

paint  
with  
shapes

ambright

“I paint with shapes.” — Alexander Calder

Formal vocabulary is a commonly used synonym in the visual arts for the stylistic elements of a work of art, a building, an artist, or an epoch. The forms or shapes of light and luminaires are also associated with particular epochs – and the industry is again facing a paradigm shift after the introduction of LED: individualization as the predominant megatrend.

Conventional manufacturing is no longer able to satisfy individual customer wishes, so innovative methods are increasingly required in production.

Welcome to the future of light – in almost every conceivable form.

Luminaires as unique as your signature?  
Let's paint with shapes!



6	architecture / design / inspiration
18	printed light
28	products
38	company
40	interview

#### Imprint

#### Photography

Franco Jennewein: 3, 32, 35, 36, 37

Oliver Jung: 19, 23, 24, 25

Thilo Müller: 26, 27

Laura Thiesbrummel: 34

#### Design

Selitsch Weig, Munich

#### Ambright GmbH

Graf zu Castell Straße 1

81829 Munich

Phone: +49 89 856 34 82 0

sparkshape@ambright.de

www.sparkshape.de

We are proud recipients of international design awards





# luminaires as unique as your signature

architecture  
design  
inspiration







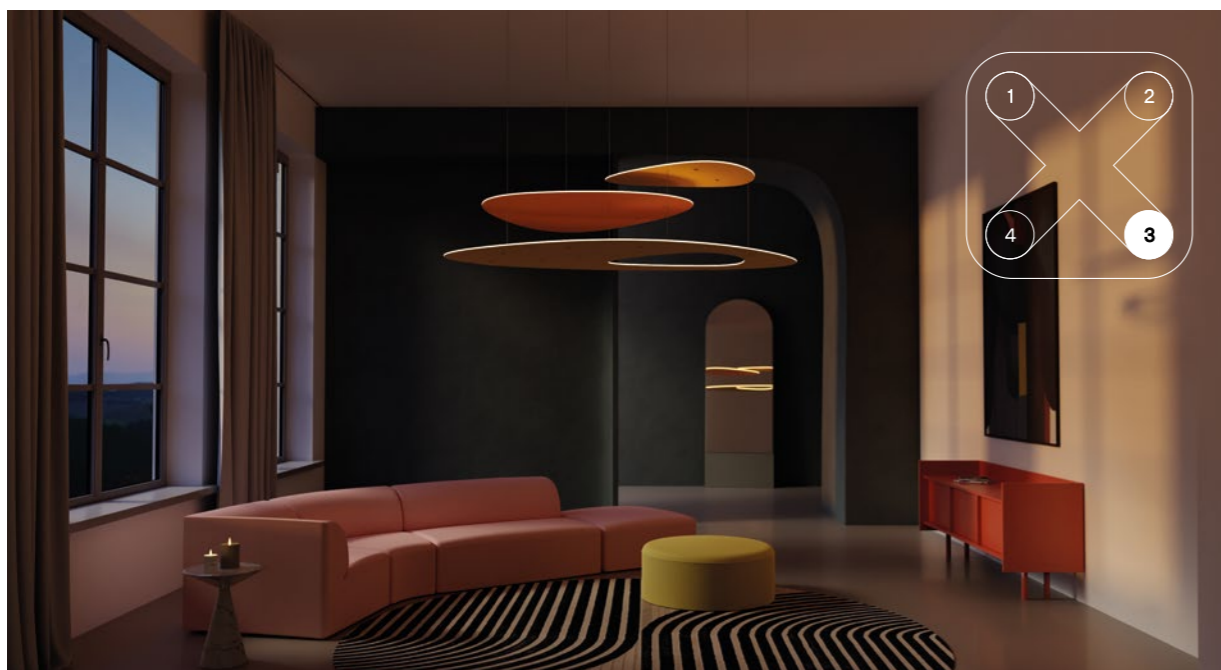
Architects and planners are thrilled by the previously inconceivable design possibilities that our luminaires offer. Today, high-class means individual. Join with us to form your individual luminaire, one that matches your ideas of shape, size, color, and lighting effect.

Form Follows You.

Three light components – a revolution in the industry! Graceful downlights with outstanding glare control, intense uplights and an elegant light edge add even more individuality to the lighting moods – and all of them come with separate and wireless controller technology from Casambi.



The homogeneously radiant light edge epitomizes our luminaires: This eye-catching highlight rounds off your light experience in every conceivable way, emphasizing the individual design to create a harmonious whole.







The connection between light and architecture and the interplay between light and form expand our current conceptions of individualized lighting scenarios.

The possibilities are unlimited when designing a lighting concept with SparkShapes: The free-flowing interaction between light and space creates almost unimaginable leeway for a new dimension in lighting design.



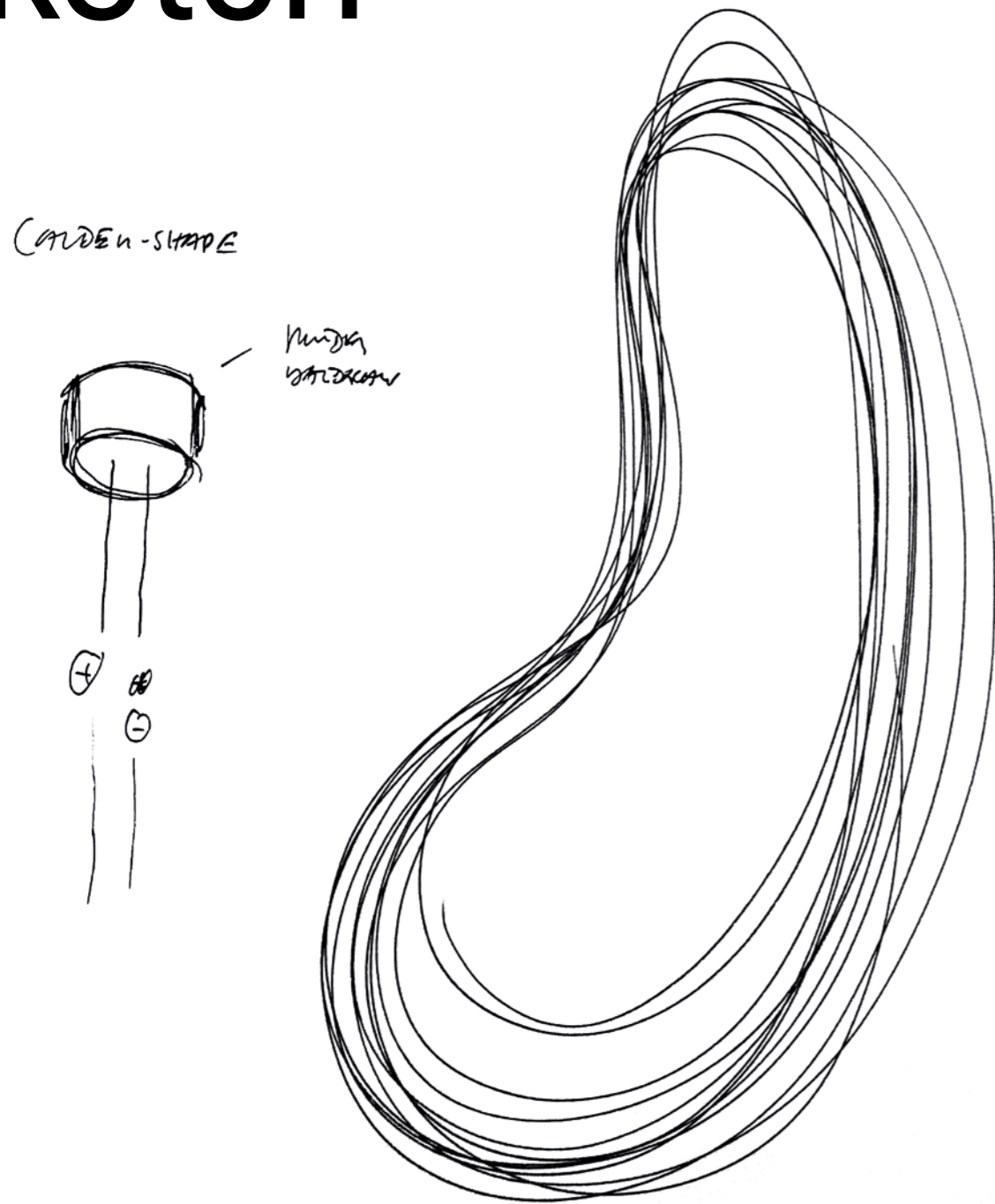
Unique designs are created that perfectly accommodate the specific requirements of the light and space. Luminaires can pick up on the surrounding forms or become very individual design elements in their own right.





imagine,  
free  
placement  
of light  
sources

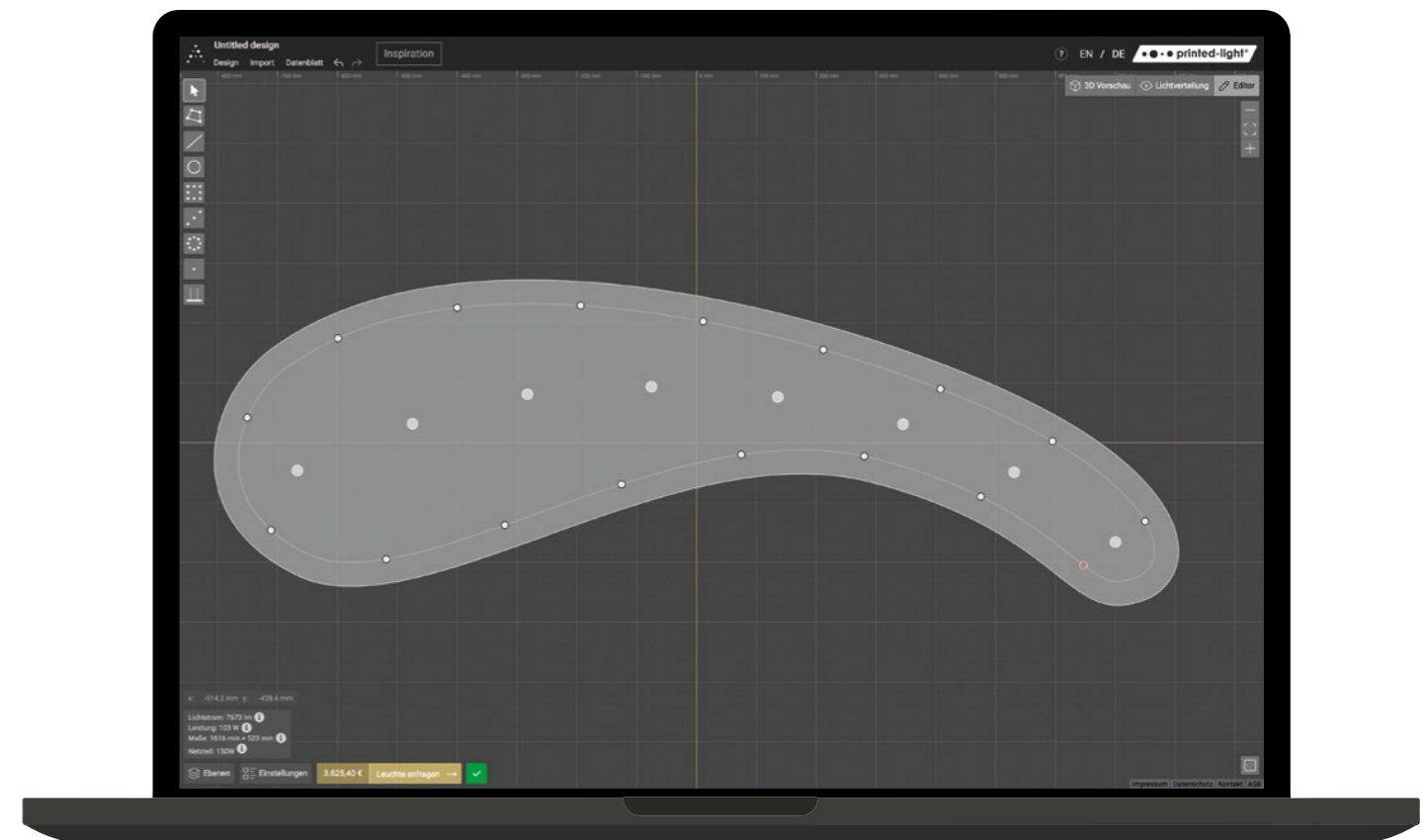
# sketch



Simple and online – design your very own luminaire right now. Just sketch your preferred shape either by hand or using your CAD program. Import geometries and then design them with light sources, or visit our library of creative forms for inspiration. Visit [www.lightsketch.ambricht.de](http://www.lightsketch.ambricht.de) to give it a try.

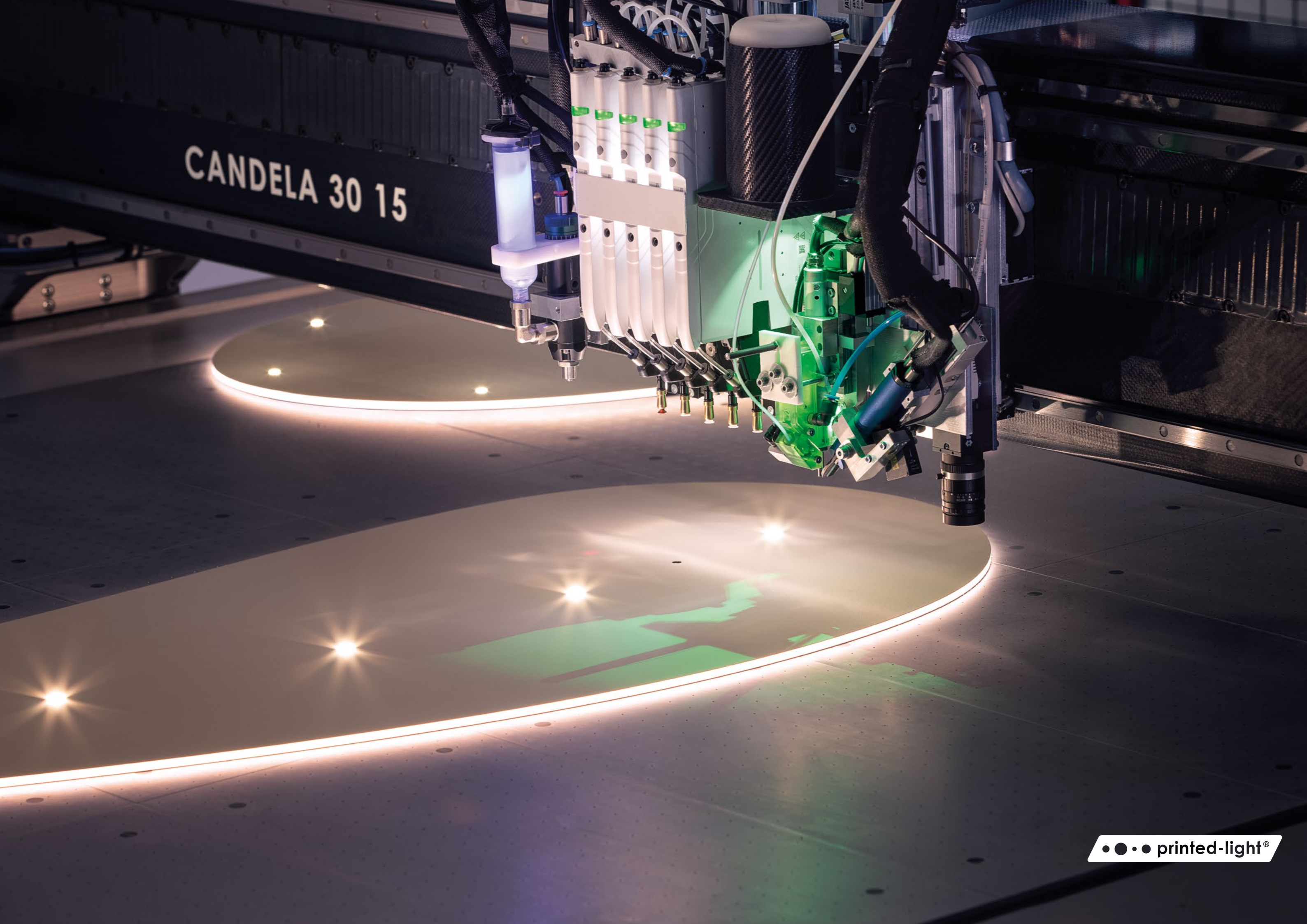
LightSketch is the first design tool for the lighting market that acts as a digital companion in the design process. Whether it's sculptural or subtle, geometric or organic, a recognizable model or free-form design – the light sources can be placed in any two-dimensional shape or arrangement. You build the luminaire and receive all the information about your design in real time, so its dimensions, light distribution, lumen, color rendering, performance, costs, and delivery time.

Be inspired and follow this design on LightSketch!



# shape

CANDELA 30 15



# print

CANDELA 30 15 production facility at the Munich headquarters.



Gutenberg invented letterpress printing – we invented printed-light!

True fascination comes when creativity and technology merge into one. Your LightSketch models will now become reality. We have developed the light tool for the digital age with our printed-light technology. This system combines innovative applications for light design with customized series production in a single method. The outcome? A radically new understanding of light: Unique. Digital. Scalable.

This is the only way to fashion unique designs that perfectly accommodate the specific requirements of the light and space – your luminaire, your “SparkShape”.

# shine

Three connected floors for communication, collaboration and concentrated work. This elaborately designed coworking space creates a playground with modern office furnishings. Everyone finds their favorite spot here. Sustainability is a key element within the Casino Futur community – and this concern is reflected in every detail of the interior design as well.

Architecture: GME, Bremen  
Interior design + lighting concept: POPO GmbH, Bremen  
Photography: Thilo Müller Photodesign



Casino Futur: Where the future is built  
Casino Futur – architecture as a counterpole to the historic buildings in the immediate neighborhood. But it remains subtle and unobtrusive, creating diversity in a modern urban cityscape.









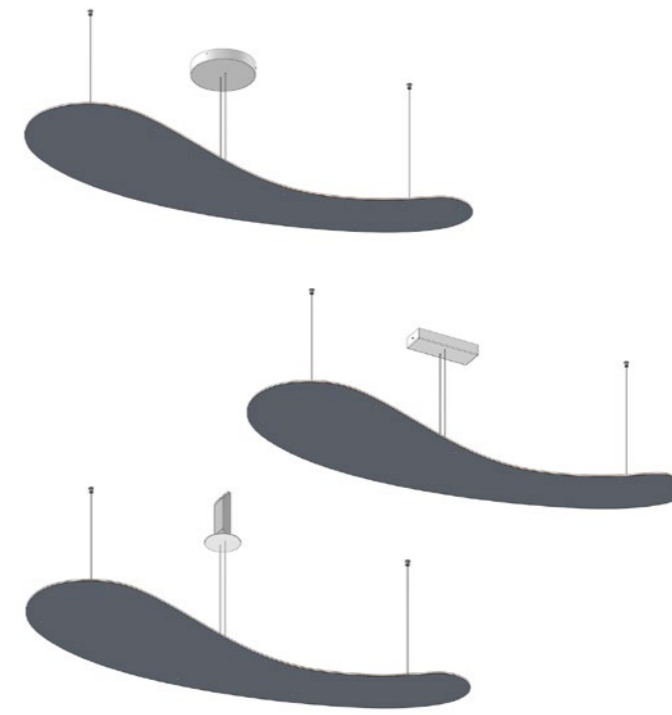
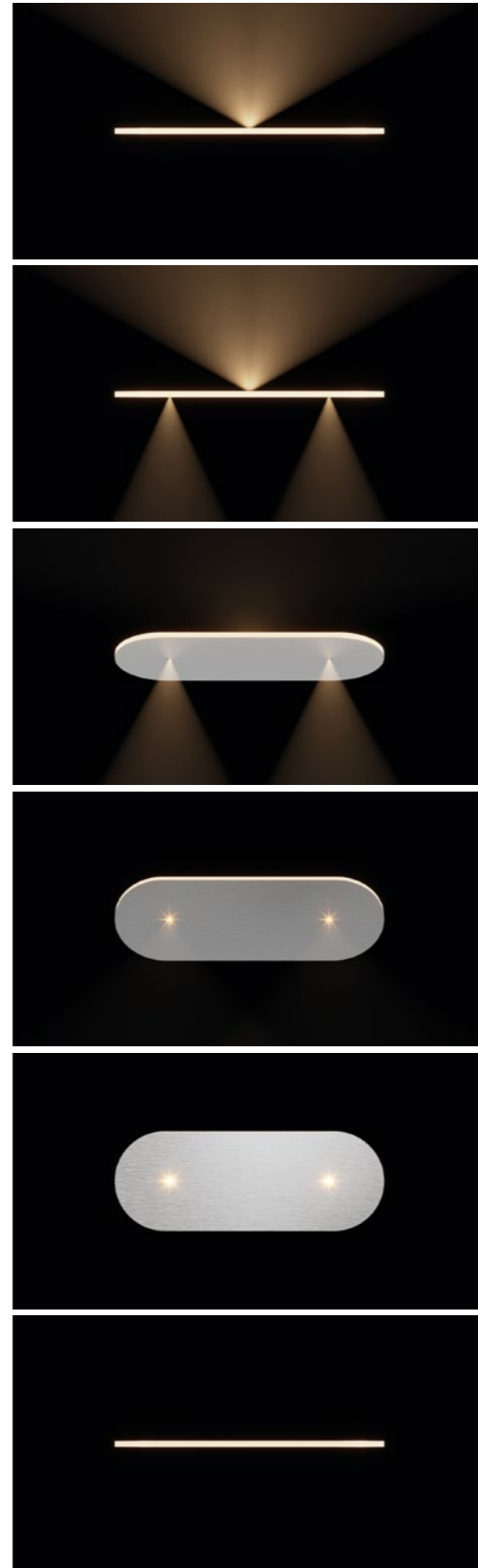


individual  
luminaires  
with your  
unique  
composition

products

# SparkShape

-  Individual form
-  Homogeneously radiant light edge
-  6 mm of simple elegance
-  Three separate light components
-  Free light source positioning
-  Casambi dimming technology



### Mounting options

Your SparkShape can be mounted on a suspended ceiling to emphasize a minimalist look with an externally positioned luminaire power supply. Alternatively, we also offer two canopy forms and sizes for mounting on a raw ceiling with predefined power outlet.

### Free positioning of the power supply

You can even select the position of the connection point to suit your preferences.

### Individual form

You can design your individually shaped SparkShape on an expanse of up to 250 × 125 cm<sup>2</sup>: your unique luminaire. The luminaire's slender body is just 6 mm thick and looks beautifully understated and uniquely elegant, depending on the angle of view and form.

### Light components and effect

Each SparkShape has three light components to create a magical lighting mood that is as individual as the luminaire itself: Graceful downlights with outstanding glare control, intensely radiating uplights and the unmistakable brightness of the light edge that gives your luminaire the perfect finishing touch.

### Light quality and CRI

The LEDs in the SparkShape luminaire are available in three color temperatures: 2700K, 3000K and 4000K. With a CRI of up to 98, the color rendering matches your standards for a unique light quality.

### Casambi dimming technology

Default integration of the innovative Casambi lighting control system enables the individual switching, dimming and integration of each light component in your SparkShape luminaire to create scenes. You can also manage the functions in the convenient app or with numerous compatible controllers.

## Uplights

Indirect component, single uplight, upper room section

CCT	Power	Luminous flux	CRI
2700K	5,8 W	418 lm	97
3000K	5,7 W	465 lm	96
4000K	5,8 W	540 lm	92

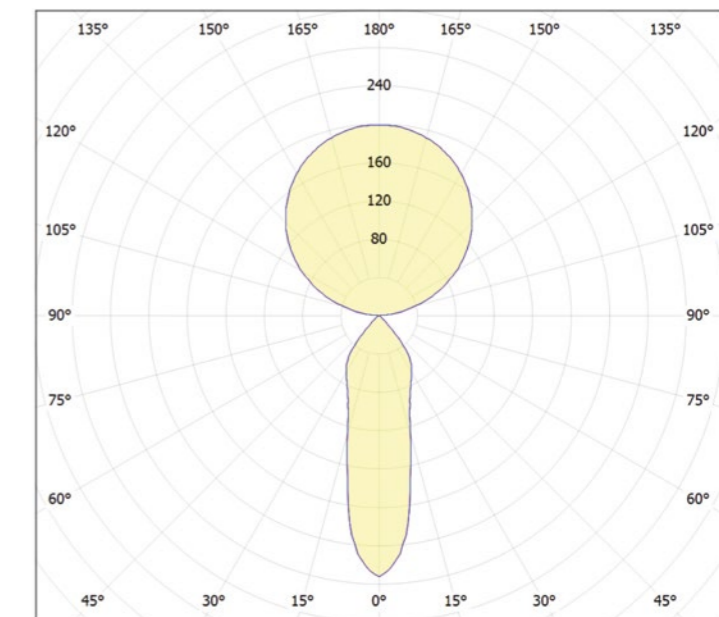
## Downlights

Direct component, single downlight, lower room section

CCT	Power	Luminous flux	CRI
2700K	2,1 W	180 lm	97.9
3000K	2,1 W	200 lm	98.1
4000K	2,1 W	220 lm	95

## light edge

CCT	Power	Luminous flux	CRI
2700K	4,1 W/m	200 lm/m	93
3000K	4,1 W/m	200 lm/m	93
4000K	4,1 W/m	200 lm/m	93



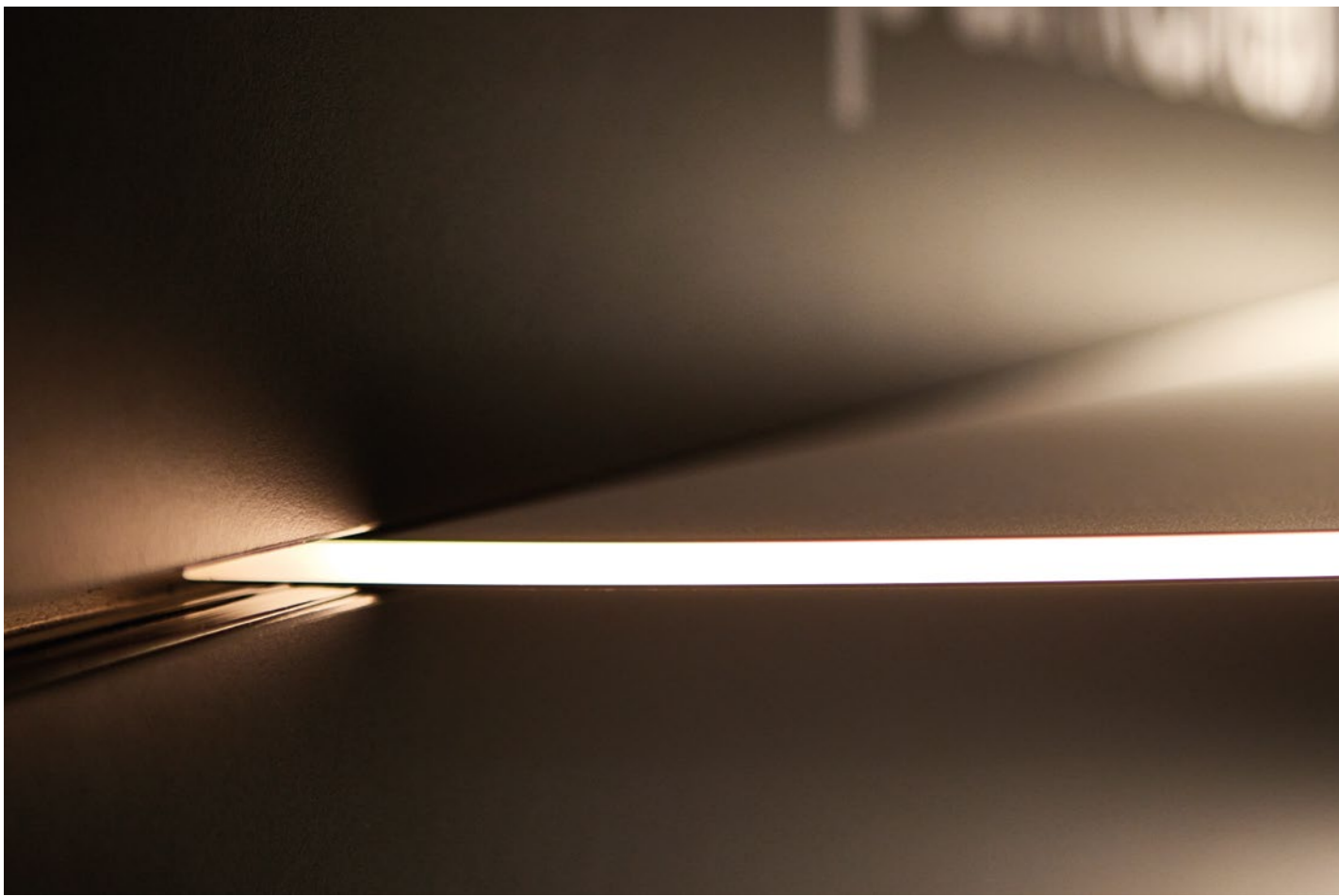




# SparkShelf

- 📏 Individual form
- ☀️ Homogeneously radiant light edge
- ⇕ 6 mm flat shelf
- ⊞ Integrated and freely positioned light sources on the underside
- ⊞ 3 available light colors (2700K, 3000K, 4000K)
- 🔌 Flexible pluggable incl. power supply

With their elegantly radiant look, our SparkShelfs draw attention to the products that you present: The graceful light edge beautifully frames your exhibits. The integrated, freely positionable LED spotlights on the underside create the perfect stage for the items located below.



The SparkShelfs are simply hooked into the Invisible 6 P/L profile, which automatically supplies the power.

With their patented light edge, the SparkShelfs literally float in the room, creating inspirational highlights in the presentation of your goods. Special optics produce an accentuated yet homogeneous light experience for the exhibits positioned below.

The SparkShelfs current collector is completely inserted into the rail and is therefore concealed from the customer.





Large selection of colored surfaces.



Anodized shades for a particularly elegant touch.

SparkShape and SparkShelf are manufactured in a variety of surface materials and colors according to customer wishes.

We will gladly provide color samples of the series surfaces on request. Flawless quality is guaranteed in every case – our materials and surfaces are certified according to CE, IMO, REACH and others.





# 13

years of experience

# 40

bright minds

# 1.200.000

light sources installed

We are Ambright.  
We are fascinated by light in all its conceivable forms.  
We accompany your project from the brainchild to completion.

Have you worked with catalog or system luminaires in your previous projects? Welcome to the future of light: Make your luminaires and light motifs as personal as your own signature – it's your project.

# Printed-light

Munich-based Ambright has developed a printed-light technology that enables architects, designers and planners to create individual lighting solutions and have them manufactured immediately. Founder and CEO Dr.-Ing. Florian Ilchmann explains how it works.

**STYLE PARK** April 21, 2022

**Anna Moldenhauer:** Dr. Ilchmann, you developed the idea for Ambright 13 years ago and have since worked tirelessly to bring the concept to market maturity. Where did you find the inspiration?

**Dr. Florian Ilchmann:** At the time I was studying electrical engineering at the Technical University of Munich and was given the opportunity to complete a doctorate in the field of medical electronics. The PhD brought me into contact with Siemens. They were looking for an ideal solution to illuminate a computed tomography machine, and I was confident that I could develop one. I founded Ambright to present my idea to Siemens in China, although I didn't have employees or my own premises yet. The technical facilities I was able to access at the university allowed me to build a model for the presentation – which convinced Siemens. The product was then put into series production, and since then we have remained a technology supplier for Siemens Healthineers, providing the lighting technology for mammography devices, X-ray devices or in fluoroscopy, among others. This knowledge is an immense blessing, as the lighting and luminaire systems for medical devices have to satisfy particularly strict requirements. It was a great way for Ambright to learn – and I am very grateful for the opportunity.

**You and your team have developed a unique, automatic method of printing light with extreme precision. The “SparkShapes” are among the results of this method. How were they created?**

**Dr. Florian Ilchmann:** The term “printed-light” evolved over the years because we developed an additive platform technology for medical devices and then transferred it to other uses. Our method enables us to harness electrical connectivity almost like parenthesis. Electronic components are usually mounted on circuit boards, but the board was essentially designed to accommodate a large number of components, while remaining as small

as possible. We developed our technology for use cases that are as large as possible but only contain a moderate number of components. And that's how printed-light emerged. We worked with a laboratory setup in the initial years, but last year we opened “CANDELA” as our first major series production facility. I am very proud of our team.

**How does the process actually work?**

**Dr. Florian Ilchmann:** The specific procedure is as follows: The first step is to position normal electronic components we would otherwise mount on a circuit board. Once they are in place, we use a high-frequency additive process to apply copper and establish an electrical connection between the components. These copper conductors essentially lead from one component to the next and form the conductor tracks – like on a circuit



board, just much larger. This enables us to build large-scale electrical circuits and connect a whole range of active components. They can be implemented on a whole variety of materials like plastics, metals, paper, or films to build customized luminaires and other products. We embed the active components such as LEDs, drivers or suspension points and optics in a specially developed composite material – so all the technical components we need to make the luminaire work smoothly. Once the components are connected, we mill the carrier material into an individual form. This gives us a manufacturing process that allows flexible responses to issues of formal vocabulary and the luminaire's lighting design, as users can specify the light source locations in each particular case. The number and position of down- and uplights can also be varied to suit the requirements. We are therefore able to produce individual, unique pieces in a single process, in which the form of the luminaire, the amount of light and the power supply position perfectly accommodate the customer's wishes.

**What else can “SparkShapes” do?**

**Dr. Florian Ilchmann:** Our method is still in a nascent stage, as we want to encourage designers to plan with our product. Established luminaire manufacturers currently offer their portfolio in catalogs. Our product promises flexible design, is digitalized and more agile. In principle, the technology can be used to create any form in any design. We want to shine a spotlight on the design profession and offer our customers a lighting tool that exploits this freedom. Their personal signature should be evident in the luminaire. Broadly speaking, “SparkShapes” allows us to produce a catalog item that reflects certain ideas and then place it in various dimensions and alignments – creating even multi-layered, spatial sculptures.

**How does the configuration work?**

**Dr. Florian Ilchmann:** We wrote the “LightSketch” tool to allow customers to draw their own ideas and design the SparkShapes. This means that a design sketch can be exported from a CAD or graphics program into our digital tool. Customers can then position the light sources according to their preferences and immediately receive the luminaire's technical data – so how many lumen, how many lux at what distance, and what would it cost to produce the design? What changes if I select a different color temperature or surface? The data change in real time, depending on the selection – including a feasibility check. After finalizing the design, users receive a data package that is in no way inferior to what a manufacturer of conventional luminaires would offer: 14 pages of information, including inspirational impressions and 3D views. We want people to enjoy designing a luminaire, without having to request a new light calculation each time a single parameter changes. The high degree of digitalization is an important step and uniquely diverse in the industry. LightSketch places no limits on design options and is certainly not a configurator that endlessly delivers the same selection of possible combinations.

**The material used to produce the luminaire has a prescribed thickness in each case. Does this affect the design freedom?**



Dr.-Ing. Florian Ilchmann

**Dr. Florian Ilchmann:** The variety of possible forms is endless from a mathematical perspective. But there are manufacturing requirements that we accommodate within LightSketch, for instance a maximum size of 2.5 × 1.25 m<sup>2</sup> per luminaire. 23 different surfaces are possible at present. The material is just six millimeters thick, and it already integrates all active components such as the drivers or the optics for glare control.

**Which materials do you use to build the “SparkShapes”?**

**Dr. Florian Ilchmann:** We work with two aluminum layers with a thickness of 0.5 mm that are used for thermal conduction. They are placed on an acrylic glass core. Apart from the electronics, the luminaire consists of only these materials – although customers can choose between anodized aluminum and color coating.

**You are not prioritizing Human Centric Lighting (HCL) at present. Would it be possible to integrate this function later on?**

**Dr. Florian Ilchmann:** We currently offer three different light colors for “SparkShapes” – 2700, 3000 and 4000 Kelvin. Our customers can choose which one best suits their project. We are also working on an HCL variant right now. The color rendering index (CRI) is 98, which is an excellent value. People can feel good light, so we believe that this is essentially the most important value. Flicker-free dimming was crucial for us as well. Each of the three SparkShape light components has wireless control capability using Casambi technology.

**How can you reconcile the immense freedom to design products with the notion of recognizability for your company?**

**Dr. Florian Ilchmann:** You have touched on a vital aspect. We achieve recognizability not only due to the consistently slender design, but also with our light edge – the third light component

in a SparkShape. It is an immediately recognizable element, regardless of the individual design. People will then immediately recognize the luminaire as an Ambright, whatever the actual geometry. We sourced our inspiration in discussions with architects, who expressed a preference for an elegant finish for the edges. That's why we developed a graceful edge that adds to the visual impression that the luminaire is floating in space.

**Ambright and the Lindner Group have embarked on a strategic partnership. How does this reflect in the product?**

**Dr. Florian Ilchmann:** We are deeply rooted in an inventive spirit of engineering. So we were keen to find a strategic partner for our work in the field of architecture. I contacted the Lindner family directly and managed to convince them that the topic of printed-light has immense potential for architecture. And it is not just the luminaires, but also our other applications, as we use the system to produce shelves and acoustic elements – to name just two examples – which we can shape according to the customer's wishes and equip with light. Our platform technology can also be transferred to radiant cooling ceilings as well. So there is a large number of relevant applications. As a general contractor, the Lindner Group has immense expertise in the successful implementation of interior fittings – you can only marvel

at what the company achieves. We can learn a lot from this, and the partnership helps us to understand the market.

**What comes next for Ambright?**

**Dr. Florian Ilchmann:** We had a small booth at the Light + Building show in 2018, which we used to ask the market whether there was interest in individual luminaires. The feedback was very positive, although we were unable to manufacture the product at the time. But our strategic partnership with Lindner enabled us to build a series production facility, which we put into operation late last year. We are currently supplying a lot of products to the highly discerning superyacht sector, which attaches considerable value to individuality. The next step will be to present "SparkShapes" at the Architect@Work in Munich. In addition, we will also exhibit at the Light & Building Autumn Edition in October, and we are particularly delighted to announce that we were recently nominated as one of the three finalists for the German Innovation Award 2022.

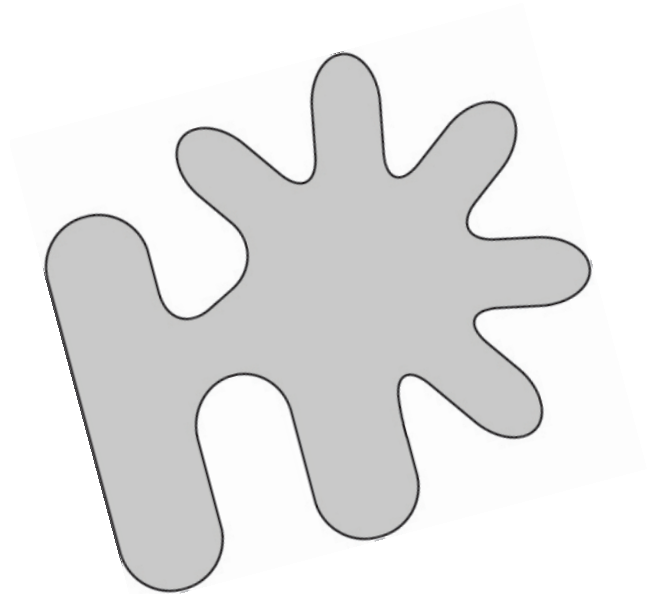
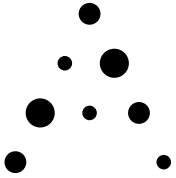
This interview was published in Stylepark Magazin for Architektur und Design on April 21, 2022 at [www.stylepark.com](http://www.stylepark.com)

# Now let your imagination roam free and design your own SparkShape!

Dr.-Ing. Florian Ilchmann with a model of the SparkShapes



[www.lightsketch.ambright.de](http://www.lightsketch.ambright.de)



For Australian and New Zealand enquiries, please visit [sparkshape.au](http://sparkshape.au).

**Ambright GmbH**

Graf zu Castell Straße 1  
81829 Munich  
Phone: +49 89 856 34 82 0  
[sparkshape@ambright.de](mailto:sparkshape@ambright.de)  
[www.sparkshape.de](http://www.sparkshape.de)



**hotbeam**  
COOL LIGHT®