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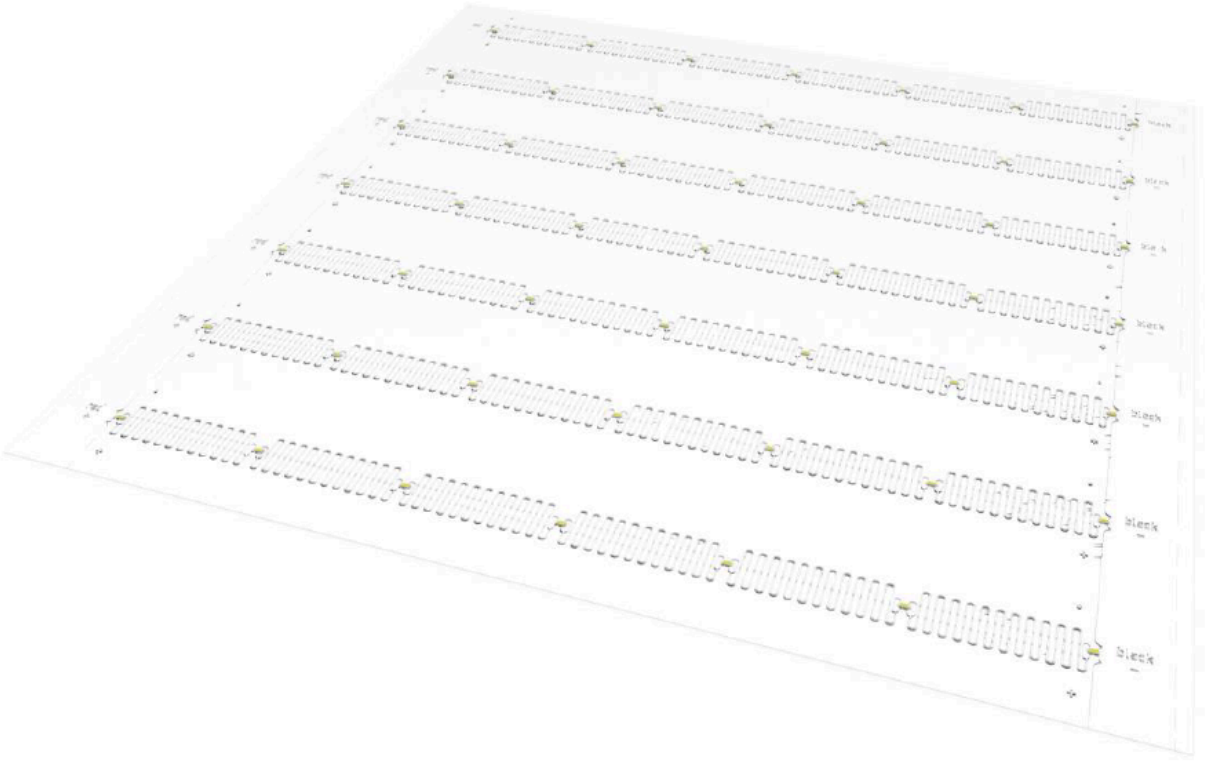
DATASHEET

PAPERFLEX-497-1080 OSRAM LED MODULE 24.85M LENGTH 3479 LEDS 8.69 SQM WARM WHITE 2700K 24V 35CM WIDE

SKU: 35548



PAPERFLEX-497-1080 OSRAM LED MODULE 24.85M LENGTH 3479 LEDS 8.69 SQM WARM WHITE 2700K 24V 35CM WIDE

Article number (SKU)	**35548**	
Product name	PaperFlex-497-1080 Osram LED module 24.85m length 3479 LEDs 8.69 sqm warm white 2700K 24V 35cm wide	
Classification	Professional	
Model identifier (equivalent models)	Paper Flex	
Photometric data (at TJ = 65°C, ± 10%)		
Light color	Warm white	
Binning	3-Step MacAdam	
Color temperature (**K**)	2700 K	
Dominant wavelength (**nm**)		
Luminous flux (**lm**)	25200 lm	2900 lm/sqm
Radiant power (**mW**)		
CRI (**Ra**)	80	
Efficiency (**lm/W**)	142 lm/W	
Beam angle FWHP	120°	
Lifetime L80B10C1 (**h**)	>60000 h	
Photometric code	827/339	
Electrical data (at TJ = 65°C, ± 10%) (reference settings)		
Operating mode	Constant voltage	
Voltage (**V**)	24 V	
Current (**mA**)	7600 mA	
Power (**W**)	182 W	21 W/sqm
Dimmable	Yes	
Dimensions / Mechanical data	**Metric units**	**Imperial units**
Length	24850 mm	976.605"
Width	350 mm	13.755"
Height	0.75 mm	0.029"
Area (sqm / sqft)	8.6975 sqm	93.619sqft
Number of LEDs (pcs)	3479 pcs	
Weight (g)	4200 g	
Temperatures		
Operating temperature at Tc	-40 °C to +65 °C	
Ambient temperature	-40 °C to +50 °C	
Storage temperature	-40 °C to +65 °C	
Approvals / Certifications		
CE / RoHS / Reach	Yes	
EN 62471 Risk group	RG0	
Energy efficiency class	C	
Mains voltage luminous efficacy (lm/W)	142 lm/W	
Version		
Date	25. July 2022	

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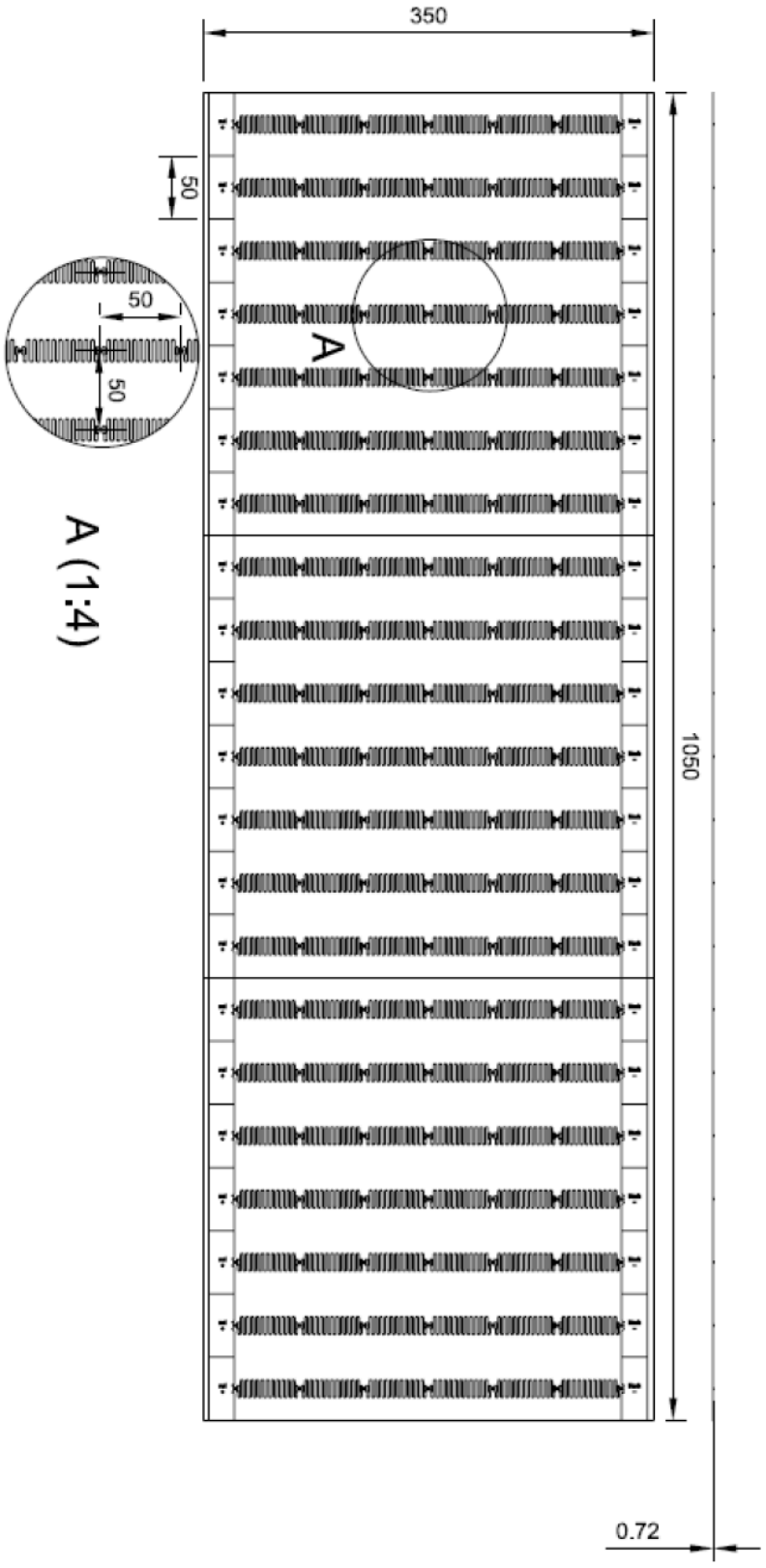

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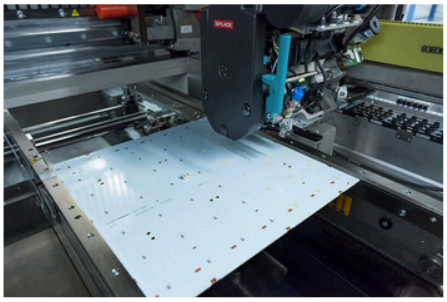
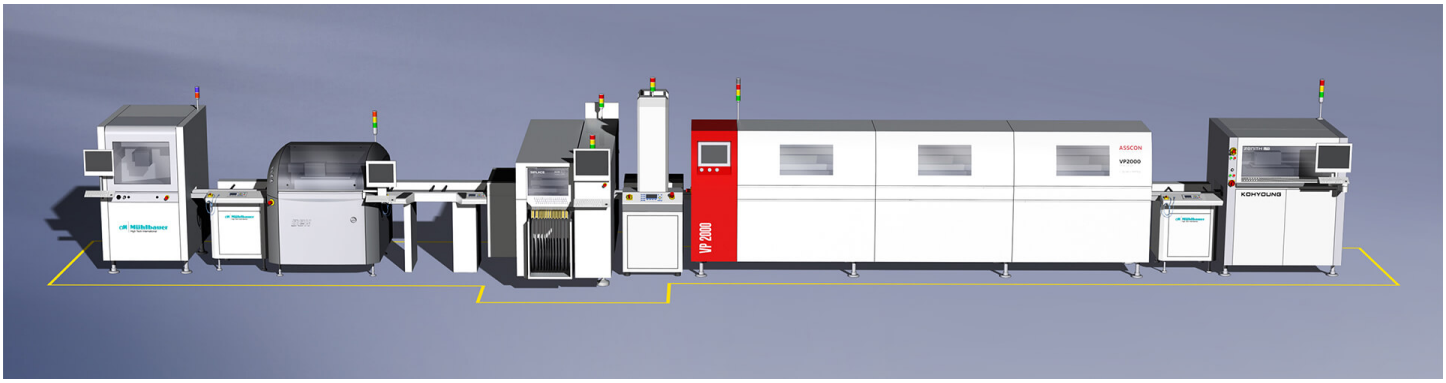
MANUFACTURING INFO

made in Germany



The PaperFlex1080 is **made in Germany**, at a production line that uses the innovative manufacturing technology of plasma direct metallization, to turn substrates into electrical conductive and solderable circuit boards, even those that before have not been suitable for an assembly with electronic components.



This LED module is made on a ISO-certified production line that has been tailored specifically to the requirements of assemblies with LED technology. Nearly one million components can be processed per day in the production line.

In the in-house assembly line, high performance automatic placement machines by Siemens place large and small components in an extremely fast and precise way. The vapour phase soldering machine by the market leader Asscon differs from ordinary convection soldering furnaces by its extraordinarily gentle soldering process under protection gas atmosphere. This prevents oxidation and cold solder joints and improves the thermal connection of component and PCB. This is particularly advantageous for LEDs, whose aging scales with the operating temperature.

The entire process is flexibly adaptable to the requirements and batch sizes of our customers and runs fully automatically.

- State-of-the-art machinery with the latest technology
- Production of circuit boards with lengths of up to 600 mm
- Traceability thanks to laser bar codes
- Maximum process safety with fully automated processing
- ISO certification

Our professional LED Strips and Modules use LEDs from market leaders

We develop and produce our LED strips at a state of the art facility in Germany, with the highest quality standards and by using only LEDs from market leaders such as Nichia, Samsung or Toshiba.

- **Nichia** is the LED market leader, with over 25% market share and decades of experience. Nichia researchers invented the blue and white LED production technology, also receiving the Nobel Prize for this achievement. Nichia LEDs are the **most efficient** (200 lm / w efficacy), durable (> 100,000 hours) and are also available with unique technologies such as **Optisolis**, CRI98+ natural light spectrum and **RspOa,** special white light for horticulture.
- **Samsung** is in the top 10 of global LED manufacturers and a well-known brand, renowned for the high performance of its products combined with the competitive price
- **Toshiba** is a Japanese conglomerate with a history of more than a century, now specialized in semiconductors, electronics and hardware, with nearly 20,000 employees

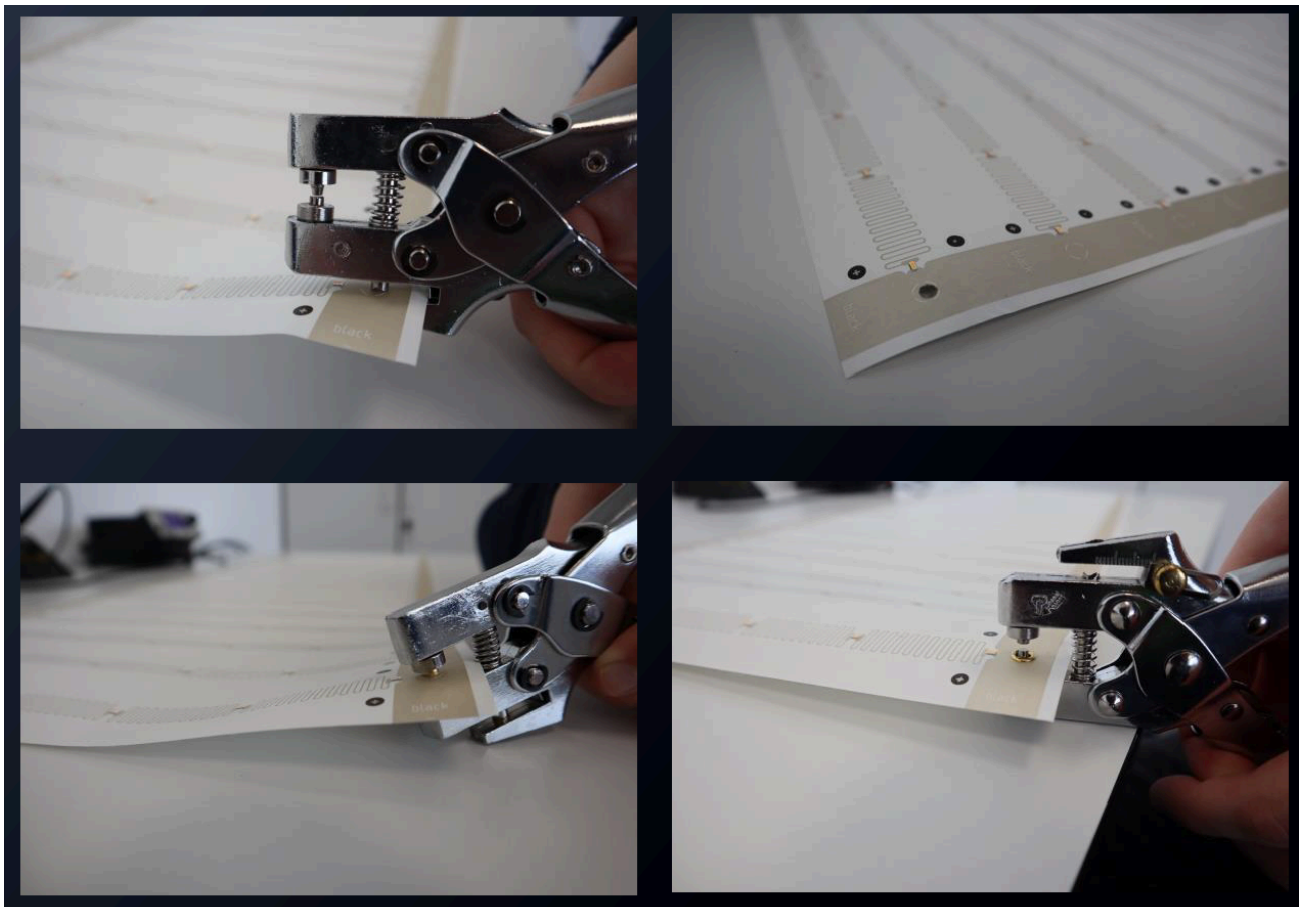
and an annual turnover of 40 billion USD. Toshiba has built the TRI-R technology and built the LED chips used in **SunLike CRI97+ LEDs** produced by Seoul Semiconductor in South Korea. With the new **SunLike™ TRI-R™** technology from Toshiba-SSC (Seoul Semiconductor) and our strips and modules you can always enjoy a natural light source with the light spectrum very close to the sun.

- **Seoul Semiconductor** is in the top 10 of global LED manufacturers and renowned for innovation, durability and competitive price

Our modules have high quality components and professional support:

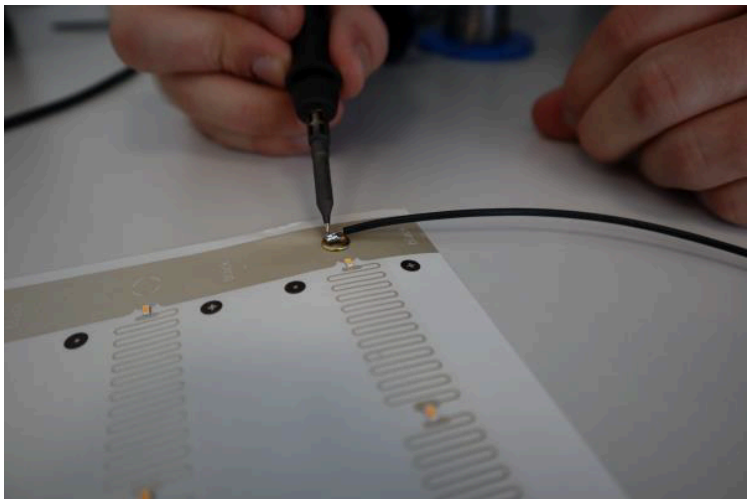
- We use LEDs from top brands and have superior designs
- We offer **professional support** for lighting projects
- The PCBs use high quality materials for best resistance, current flow and heat transfer
- Performance values in this datasheet match those in real world applications
- Function perfectly at high temperatures that would destroy many other strip.

CONNECTION OF LED PAPERFLEX1080

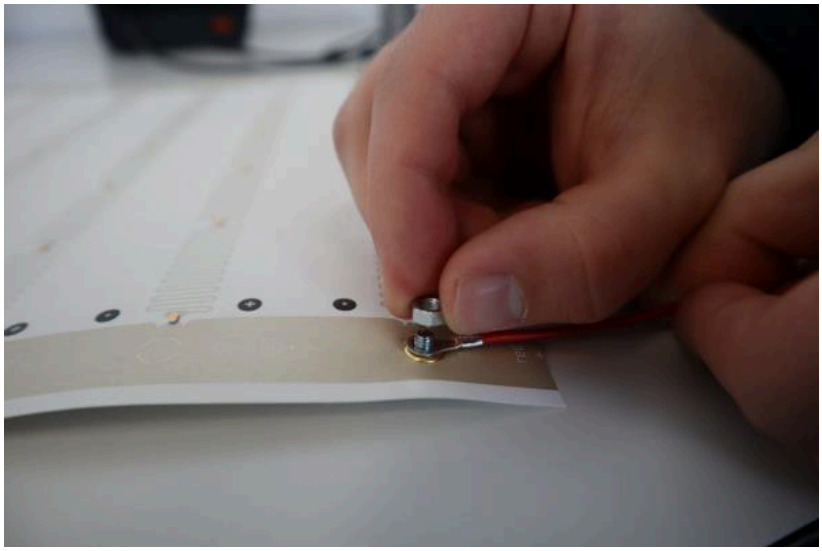


The PaperFlex1080 can be connected to wires via a Eyelet Pliers tool, such as found here: https://www.conrad.de/de/search.html?search=BGS%20technic%20%C3%96senzange

With the contact points insterted with the eyelet pliers tool, connect with a solder iron, the plus and minus cable (0.5 mm²) with eyelets. Do not solder directly on the Paper-Flex!



Alternatively you can use create the electrical connection with the Ring Cable, SKU 37699, in combination with screws and cable.



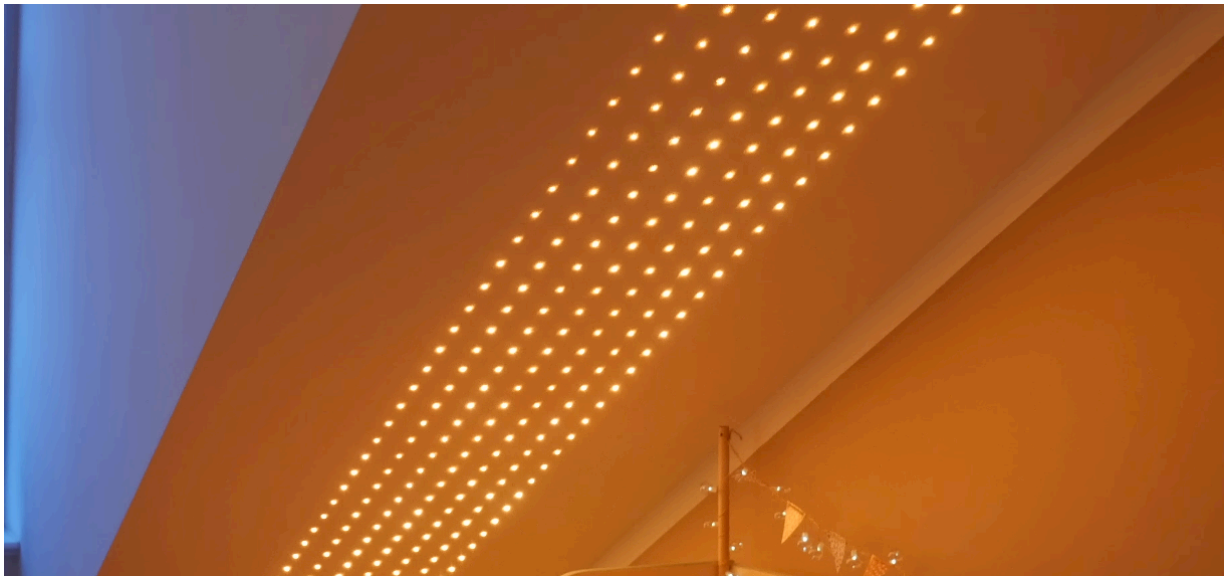
CUTTING INFO:

PaperFlex1080 can be cut at each row of 50mm, with scissors, on the cutting marks.

CONTROL GEAR AND POWER:

- A power supply unit with 24 V is required, the power depends on the length of the entire module or several modules (if operated together).
- Per 5 cm the power is 0,36 W, at 2 m length this would be e.g. 40 x 0,36 W = 14,4 W and a power supply with 16 or 20 W could be used.
- The PaperFlex1080 can also be dimmed. For this you can use a common PWM voltage dimmer, operated by potentiometer or push button, or a Casambi controller for control via smartphone with the Casambi app.

PAPERFLEX AS WALLPAPER:



PaperFlex can be installed as a wall paper, with a white wallpaper glued on top. See the below video for info:

https://youtu.be/7c5TKh5Mo8U

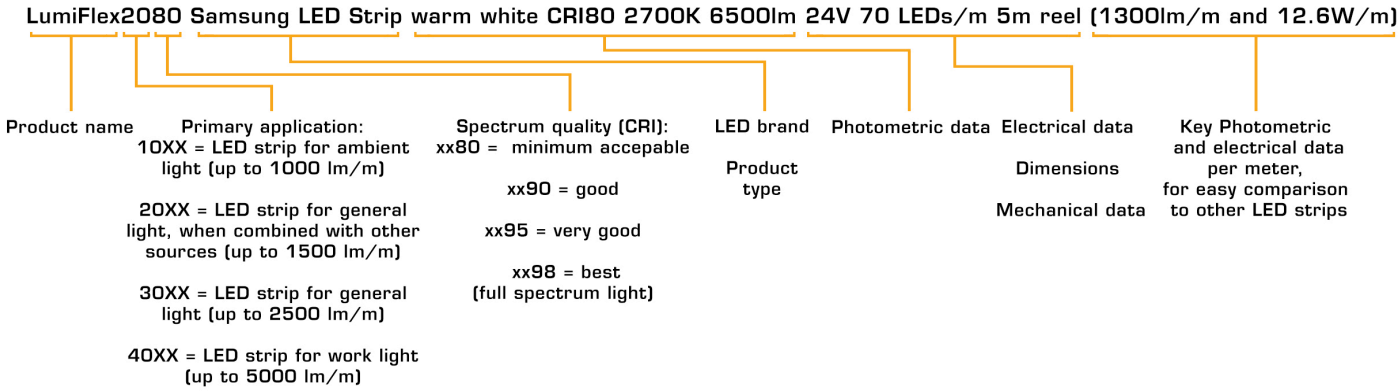
General notes:

- Connect and test for function before wallpapering: Do all LEDs light up?
- The PaperFlex1080 can be glued to the wall like normal wallpaper with paste.
- Please work carefully so as not to damage the LEDs. Large pressure on LEDs and kinking of the modules is to be avoided.
- Allow PaperFlex1080 to dry for at least 48 hours before putting it into operation.
- In damp rooms (bathrooms) Paper Flex not applicable as it does not have IP protection.

Possible incidents:

- Cables are connected incorrectly, +/ mixed up
- Tracks are oxidized, because the drying time was not observed
- One light strip (7 LEDs) has failed due to damage when applying the wallpaper
- Rivet eyelet not squeezed tight enough, possibly loose contact

LED MODULE PRODUCT NAME EXPLAINED



Due to the special conditions in the production process of LEDs, the specified values are statistical averages. The individual LED may deviate from them.

The LED modules and all their components must not be mechanically stressed.
Avoid undue claw action, e.g. by screwing or excessive bending.
The LED modules must not come into contact with aggressive chemical substances, either in operation or in storage.
The installation of the module (with the operating device) must be carried out in compliance with all applicable electrical and safety standards.
Pay attention to standard ESD precautions when installing the modules.
- The components on the LED modules must not be subjected to mechanical stress.
- The conductive paths on the boards must not be damaged or interrupted by the installation.
- Store and operate the LED modules only at a final humidity of 10% to 60%.
Our LED modules are not protected against overload, overtemperature and short-circuit currents. To operate the modules safely and reliably, it is therefore necessary to use an electronically stabilized power supply unit in which these
in which these safety functions are already integrated. If other power supplies than the ones distributed by us are used, the following protective
the following protective measures must be ensured on the power supply side:
MINIMUM REQUIREMENTS FOR POWER SUPPLIES: Short circuit protection - Overload protection - Overtemperature protection
- The installation of LED modules may only be carried out in compliance with all applicable regulations and standards by an authorized electrician.
Distribution and reproduction of this document, utilization and communication of its contents are prohibited unless expressly permitted. Any infringement will result in compensation for damages. All rights reserved in the event of patent, utility model or design registration.
We reserve the right to make technical changes.

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This LED Module can be purchased via the following websites:

www.ledrise.eu / www.lumistrips.com

ISO 9001 quality management system.

OHSAS 18000 health and safety management system.

ISO 14001 Environment Management System