_Architekten: The entrance defines the character of a building in the same way that the facade does. This is where all the visitors and users get particularly close to the building. So we felt it was important to give the lobby a really special character. During our research we came across OLED technology. We have arranged the OLEDs in such a way that visitors are drawn deep into the building through the slightly curved shape of the ceiling. In combination with the floor mosaic, this creates a lighting effect comparable to rays of light shining through the leaves of a tree and their dappled shadows on the ground. A scenario that people find pleasant, and a kind of archetype of human history. The company hatec has already worked successfully with Groß + Partner on a range of different projects. And we also value the experience and innovative spirit of the company.

What challenges, both technical and organizational, does a project of this scale present?

Andreas Pfefferle, hatec: In a project like this, it's essential that everyone works hand in hand. It's not enough to have just a project manager and a bit of accounting. We are a family-owned SME with a clear structure and production facilities in Germany. That has proved – also in this case – to be a

good basis for trouble-free processing, because communication between the complete team has to be perfectly tuned. The technical development took place in close coordination with the project managers, which meant that even hurdles like how to accommodate the electronic drivers behind the thin OLED panels could be quickly overcome. The production itself posed hardly any problems. We're used to implementing project-related solutions quickly and in high quality.

You develop your own luminaires in collaboration with a number of designers. Was it a designer who first had the idea of a solution based on OLEDs, or did you take the idea to a designer?

Andreas Pfefferle, hatec: We approached selected designers with the specific task of designing luminaires for the OLED installation that could be built efficiently. We keep an earnest eye on developments in the market and are convinced that OLED will be one of the light sources of the future. So we see ourselves as an innovation driver in this market – we had similar experiences with the LED. Our daily work at the cutting edge is characterized by challenge, passion, and committed involvement in changes in our sector.

Tell us a bit about how you work with your designers. How does the collaboration come about?

Does your company have a clear design philosophy, or are the designs not subject to limitations?

Andreas Pfefferle, hatec: Designing luminaires is always a special challenge for designers. After all, it is the function – of ideally illuminating a situ-

ation or a room – that has top priority, and that is influenced by both the technical construction and the design of the luminaire. That's why the creative process always has to begin with careful and detailed coordination of the room and lighting concept – and this often imposes limitations on the freedom of the designer in terms of the luminaire itself. This is where the advantages of OLED technology come into play, providing the designers with new scope for their creativity. Andreas Frei, one of our designers, has this to say on the subject: "We can now get back to concentrating our focus on the aesthetics and boldly experimenting with forms and materials. And it's amazing how quickly refreshing new light and lighting concepts emerge.

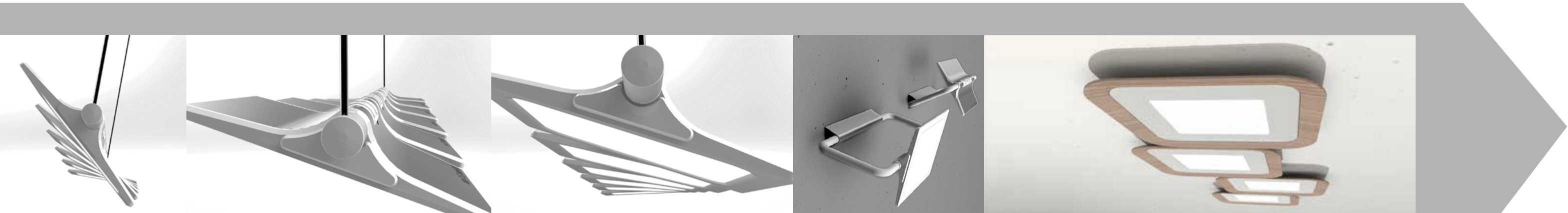
At the moment you are working on several studies for new OLED luminaires. Can you tell us something about the ideas and concepts? How would you define your target group for the new OLED luminaires?

Andreas Pfefferle, hatec: We are currently looking at a range of potential uses for OLED lighting for our regular clientele of architects, planners, and project developers. What's important for us is not to wait for requests and then react to them, but to have solutions up our sleeve that can convince our customers. Among other things, we are working on OLED luminaires in combination with materials that are new to us, like wood – what we're aiming at is the OLED as a "green" light source. We'll be presenting the first luminaires of this kind at the Light & Building 2016 trade fair.

“Designing luminaires is always a special challenge for designers. After all, it is the function that has top priority, and that is influenced by both the technical construction and the design of the luminaire.”

Andreas Pfefferle, hatec

First studies for new OLED luminaires designed by Andreas Frei in collaboration with hatec





The light from the OLEDs is reflected in the mirror from above achieving the mesmerizing effect of light floating in mid-air.



Floating light

for a luxury yacht

Club
member
#048

Innovators Club member Promotech enables interior yacht designer Alessandro Pulina to create an idealized sensation of waves floating in mid-air and the vast expanse of the ocean in his lighting design concept for Rossinavi's 60-meter yacht.

OLEDs of course could not have been better suited to this purpose. "We are always looking for new and innovative lighting solutions for our clients to help them find the right mood and atmosphere for their projects," says Claudio Giampaoli, CEO of Promotech. OLEDs were therefore a choice motivated by necessity. The desire to create a pendent lighting effect with a lightweight light source subtly enhanced the concept behind the design of the mega-yacht. The OLEDs are virtually imperceptible and yet clearly differentiated from the rest of the lighting. The effect was created by using a suspended light fixture that could be shaped in accordance with the project. A mirrored ceiling with OLEDs inserted at various positions and distances from the floor created the wave effect that Pulina

was aiming for. The light from the OLEDs is reflected in the mirror from above achieving the mesmerizing effect of light floating in mid-air.

Promotech is dedicated to finding technically advanced and sophisticated solutions to satisfy the most ambitious demands in style and exclusivity. So it was inevitable that they would sooner or later be drawn towards the possibilities offered by OLEDs. Indeed the project represents a perfect match that delivers sustainable solutions with a timeless design.

We spoke with Claudio Giampaoli, CEO of Promotech, about his perspective on the lighting business.

You describe your work as “lighting integration”.

What does this concept mean to you?

Lighting integration is an innovative technique invented by us in early 2000. Pure homogeneous light is shaped and integrated into furniture, architectural spaces and the local ambience. Lighting integration is a concept which is not limited by traditional barriers such as spots and lamps but as a value added to the existing ambience, style or furniture. It is an interaction between aesthetics and functionality. Technology and design are blended together to create harmony. We are not selling items or products but atmospheres and exclusivity achieved through our integrations.

Can you tell us a little about how your company came into being?

Promotech is a dynamic organization that was founded more than ten years ago. We started to study the yachting market by visiting yacht architects and designers, investigating what was required by the most visionary minded and not available in the market. After this we started to select existing lighting products and to modify them in innovative ways to satisfy demand from the market. The second step was to fully realize novel solutions based on input from customers looking for different ways of using light. We set up a small-scale company to select and distribute products for local shipyards in Viareggio, the center of global shipbuilding. In just a few years, Promotech developed from a new venture into an important custom lighting company. The business was growing and needed more space. It moved into new premises and that's when two new shareholders joined: Alessandro Quattrocchi and Federica Luppichini. They assist with production and product development. Promotech presents itself as a partner for the design, realization and installation of complete custom-made systems produced with intelligent and advanced solutions to satisfy particular needs in style, technique, and exclusivity. Research and development have always been at the core of the company presenting new technological and sustainable solutions that stand the test of time. We first came into contact with

OLED technology in 2011 while searching for new and improved light sources. After various visits to Philips' OLED workshop and production site in Aachen we started to promote OLEDs to the global marine market by presenting LivingShapes and LivingSculpture at selected industry fairs and the complete OLED range at our showroom. Today you will find Promotech's integrated lighting solutions on some of the world's most extraordinary yachts ranging from 40 to 120 meters in length and built by Italian, Dutch and German shipyards as well as in private homes and exclusive stores. The company has moved again into brand new offices where a new showroom will soon be ready to inspire our international clientele of architects and interior designers.

On your website you challenge designers to present their concepts. What is the most unusual idea that has ever been presented to you? And what do you love most about working with creative people?

We were asked to illuminate eight mono-block onyx vanity tops with 2 meter in length for a famous English design studio. They were organic shapes suspended and inserted into a wall on a German-built 96-meter yacht. The tops had to be illuminated without any visible dark areas on their surfaces and along their beveled edges. We designed a transparent Plexiglas lighting frame to be mounted underneath, taking into consideration piping and taps to avoid any shadows. It was a great challenge but we succeeded in completely illuminating the surface and had a happy owner as a result. We love to work with creative people as we see ourselves as people who think outside the box. We speak the same language.



„We are always looking for new and innovative lighting solutions for our clients to help them find the right mood and atmosphere for their projects”
 Claudio Giampaoli,
 CEO of Promotech
 Italia.

Your expertise and experience in the technical area puts you in the position to realize exceptional projects. Is there still an idea or dream project that you have not yet undertaken? And if so, why not?

Yes, we have many new and innovative ideas on the drawing board. However, past experience has taught us to wait for the right moment to present innovations and to understand when the market is ready. Many times we have found ourselves with a product or project which has been too innovative for a particular time, that was received with cool feedback, but that was launched again a couple of years later and achieved extraordinary results.

the universe of Dieter Rams:

10 principles of good lighting design

Dieter Rams' principles of good design are fundamentals of the rhetoric of design. Originally developed for his own field of work, his "ten commandments" can also be applied to the world of lighting.

What makes for good design? A question designers all over the world ask themselves daily. What criteria do I apply when selecting designs, and what are the parameters for the creation of timeless designs?

"An impenetrable confusion of forms, colors, and noises." That's what Dieter Rams, possibly Germany's most famous industrial designer and architect, thought of the world around him back in the 1970s. As Chief Design Officer at Braun, he designed products whose language of form can still be found in many other products today. "Let Rams do it," Erwin Braun once said – a good decision!

To this day, Dieter Rams' work has lost nothing of its relevance. On the contrary, in a world cloaked in planned obsolescence that brings forth noisy products and even noisier marketing, Rams' principles are even more relevant than ever. They give reason to scrutinize design and to reduce it to its essentials.

The list of parameters that Rams drew up back then encompasses 10 principles which are still celebrated as guidelines and inspirations, and as an "acid test" of design concepts. They can, of course, also be applied to the world of lighting design. We have selected 10 exemplary products that clearly espouse Rams' principles.



good lighting design

1 | is innovative

2 | makes a product useful

3 | is aesthetic

4 | makes a product understandable

5 | is unobtrusive

6 | is honest

7 | is long-lasting

8 | is thorough down to the last detail

9 | is environmentally-friendly

10 | is as little design as possible



Preview

Lumiblade Insider #03

CARL STAHL ARCHITECTURE

Filigree light sculpture offers luminous shopping experience

At 18.5 meters, "The Source" OLED installation extends up through all three sales floors to the glass roof of the new Aquis Plaza shopping mall in Aachen and is thus one of the largest of its kind worldwide. It consists of 36 individual two-meter platforms, each bearing 12 organic LEDs. Individually adjustable, they create fascinating color changes and unusual lighting effects.

In the next issue we talk to the makers, Carl Stahl Architecture, about the idea and realisation behind this impressive OLED installation.



Carl Stahl
ARCHITEKTUR

Deknudt Mirror Works

A step further: The perfectly finished double-sided mirrored doors by Deknudt, until recently lit up by a completely integrated LED lighting system, are now available with OLED technology, delivering considerably better lighting. Find out more about this innovation from the family-owned niche player from Deerlijk, Belgium, in our next issue.



Join us at Light+Building 2016!

The next issue of Lumiblade Insider takes you to the world's leading trade fair for lighting and building technology, Light+Building in Frankfurt. The theme of the exhibition "digital - individual - networked" points the way: How can modern living spaces be designed, what increases our quality of life, what are the latest trends, the craziest ideas, and the most elegant solutions? In words and pictures we take you on an expedition to track down exciting innovations and interesting creative partners.

Light + Building 2016, Frankfurt,
Germany,
Hall 4.1, Booth G62



Lumiblade Insider
Issue 2/2016

Published by

OLEDWorks GmbH
Philipsstr. 8
52068 Aachen
Germany

Publishing house

wesentlich. verlag GbR
Alfonsstraße 44
52070 Aachen
Germany

Editors in chief (responsible)

Alexandra Kozub,
Daniel Hoffmann

Desk

Saskia Petermann
(wesentlich. visuelle kommunikation)

Authors in this issue

Peter Bereza (p. 38 – 42, 46 – 47) /
Rob Compton (p. 8 – 11, 22 – 24, 43 – 45) /
Daniel Hoffmann (p. 3) /
Gabi Lukomski (p. 8 – 24, 38 – 45) /
Dennis McCarthy (p. 26 – 27)
Saskia Petermann (p. 25, 28 – 37) /
Giana M. Phelan (p. 16 – 21)
Jenny Roder (p. 6 – 7, 25, 46 – 47)
James Simmonds (p. 12 – 15, 28 – 37)

Art direction / layout

wesentlich. visuelle kommunikation,
www.wesentlich.com

ISSN

2364-5695

Copyright

Cover

© Andreas Frei

Content

© Inertia Projects (p. 4, top)
© Jason Bruges Studio (p. 4, bottom)
© Eike Becker_Architekten, Berlin (p. 5, top)
© Promotech (p. 5, bottom)

“Is this how you work?”

© T*RED (p. 6)
© Jason Bruges Studio (p. 7, top)
© Andreas Frei (p. 7, bottom)

“Lines are the new curves”

© Lorenzo De Maria (p. 9, top)
© Anna Mainenti (Romolo Stanco)
© Sergio Ferri (Erica Marson)
© Serena Groppelli (p. 10, top)
© T*RED (p. 11, top)

“The irresistible force...”

All pictures © Inertia Projects (p. 12 – 15)

“OLEDWorks”

All pictures © OLEDWorks (p. 16 – 21)

“The philosophical approach”

© Massimo Di Filippo (p. 22)

“Truly listen...”

© Jason Bruges Studio (p. 28 – 33)
© James Medcraft (p. 34 – 37)

“OLED for lighting is an inevitability”

© Eike Becker_Architekten, Berlin (p. 38)
© Andreas Frei (p. 40 – 41)

“Floating light for a luxury yacht”

© PulinaDNA (p. 42)
© Promotech (p. 45)

Preview

© Carl Stahl Architektur (p. 48)
© Deknudt Mirror Works (p. 49, top)

Find out more

www.tred.me (p. 8)
www.inertiaprojects.com (p. 12)
www.oledworks.com (p. 16)
www.designgroupitalia.com (p. 22)
www.jasonbruges.com (p. 28)

www.hatec-licht.de (p. 38)
www.promotech-italia.it (p. 42)

www.oledworks.com

design is
not just
what it
looks like and feels like.
design is
how it
works.

Steve Jobs

Offspring: the new members of our OLED Family

Always the ideal light
for your design-needs.

**Buy
now.**

OLEDs inspire with their full-surface, high-quality light and their barely noticeable heat. The most modern light source in the world is the ideal building block for unobtrusively integrating light into individual projects.

www.oledworks.com

**OLEDWorks**
Naturally Illuminating