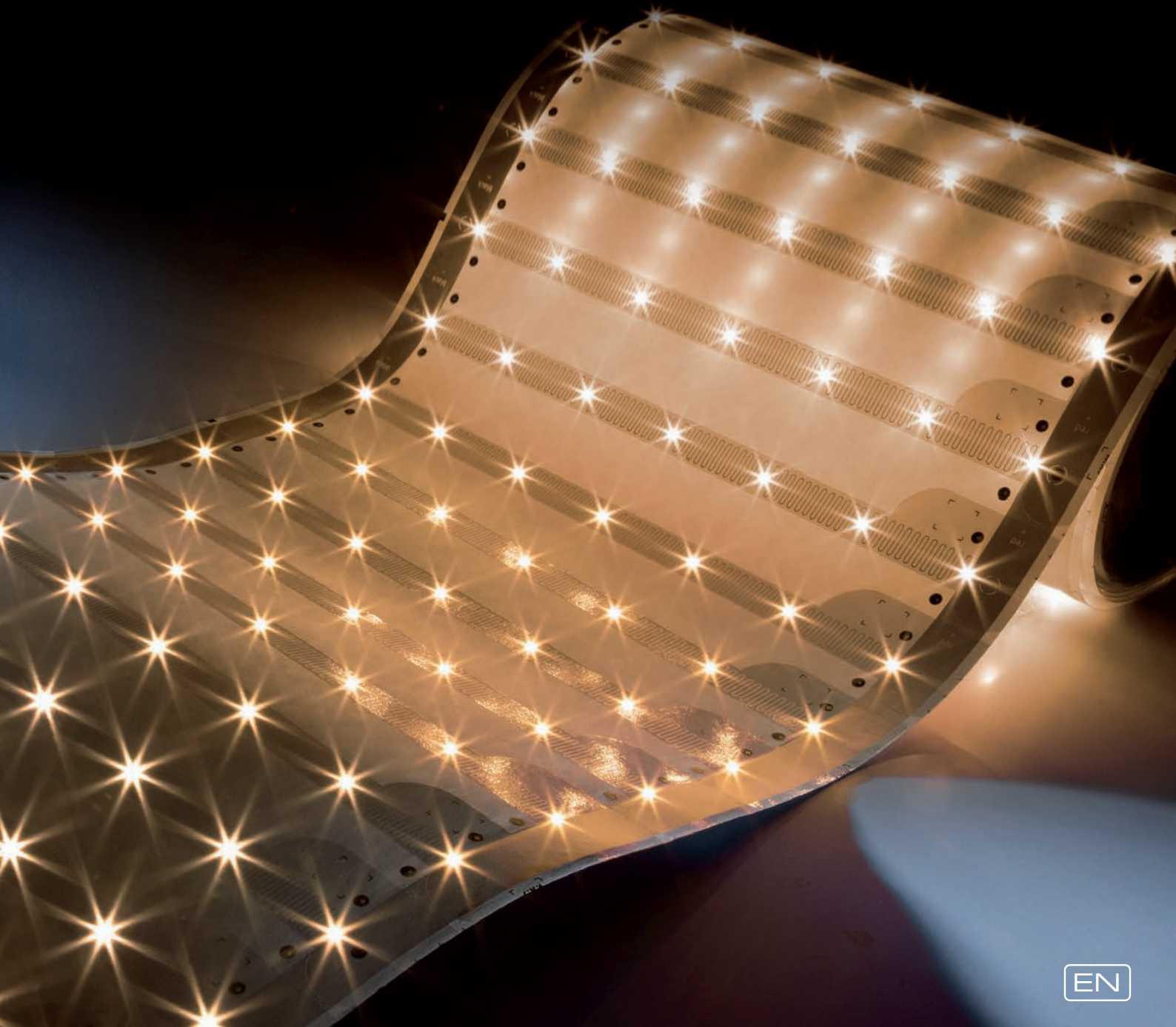


# High-Performance LED-Technologies & Solutions



EN

*We bring your ideas to light*

LUMITRONIX® offers you a large selection of LED modules and develops and produces custom solutions according to your specifications!





## LUMITRONIX® - leading LED competence

LUMITRONIX® has been one of the leading specialists for LEDs and LED products for many years. As a competent partner for the industry, we possess extensive application knowledge from numerous sectors. LUMITRONIX® is not only involved in the distribution of LED products, but also develops and manufactures in-house according to customer-specific requirements. Two ultra-modern production lines with the latest machine technology allow the assembly of both rigid and flexible PCBs. A special feature of the flex production is the reel-to-reel processing, with which almost endless lengths can be realized. The production site in Hechingen furthermore provides the benefit of being able to respond quickly and reliably to individual customer wishes and requirements. Quality Made in Germany.

## Development, production and distribution – all from one source

Our development engineers design modules and control technology according to your requirements and matching your individual applications.

We are official distributor of the market-leading LED manufacturer Nichia, the lens manufacturers LEDiL and Carclo as well as partners with Osram Opto Semiconductors and Lumileds. We also have all well-known LED manufacturers in our portfolio.

## Your project in good hands

### Benefit from our know-how and our state-of-the-art manufacturing



Quality „Made in Germany“



All from one source: development, distribution and production



Customer-specific solutions



Short reaction times, fast delivery



Direct contacts



More than 3000 satisfied customers



LED specialist with 15 years of experience



ISO-certified quality



Extensive industry expertise







## Ultra-modern and flexible – our in-house production

In our in-house production, high-performance automatic assembly machines place components extremely quickly and precisely. By means of a very gentle soldering process in an inert gas atmosphere, we improve the thermal connection between component and board.

With our AOI visual inspection system, we check every single soldered joint and every component using the latest 3D inspection method to reliably detect any defects and ensure high quality.

Since 2014 we have been assembling rigid LED modules according to the individual requirements of our customers on our SMT line at a speed of up to 28000 components/hour. State-of-the-art machines with the latest technology allow the processing of PCBs with a length of up to 600 mm, which are completely traceable thanks to a scanned barcode.

## Certified quality

- Certified quality management according to DIN EN ISO 9001 in all areas
- Commitment to occupational safety and social guidelines far beyond the legal requirements



## The new Flex production line – expand your possibilities

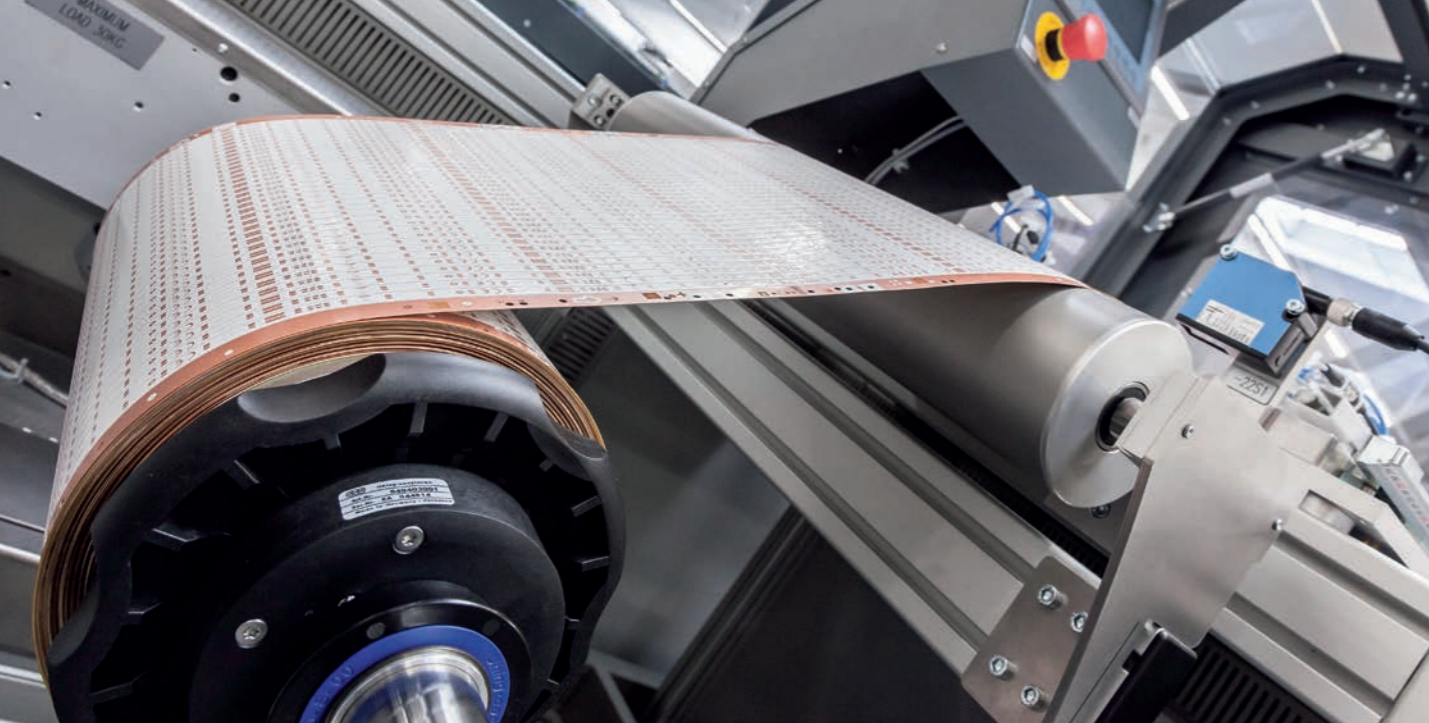
Our innovative manufacturing technology with the patented process of plasma direct metallization turns flexible substrates into electrical conductive and solderable circuit boards. Even those that have not been suitable for an assembly with electronic components before. Thus, the FPCs we assemble open up many new application possibilities in the entire industry.

Solderable paper FPCs, for example, are cost-effective, open to diffusion and therefore ideal for large-area applications such as wallpaper or advertising spaces.

PET can also serve as a base material for FPCs. This plastic is less expensive than polyimide, has a very good stability, a high load capacity and a low weight. Coated with a thin aluminium layer, which is made solderable by plasma metallization, the PET FPCs can be equipped with components.








## Z-Flex LED Strips


Reel-to-reel 

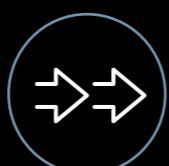
 made in germany


## Reel-to-reel production


### Multiple advantages. New opportunities.


- 


Endless products possible without error-prone soldering
- 


New base materials such as PET, polyimide, paper etc.
- 


Fast and automated processing on large production lines
- 

Easier handling and installation thanks to self-adhesive backside
- 

Savings potentials in logistics and warehousing
- 

Design advantages in comparison to rigid boards
- 

Less residual material due to the processing of large roll lengths
- 

Higher functional density: dimensions and weight of components lower
- 

Use of organic base material contributes to recycling

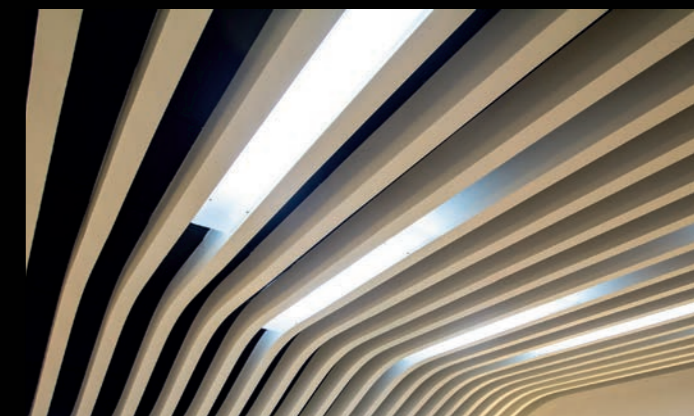
## Simplified handling for luminaire manufacturers

The 280 x 20 mm Z-Flex modules are ideal for use in narrow industrial or workplace luminaires. One self-adhesive module follows the next on the roll, which makes handling during installation much easier. Up to five modules can be operated with one feed. All common light colours are available. There are two versions: The low forward voltage of the SELV variant guarantees that no voltage flashover can occur on the lamp housing. The product can therefore be separated every 280 mm without danger. Furthermore, no connection of the individual modules is necessary.

The non-SELV variant is compatible with non-SELV power supplies, thus providing an efficient and attractively priced solution. The product is divisible every 280 mm – even at high forward voltages. The individual modules are not connected by conducting paths. The modules can be connected to each other by means of a connector.

### FEATURES:

- Reel production
- Simple and convenient installation
- Dimensions: 280 x 20 mm (Zhaga standard)
- Operating length of up to 1.4 m (5 modules)
- Light colours: 2700 K, 3000 K, 4000 K, 6500 K
- Touch-proof SELV version
- Efficient, less expensive non-SELV version

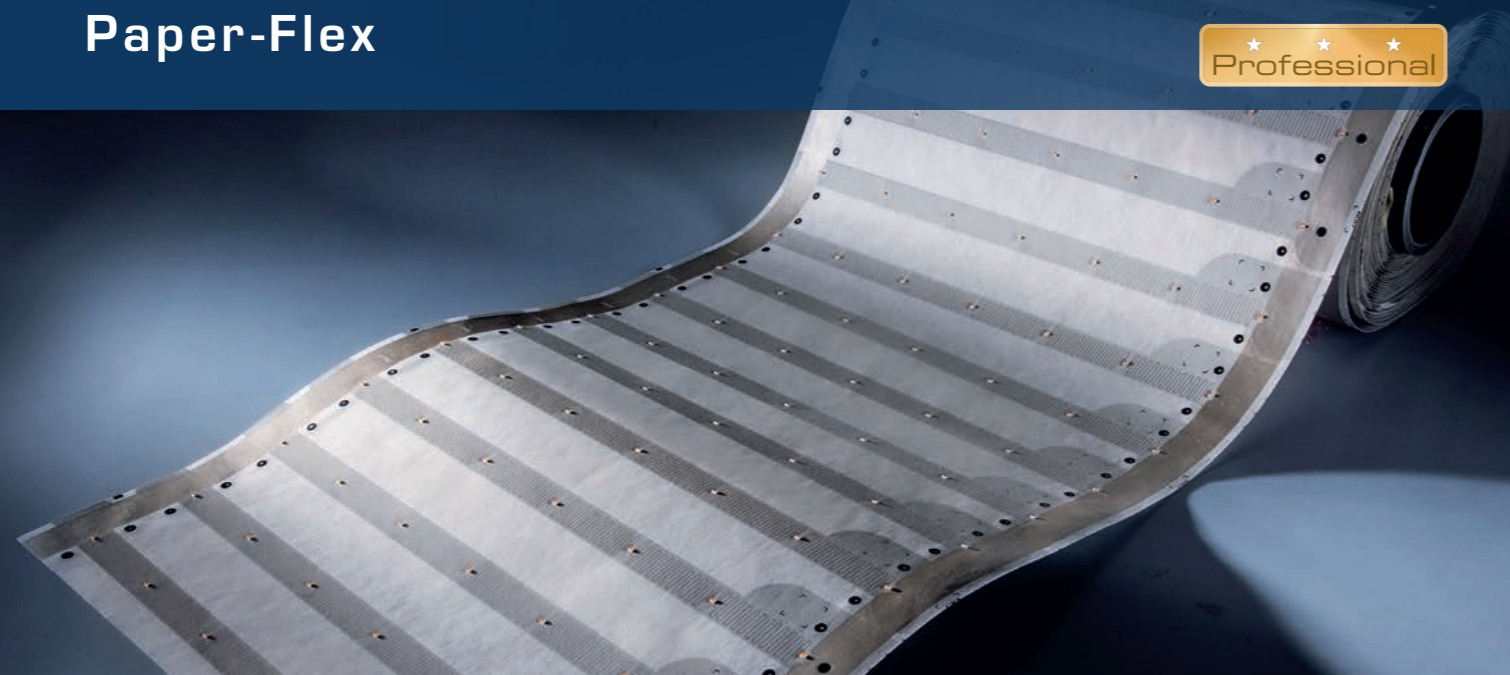


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Luminous flux	Power	Efficiency	Current	Voltage	Colour temperature
1355 lm	7.4 W	183 lm/W	900 mA	8.25 V	2700 K

Z-Flex SELV





made in germany

Reel-  
to-reel



## Luminous paper thanks to printed electronics

Printed electronics is currently one of the most promising key technologies on the market. A printing process is used to apply liquid compounds to a wide variety of surfaces. These conduct electricity and thus entire circuits can be printed on materials such as plastics, ceramics, textiles or even paper. The potential of the technology is enormous - industry-wide it promises to revolutionize existing processes.

The technology is also a real asset for the LED market. Our pioneering product, which was developed in cooperation with the Marburger Tapetenfabrik, uses an innovative process to illuminate paper – for example, in the form of wallpaper fully covered with LEDs.

## Enormous potential in many sectors

Paper-Flex is currently the only LED module that uses paper as its base material. The possible areas of application for paper in luminaires are almost limitless: from classic luminaire production for the furniture industry to the packaging and advertising industries, countless sectors are potential customers.

The background: Our product newcomer comes with a high degree of customizability. Depending on your wishes, you can choose from a wide variety of decorative surfaces. Whether with or without punching or diffusion layer - basically any combination is possible.

Even the combination of modules for double-sided lighting is conceivable. The option of additional sensors for measuring and controlling data, such as temperature or humidity, further expands the potential. This can generate great added value, especially in the packaging industry.



### FEATURES:

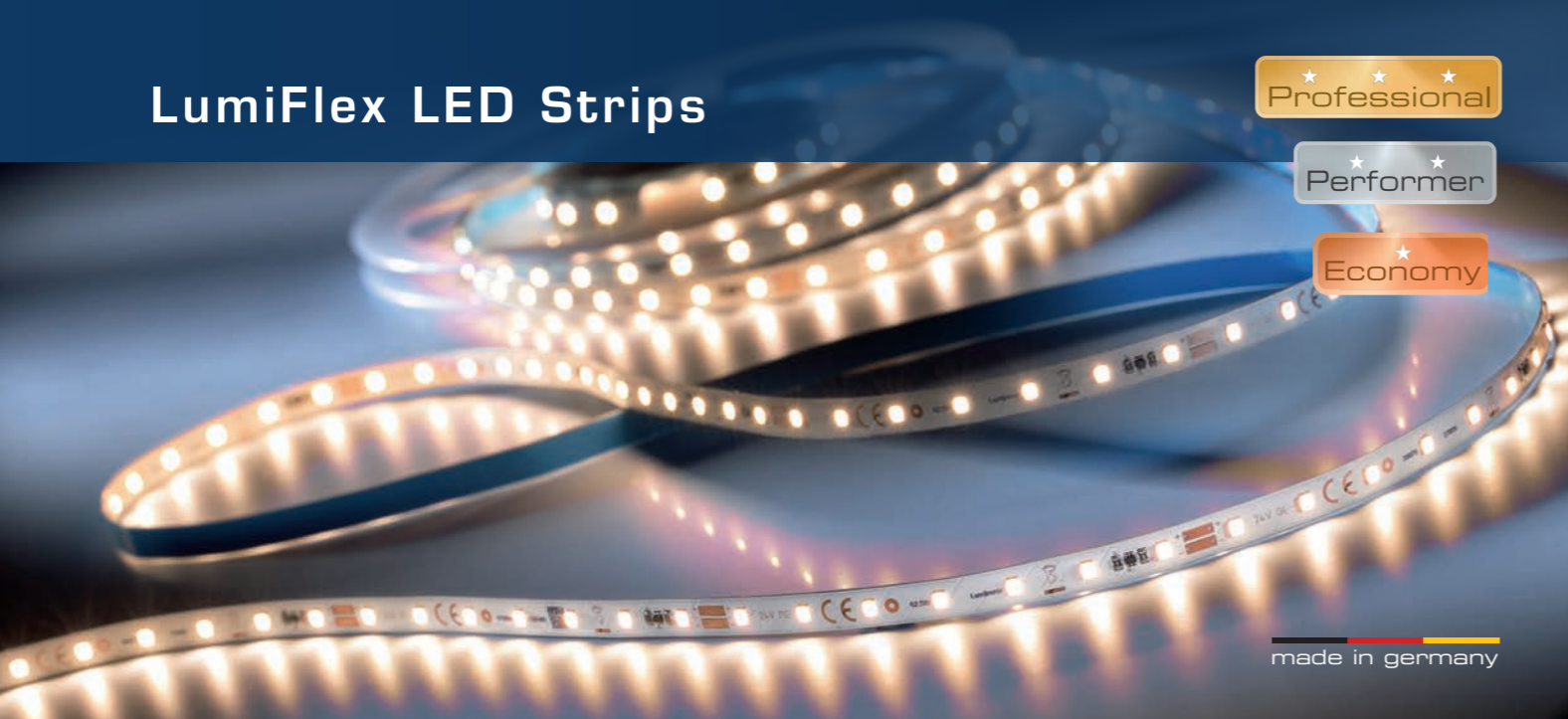
- Paper as base material with good price structure
- Easier processing compared to rigid boards
- Dimensions up to 24850 x 350 mm
- Very light and very thin
- Ideal for large-scale applications
- Colour rendering: CRI >80
- Individual configurations available on request

Luminous flux	Power	Efficiency	Current	Voltage	Colour temperature
2900 lm	20.88 W	139 lm/W	0.87 A	24 V	2700 K

Paper-Flex (Data for one square meter)



# LumiFlex LED Strips

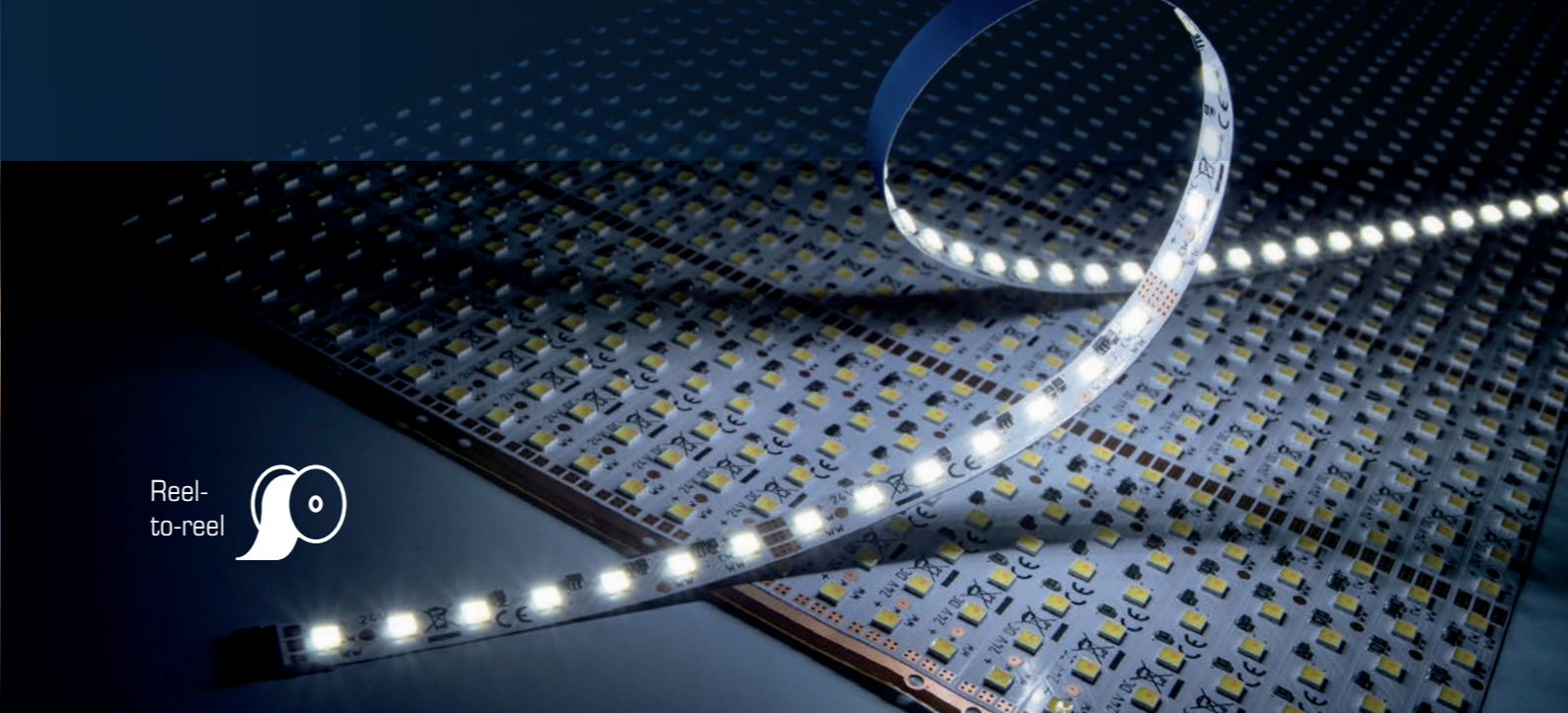


Professional

Performer

Economy

made in germany



Reel-to-reel

## Flexible in application and installation

Thanks to the self-adhesive back side, low profile, high efficiency and wide range of versions, the LumiFlex LED strips offer a wide range of applications and are especially easy to install. Further possibilities arise with the new Tunable White version, on which the new 2in1 LED from Nichia is installed, the RGB version and the LumiFlex LED strip with the innovative SunLike daylight LEDs from Seoul Semiconductor and Toshiba Materials.

Whether as cove and plinth lighting, for trade fair and kitchen construction or for use in luminaires - the LumiFlex LED strips are the right solution for almost every application due to their various designs with different LED types and different LED quantities.

Three different categories (Economy, Performer, Professional) offer the greatest possible variability in terms of application requirements and also quality. Professional strips, for example, come with a 5-year warranty.



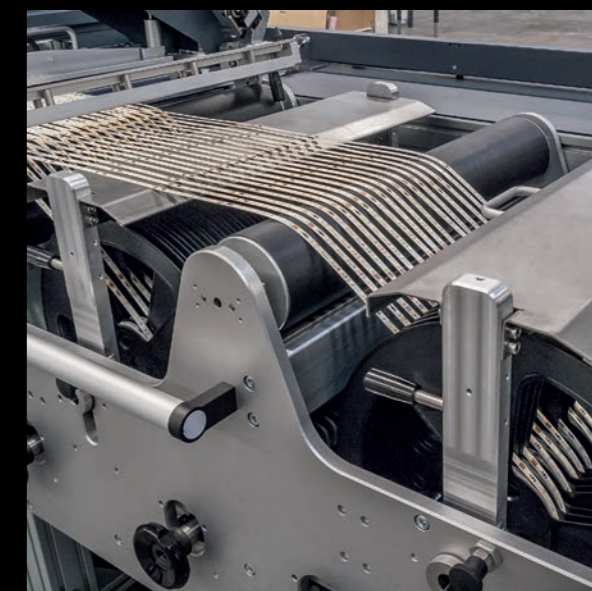
### FEATURES:

- Only 8 mm or 10 mm wide
- Very efficient and bright - up to 2430 lm/m (LumiFlex Professional with 4000 K)
- Homogeneous light thanks to Nichia 3-Step MacAdam binning
- Up to 5 years warranty
- Easy connection due to 24 V
- Self-adhesive back
- Version with Sunlike daylight LEDs
- Tunable White version
- RGB version

## Up to 50 meters in length thanks to new production line

The new LumiFlex350 Professional and LumiFlex560 Professional Tunable White are processed on the new LUMITRONIX® flex production line in lengths of up to 50 meters using the reel-to-reel process.

The great advantage of this method is that the flexible base material is plated through to the entire length and does not need to be soldered every 50 cm for longer applications like standard flex strips. This minimizes the risk of errors. Other benefits of the flex strips produced on a roll are low storage and transport costs and a simplified assembly.



Compared with conventional LED strips on a flexible basis, LUMITRONIX® LumiFlex strips produced on rolls offer the possibility of creating larger areas with a one-off installation effort.



Luminous flux	Power	Efficiency	Current	Voltage	Colour temperature
1396 lm/m	9.6 W/m	145 lm/W	400 mA/m	24 V	2000 - 6500 K

LumiFlex Performer TW at 6500 K



# SlimFlex LED Strips

Professional

Performer



made in germany

# FlexOne LED Strips

Performer



made in germany

## Even slimmer – even more possibilities

SlimFlex LED strips are - as their name suggests - even narrower at just 5 mm and can be used wherever other flexible strips are too wide. Like the LumiFlex, they are extremely flexible and can be installed even over edges and rounded corners. The LED strips are supplied on rolls in lengths of up to 2 metres in one piece and can be easily cut with scissors every 3.3 or 10 centimetres. The maximum length per feed is 2 meters. Longer strips in one piece are possible with corresponding additional feeds.



### FEATURES:

- Only 5 mm width with 120 LEDs/m (SlimFlex Professional) and 140 LEDs/m (SlimFlex Performer TW)
- 180° angle of reflected beam (SlimFlex Performer Tunable White)
- Very efficient and bright – up to 1070 lm/m
- Homogeneous light thanks to Nichia 3-step MacAdam binning
- Long-lasting: Up to 5-year warranty
- Simple connection with 24 V
- Tunable White version available
- Self-adhesive back side

Luminous flux	Power	Efficiency	Current	Voltage	Colour temperature
2120 lm/m	18 W/m	118 lm/W	750 mA/m	24 V	4000 K

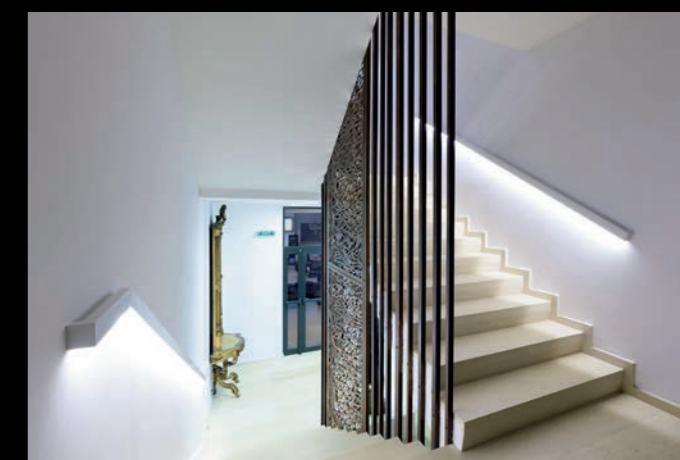
SlimFlex240 Professional

## Constantly bright and divisible after each LED

Thanks to their divisibility after each LED, the new FlexOne LED strips open up many new applications because they adapt perfectly to the environment they are intended for and close flush without creating shady spots. Thanks to the additionally applied linear regulation, the individual LED current is kept constant over the entire module length, so that even with one-sided voltage supply, the last LED still shines just as brightly as the first LED on the strip. It is absolutely reliable in terms of brightness and is equipped with high-quality double-sided adhesive tape on the back, which holds on to a great many surfaces. This allows an easy and comfortable installation.

### FEATURES:

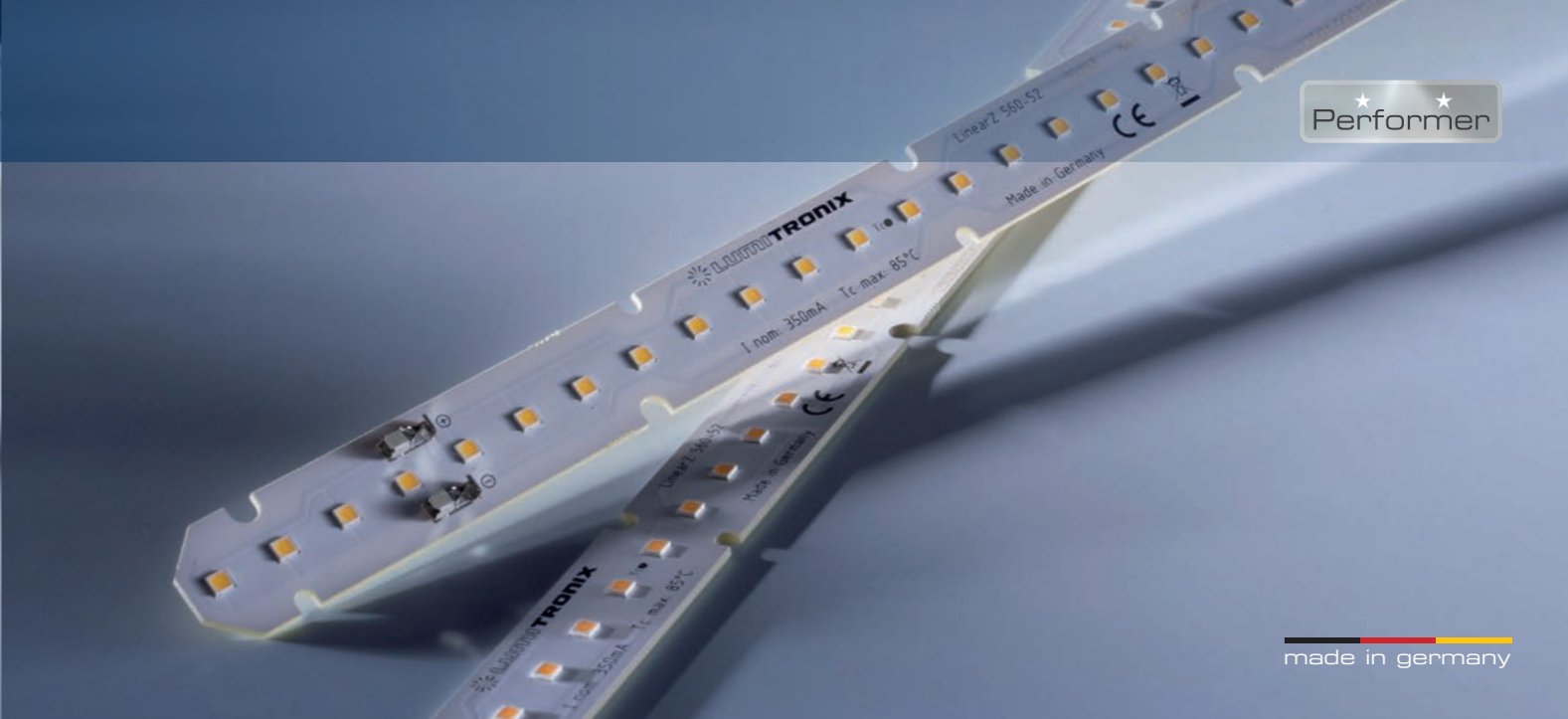
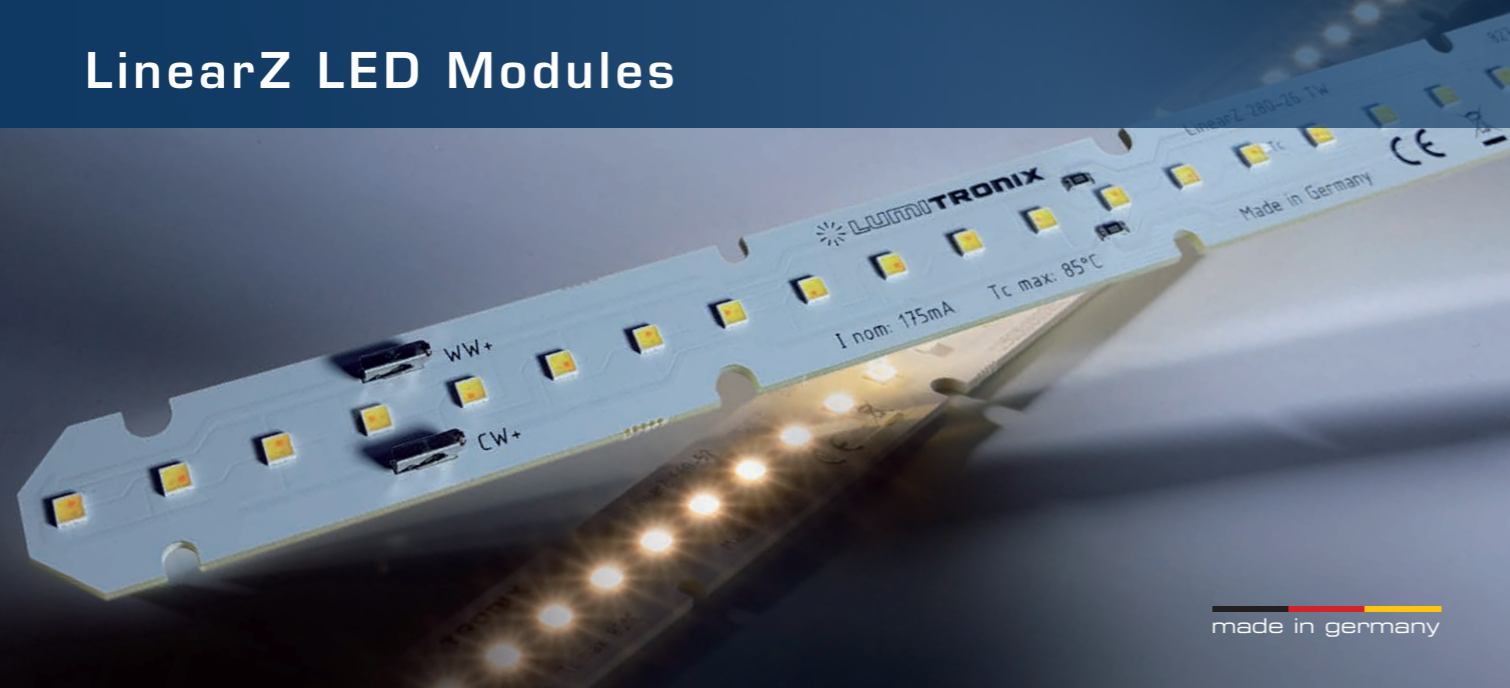
- The FlexOne is available in the colours warm white (2700 K), neutral white (4000 K) and cold white (6500 K).
- 3 years warranty
- Easy connection due to 12 V
- Self-adhesive back
- Linear control for constant brightness over entire length



Luminous flux	Power	Efficiency	Current	Voltage	Colour temperature
2375 lm/m	30W/m	86 lm/W	2500 mA/m	12 V	4000 K

FlexOne250 Performer 4000 K





## Highest efficiency, simple installation

The classic LinearZ LED modules offer a sensational light efficiency of up to 172 lumens per watt with a luminous flux of 2260 lumens. Thanks to the narrow mounting, no light spots are visible behind a cover. They are available in two lengths with 26 or 52 LEDs. Due to the high-quality Nichia LEDs in 3-step MacAdam binning, the modules emit an even and homogeneous light.

All LinearZ modules are easy and convenient to install. Designed according to the Zhaga standard, the modules are compatible with common luminaires. They require no cooling and can be connected without soldering. Their slim design makes them ideal for use in narrow luminaires in industrial or workplace lighting.



### FEATURES:

- Highest efficiency with up to 172 lm/W
- Designed according to the Zhaga standard
- No heat sink necessary
- No light points thanks to narrow mounting
- New full spectrum LEDs Optisolis and Sunlike (Better contrast vision and improved reading, improved ability to concentrate)
- Version with Nichia Vitasolis LEDs for activating light with high efficiency
- Tunable White version with Nichia 2in1 LEDs
- Horticulture version

## The appropriate LinearZ LED module for every requirement

By using the innovative full spectrum LEDs from Seoul Semiconductor (SunLike) and Nichia (Optisolis), LUMITRONIX® has additionally fitted its LinearZ modules with light emitting diodes that have a CRI value of almost 100. Their light spectrum no longer has any gaps and is therefore comparable with sunlight.

Additions to the range also include versions with the 2in1 Tunable White LEDs and the Vitasolis LEDs from Nichia. The unique spectral distribution of the Vitasolis LED illuminates objects well and achieves a high light output. While Vitasolis provides a natural white colour, a lot of light is emitted in the cyan range. As a result, vitality can be boosted and „office fatigue“ prevented.

With the Nichia 2in1 Tunable White LED, mixed colours can be realised more easily and diffusers can be moved closer to the light source. The result is a very homogeneous light.

The LinearZ product family is complemented by modules specially developed for horticulture applications.



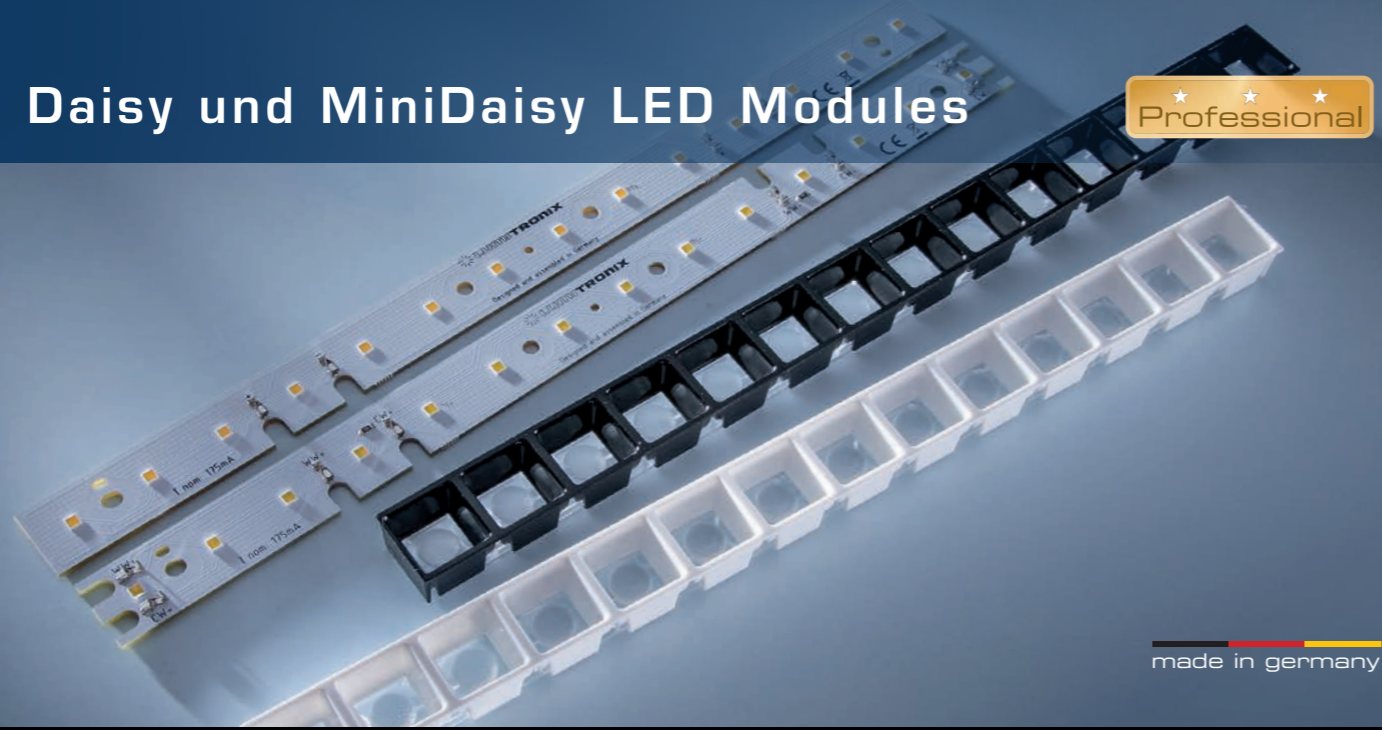
Luminous flux	Power	Efficiency	Current	Voltage	Colour temperature
2260 lm	13.13 W	172 lm/W	350 mA	37.5 V	6500 K

LinearZ 560 865 cold white



# Daisy und MiniDaisy LED Modules

Professional



made in germany

## Perfect for LEDiL optics

The Daisy and MiniDaisy module series from LUMITRONIX® were developed in close cooperation with the Finnish optics manufacturer LEDiL and are particularly suitable for an installation in linear luminaires for offices and workplaces. The narrow MiniDaisy modules were produced in two versions: one with 14 neutral white Nichia LEDs, a second version with 14 of the new 2in1 Tunable White LEDs from Nichia. This new LED is the first in the world to feature a colour temperature range from 2700 to 6500 K under one phosphor layer and thus enabling finer colour matching and mixing. In combination with the DAISY-MINI linear lenses particularly filigree luminaire designs can be realised. The somewhat wider Tunable White modules of the Daisy series are available in three lengths and are equipped with up to 56 high-efficiency warm white and cold white Nichia LEDs from the 757 series.



### FEATURES:

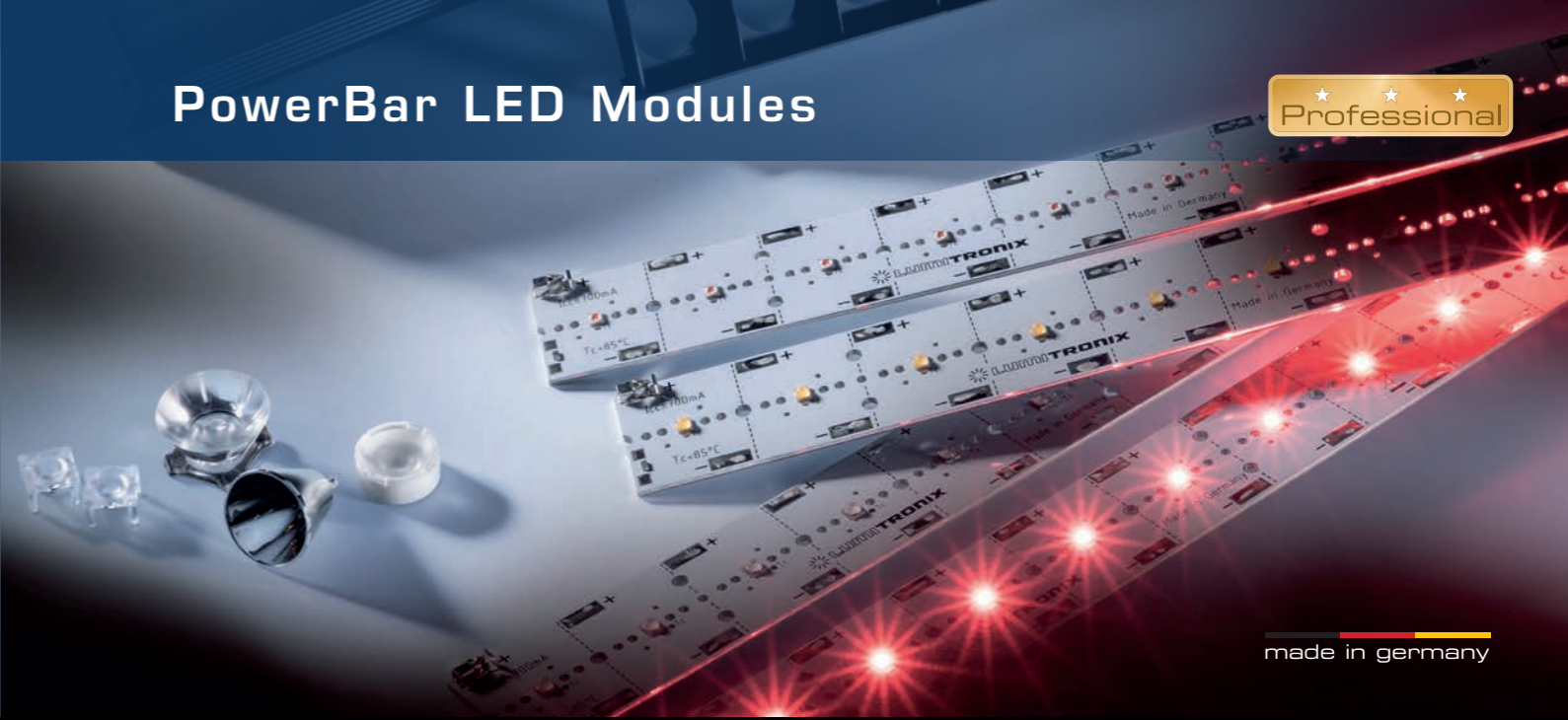
- Optimized for lenses of the LEDiL series DAISY and DAISY-MINI
- Easy installation
- Ideal for particularly filigree luminaire designs
- No heat sink required
- 28 mm wide Daisy Tunable White LED modules in three lengths (156 mm, 274 mm and 559 mm)

Luminous flux	Power	Efficiency	Current	Voltage	Colour temperature
527 lm	3.5 W	151 lm/W	175 mA	20 V	4000 K

MiniDaisy TW

# PowerBar LED Modules

Professional



made in germany

## Strong light with a broad spectrum

The new PowerBar V3 LED strip developed by LUMITRONIX® is ideal for many industrial applications. In addition to the high-intensity white LEDs with a high CRI value, many other light colours including UV light are available.

The areas of application range from special technical luminaires for optical systems and imaging processes to applications in the private sector or in the field of plant breeding. The installed LEDs convince with a high beam angle of up to 150° and are therefore optimally suited for use with lenses and reflectors.

### FEATURES:

- White, coloured, IR or UV LEDs
- Equipped with LEDs from the Osram Oslon series and Nichia UV LEDs
- Simple plug & play system
- Excellent luminous flux up to 3235 lm
- High beam angle
- Divisible after each segment
- Optimized for lens systems (LEDiL and Carclo)
- Wide range of applications



Luminous flux	Power	Efficiency	Current	Voltage	Colour temperature
3235 lm	24.6 W	131 lm/W	700 mA	35.2 V	5700 K

PowerBar V3 cold white



# Conext LED Modules



## The innovative way to connect LED modules

The patented Conext connection system is a real innovation for linking LED modules: Thanks to the puzzle shape, the modules can be easily plugged together without connectors and then reconnected again. The system is used in two LUMITRONIX® products. The ConextMatrix LED modules are available in five different shapes, which opens up many possibilities for free light fields and diverse applications. ConextPlay modules also feature coloured LEDs. They have been developed for backlighting, model making or simply for playful learning and experimenting.

### FEATURES:

- Mechanical and electrical connection by simple plugging together
- Plane-resting circuit board material
- ConextMatrix: Five module forms for plugging together free forms with high CRI value +90
- ConextPlay: One connection module and two module forms of black circuit board material, one LED in the light colours: red, green, blue or white



Easy to plug

NICHIA on board

Dimmable

3-Step MacAdam

CRI 90+

24 V

No cooling

5 years warranty

Luminous flux	Power	Efficiency	Current	Voltage	Colour temperature
118 lm	0.9 W	133 lm/W	37 mA	24 V	2700 K

ConextMatrix

# Aventrix LED Modules

made in germany



## The powerful module for street, tunnel and hall lighting

The Aventrix LED modules have been specially developed to meet the requirements of urban areas, roads and large halls. With their energy efficiency of up to 163 lm/W, Aventrix modules are particularly energy-saving, environmentally friendly and economical. Thanks to different optics, the light can be directed exactly to the area to be illuminated and the modules are available in different colour temperatures.

The Aventrix module „4x4 V2“ with 16 LEDs has been newly developed for even higher efficiency. With two connecting elements of the Wago series 2060, modules can be easily joined together – while maintaining the same LED spacing.

### FEATURES:

- Efficiency up to 163 lm/W (Aventrix 4x4 V2)
- Bright - up to 7785 lumens (Aventrix 2x8 at 1400 mA)
- Large variety of optics
- Three designs
- ESD and overvoltage protection up to 4000 V
- Easy installation
- Homogeneous light thanks to Nichia LEDs
- Operation by constant current
- Optimized for lens systems



NICHIA on board

Dimmable

max. 1400 mA

max. 7785 lm

5 years warranty

3-Step MacAdam

Luminous flux	Power	Efficiency	Current	Voltage	Colour temperature
7785 lm	48.8 W	113 lm/W	1400 mA	46 V	4000 K

Aventrix 2x8 max. values



# BackMatrix LED Modules

Professional

Performer



made in germany

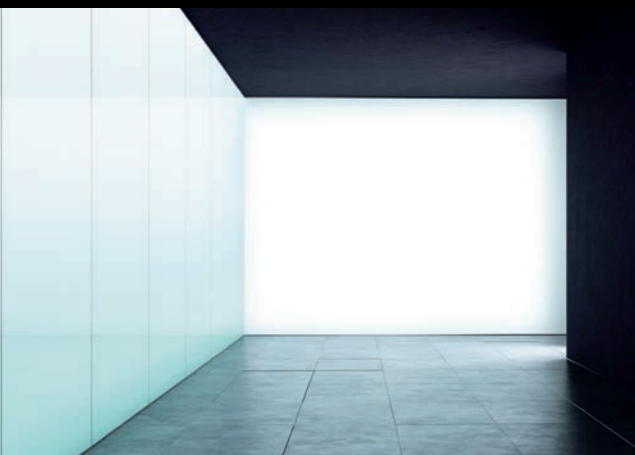
## The bright module for large-scale illumination

The powerful BackMatrix modules are designed for the homogeneous lighting of large surfaces, such as advertising signs, light boxes or luminous ceilings. Equipped with 49 high-efficiency Nichia LEDs of the 757 series, the modules generate an enormous brightness of up to 37 200 lm/m<sup>2</sup>. In doing so, the modules hardly heat up and can even be used in continuous operation without cooling.

A powerful RGBW version has been added to the product family. It is ideal as an effect light for advertising, trade fair and shop fitting.

### FEATURES:

- High system efficiency
- Onboard brightness adjustment (BackMatrix 49 Pro)
- Also available in Tunable White version (BackMatrix 49 TW)
- New RGBW version available with 4 x 49 LEDs
- Particularly good colour rendering
- Easy installation without soldering
- Homogeneous light thanks to Nichia 3-Step MacAdam binning
- No cooling required
- Up to 5 years warranty

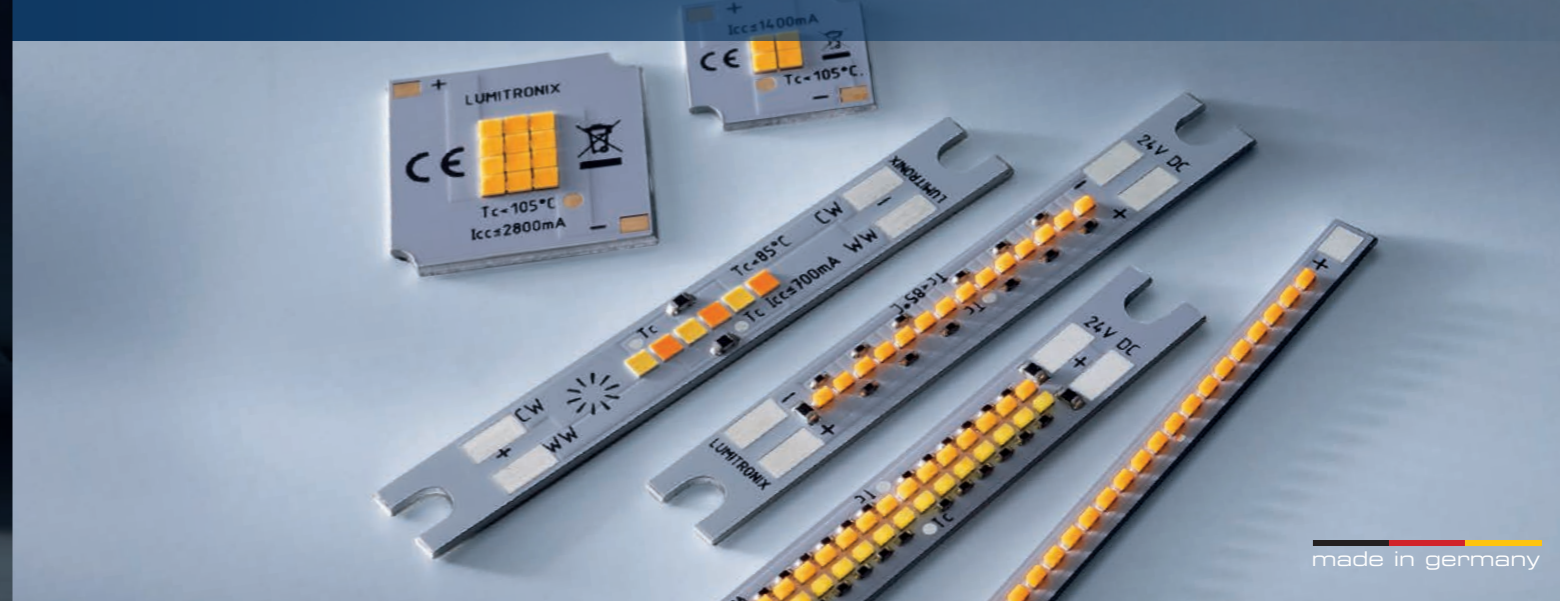


Luminous flux	Power	Efficiency	Current	Voltage	Colour temperature
2390 lm	16.8 W	142 lm/W	700 mA	24 V	4000 K

Maximum values for BackMatrix RGBW white

# SmartArray LED Modules

Performer



made in germany

## The plug & play power light

SmartArray LED modules from LUMITRONIX® are designed for use in powerful luminaires – from designer luminaires to industrial high-performance luminaires. Thanks to their very flat and compact design, SmartArray LED modules fit into almost any luminaire design. The SmartArrays, which are developed and produced in-house, are equipped with the outstanding quality LEDs of the world market leader Nichia. Thanks to the high CRI value of typically 85, colours appear particularly natural. Equipped with the new Dim2Warm and Tunable White technology, the modules produce a pleasant light spectrum with a feel-good character, especially in the home and office area.

### FEATURES:

- Ideal replacement for COB modules (compatible with existing accessories)
- Also available with Dim2Warm and Tunable White technology
- Excellent homogeneity
- Luminous flux of up to 1580 lumens
- Long service life of over 60 000 h
- Space-saving, very flat design
- Easy installation
- Module with 24 V connection available
- New RGBW version



Luminous flux	Power	Efficiency	Current	Voltage	Colour temperature
1580 lm	12 W	132 lm/W	1400 mA	8.6 V	4000 K

SmartArray Q12 at 4000 K



# MiniController



# PowerController V2



## The very small Tunable White control unit for integration in luminaires

The MiniController is a powerful control unit for Tunable White LED modules that requires minimal space. Regardless of whether the modules are operated with 12 V, 24 V or 30V, this MiniController enables a simple and cost-effective realisation of Tunable White luminaires or the control of Tunable White LED modules. With the new Casambi version, the MiniController can now also be conveniently operated via app (iOS, Android).

### FEATURES MiniController:

- Compact control unit for Tunable White or Dim2Warm or dimming (selectable via jumper)
- For constant voltage LED modules
- High current carrying capacity of up to 2.5 A
- High output power of up to 75 W
- Low stand-by power of <90 mW at 12 V
- Integrated push button for control
- Memory function: values are retained even if the mains supply is interrupted or restored
- WAGO PCB terminal blocks for quick connection without tools

### FEATURES MiniController Casambi Classic:

- Compact control unit for Tunable White or 2x dimming or Dim2Warm (selection in Casambi App)
- Control via Casambi App
- For constant voltage LED modules
- High current carrying capacity of up to 3.5 A
- High output power of up to 170 W
- Four terminals at the input for looping through the supply voltage
- WAGO PCB terminal blocks for quick connection without tools



DC voltage range	Current / channel	Standby power consumption	PWM frequency	Dimensions
12 - 24 V	max. 3.5 A	150 mW at 24 V	1420 Hz	80 x 14 x 5.25 mm

MiniController Casambi Classic

## Smart control for luminaire manufacturers

Full flexibility and high performance! The new generation of the PowerController as a control unit for Tunable White, Dim2Warm or colour change offers a wide range of possibilities in a compact design. For this purpose, LUMITRONIX® provides you with different standard configurations. If your desired configuration is not included, you can use the software to define how the inputs and outputs are assigned and which functions are executed. Now you will only need one product for different control requirements in your luminaire – the PowerController V2.

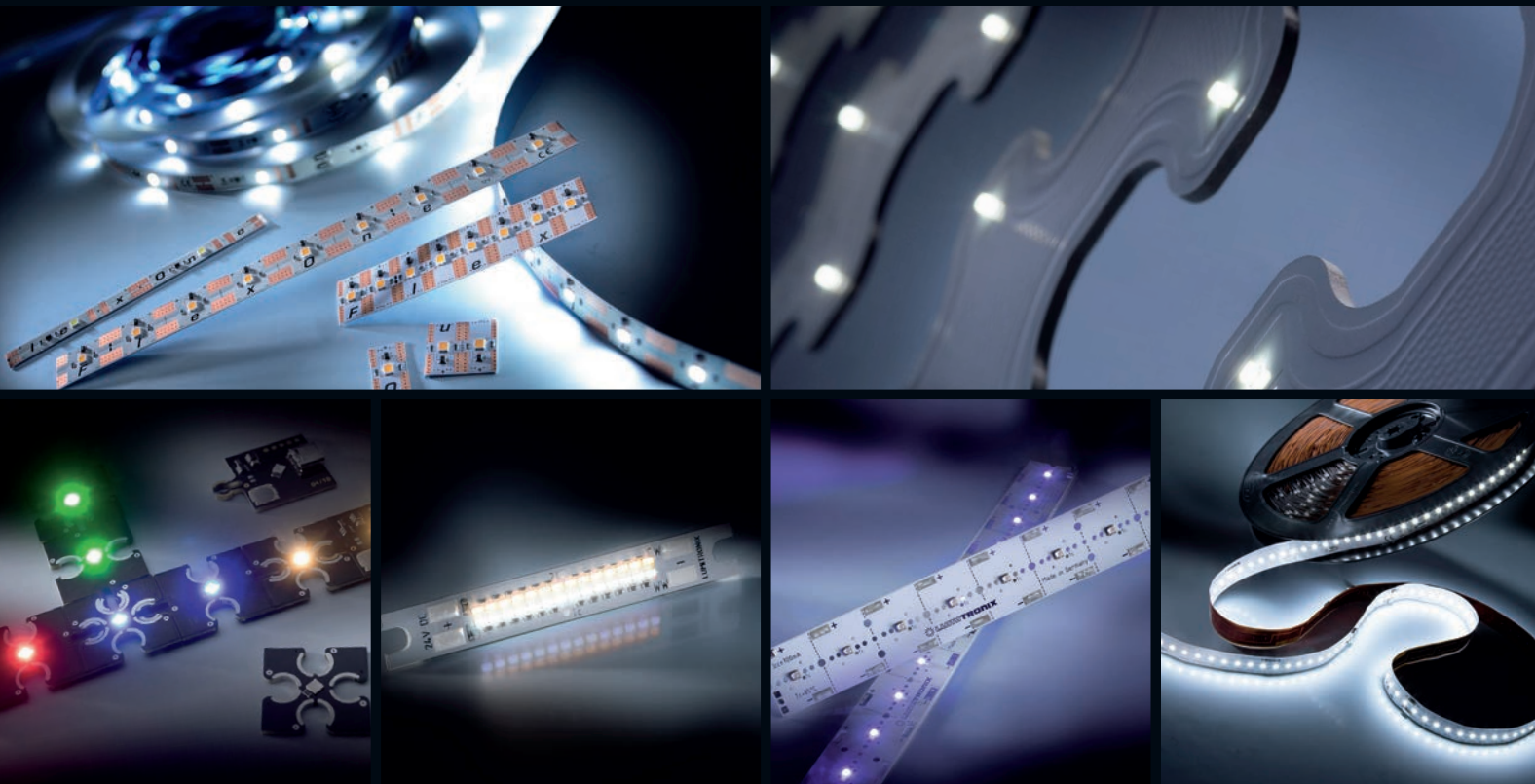
### FEATURES:

- Up to four analog signal sources can be freely configured: push button, switch, 0-10 V, 1-10 V, NTC, potentiometer, LDR
- Two analog signal sources can also be used with active sensor technology e.g.: motion sensor, brightness sensor, capacitive button or infrared sensor
- Four output channels (e.g. 2 x Tunable White / 1 x RGBW / 4 single colours)
- Up to 10 A via output channels switchable (1 x 10 A / 2 x 5 A)
- For controlling constant voltage LED modules
- Can also be used for constant current LED modules via expansion module
- The compact design with 13 mm height and 29 mm width allows installation in almost any luminaire. The practical clamps allow easy and quick installation.
- Simple programming by means of software (use with a software maintenance contract)
- Variations of the PowerController V2 with integrated extension from Casambi or DALI Device Type 8
- Perfect fit for controlling the following LUMITRONIX® Tunable White, Dim2Warm and RGBW products: LumiFlex, SlimFlex, BackMatrix and SmartArray 24



DC voltage range	Current / channel	Standby power consumption	PWM frequency	Dimensions
12 - 30 V	max. 10 A (1 channel) max. 5 A (2 channels)	<100 mW	2000 Hz	99 x 29 x 13 mm





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