Lumistrips

DATASHEET

LUMIBAR-52-3098+ NICHIA LED STRIP OPTISOLIS CRI99 D50 PURE WHITE 5000K 1504LM 28PPF 350MA 37.5V 52 LEDS 56CM MODULE

SKU: 31332

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Article number (SKU)	**31332**	
Product name	LumiBar-52-3098+ Nichia LED Strip Optisolis CRI99 D50 pure white 5000K 1504lm 28PPF 350mA 37.5V 52 LEDs 56cm module	
Classification	Professional	
Model identifier (equivalent models)	LinearZ 560-52-D50	
Photometric data (at TJ = 65°C, ± 10%)		
Light color	Pure white	
Binning	3-Step MacAdam	
Color temperature (**K**)	5000 K	
Dominant wavelength (**nm**)		
Luminous flux (**lm**)	1504 lm	2686 lm/m
Photosynthetic photon flux PPF (**µmol/s**)*	28 µmol/s	
CRI (**Ra**)	99	
Efficiency (**lm/W**)	115 lm/W	
Beam angle FWHP	120°	
Lifetime L80B10C1 (**h**)	>60.000 h	
Photometric code		
Electrical data (at TJ = 65°C, ± 10%) (reference settings)		
Operating mode	Constant current	
Voltage (**V**)	37.5 V	
Current (**mA**)	350 mA	
Power (**W**)	13.13 W	24 W/m
Standby power consumption (**W**)	0 W	
Dimmable	Yes	
Dimensions / Mechanical data	**Metric units**	**Imperial units**
Length	559.5 mm	21.988"
Width	20 mm	0.786"
Height	4.55 mm	0.179"
Number of LEDs (pcs)	52 pcs	
Weight (g)	40 g	
Heat dissipation	Yes, no cooling necessary	
Temperatures		
Operating temperature at Tc	-40 °C to +85 °C	
Ambient temperature	-40 °C to +50 °C	
Storage temperature	-40 °C to +100 °C	
Approvals / Certifications		
CE / RoHS / Reach	Yes	
EN 62471 Risk group	RG0	
Energy efficiency class	G	
Mains voltage luminous efficacy (lm/W)	115 lm/W	
Version		
Date	15. Aug 2022	

*based on preliminary research by University of Helsinki, Finland.

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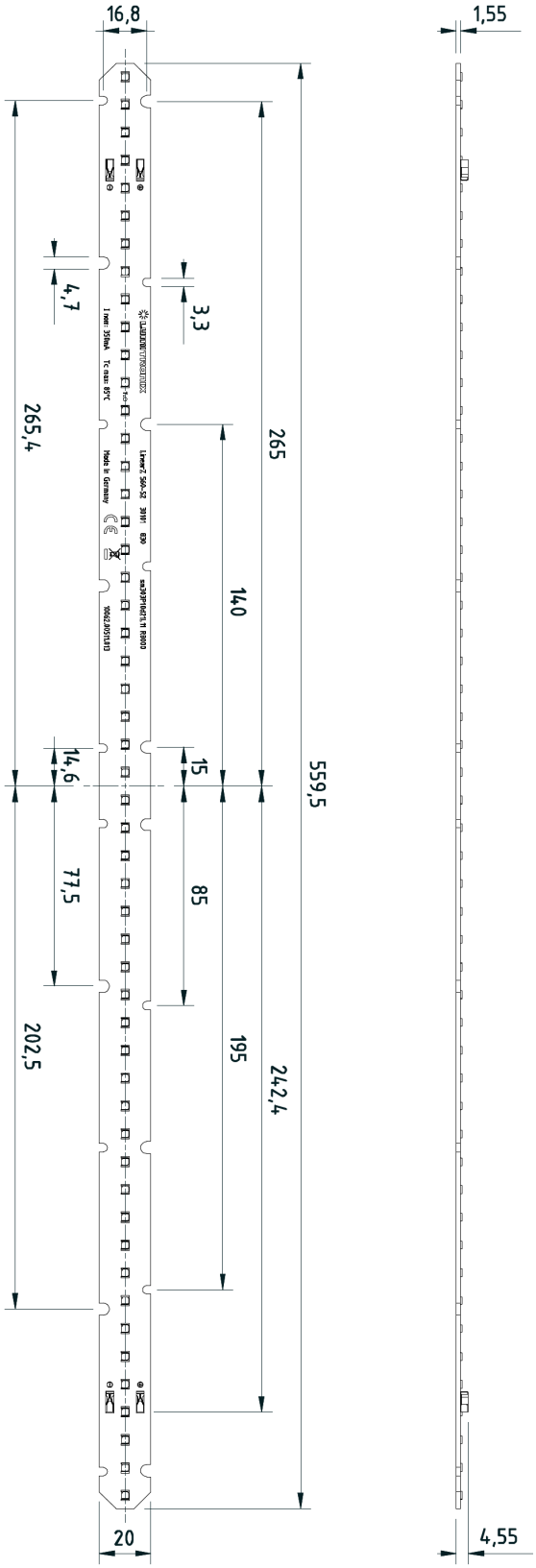

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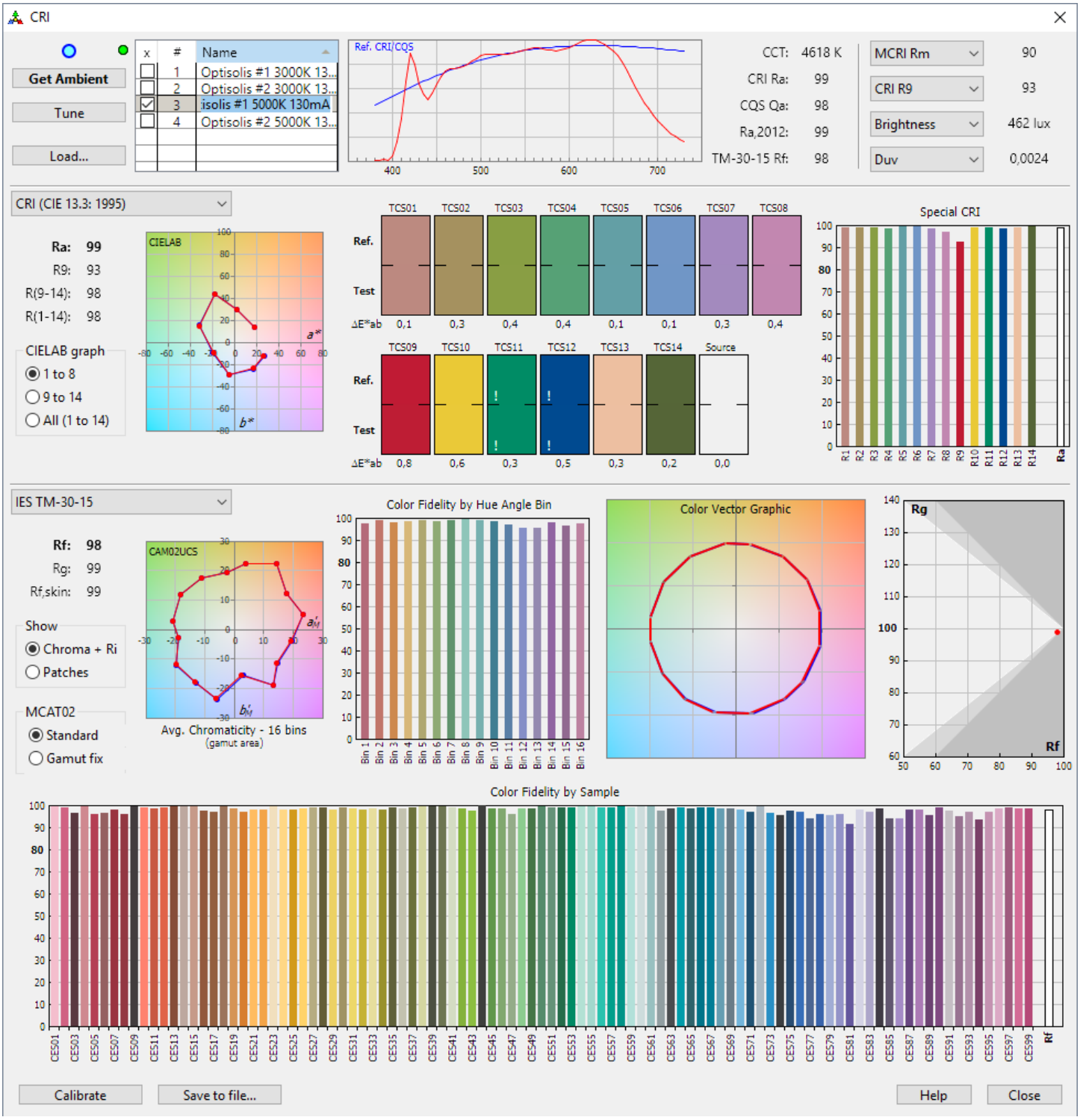
NICHIA OPTISOLIS FULL SPECTRUM LED 5000K TM-30



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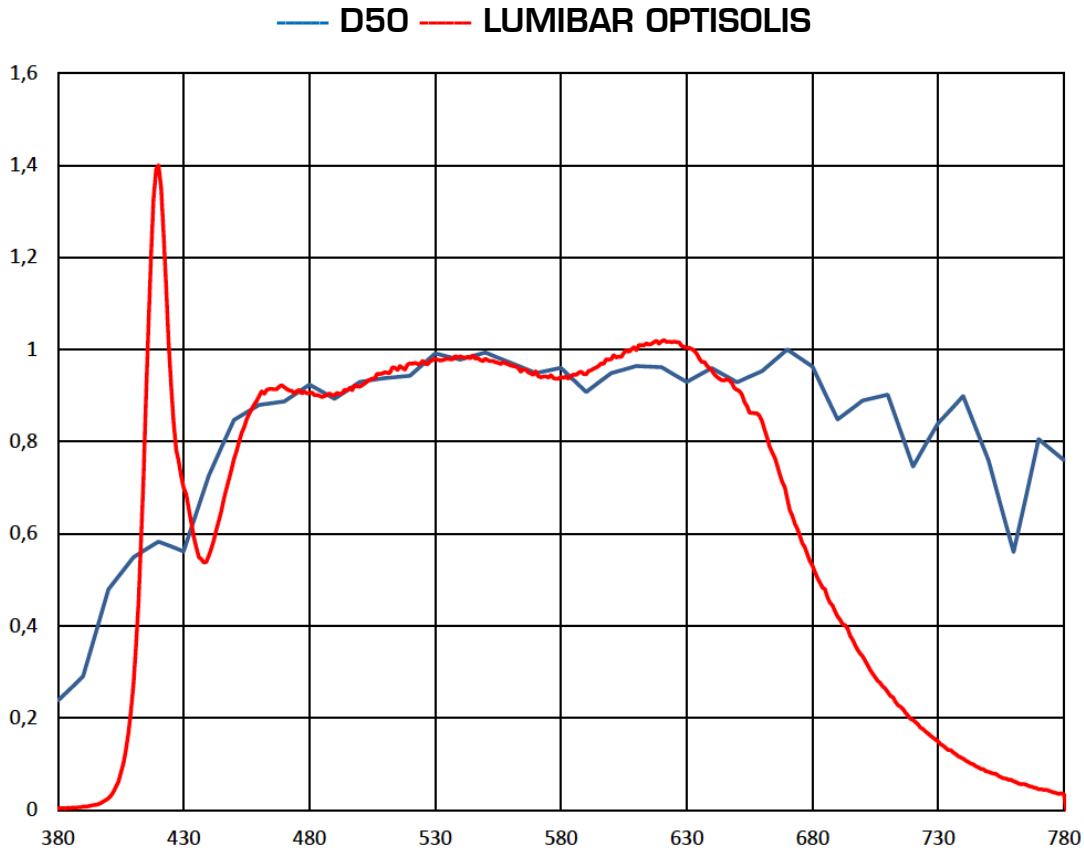
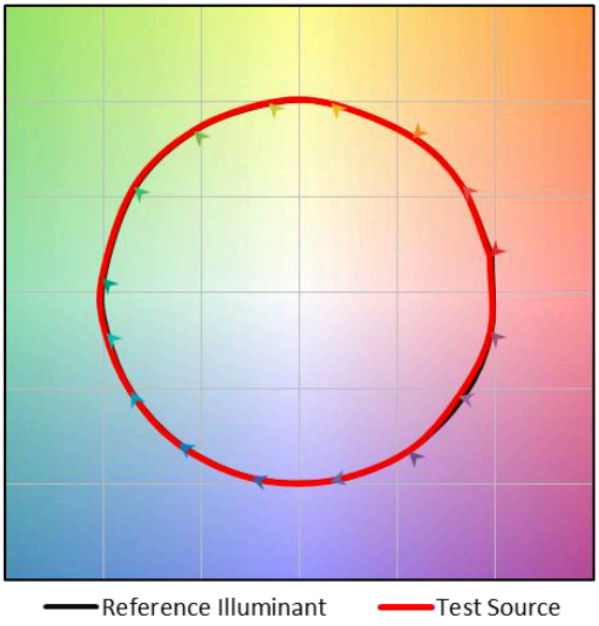
SPECTRUM AND COLOR GRAPHIC TM-30-15



COLOR VECTOR GRAPHIC



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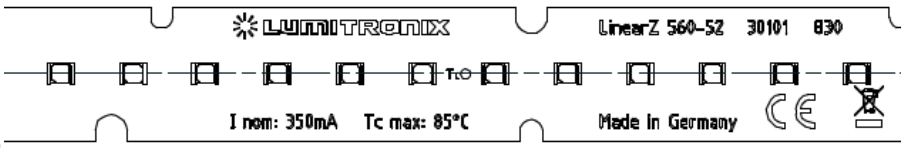
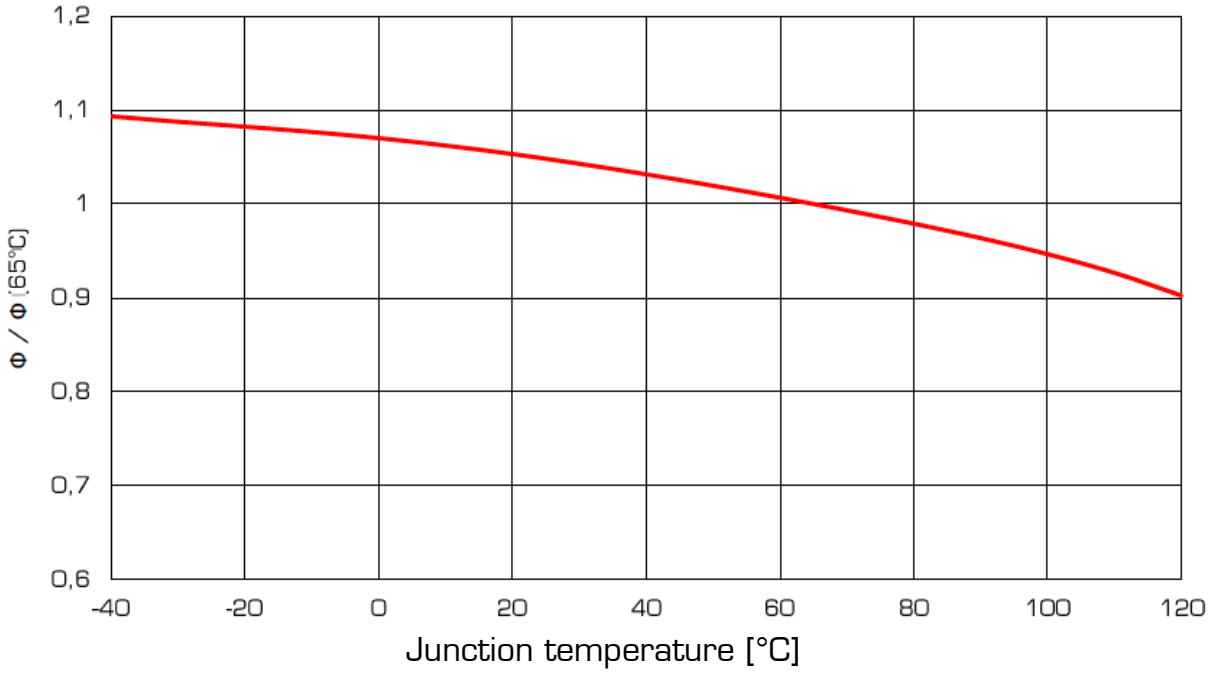
CUSTOM LOGO

Replace “Lumitronix” with your logo, for orders of 100 pcs or more, production time 10 weeks. Contact us for details.



LUMINOUS FLUX vs. TEMPERATURE



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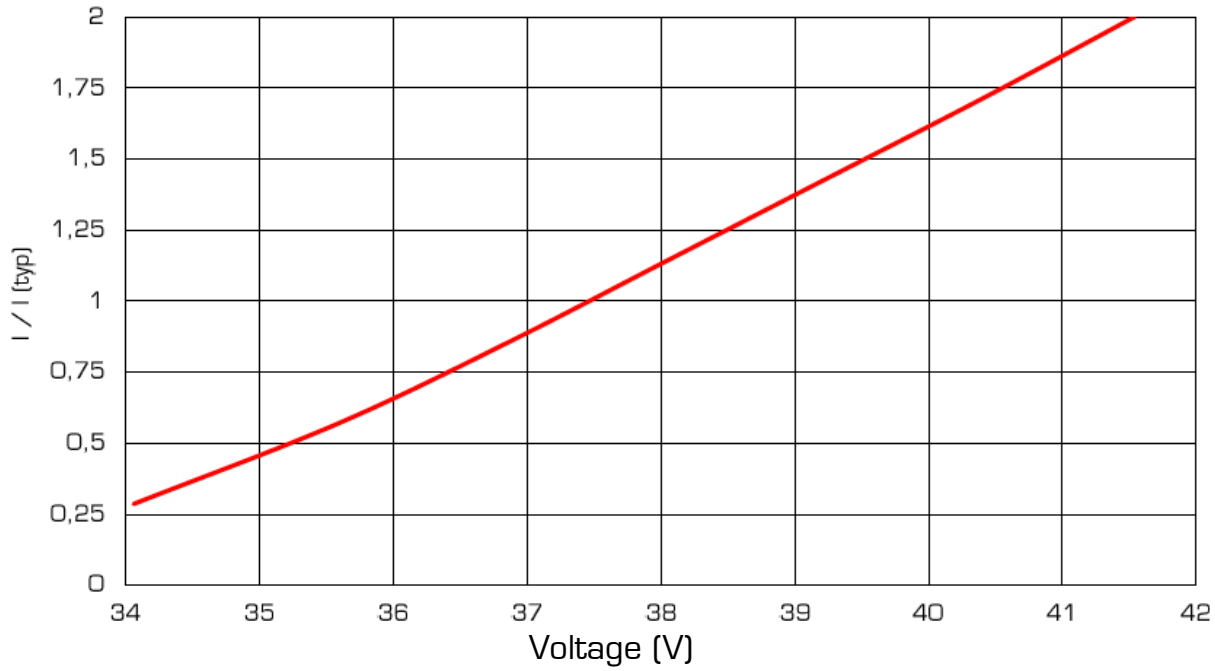
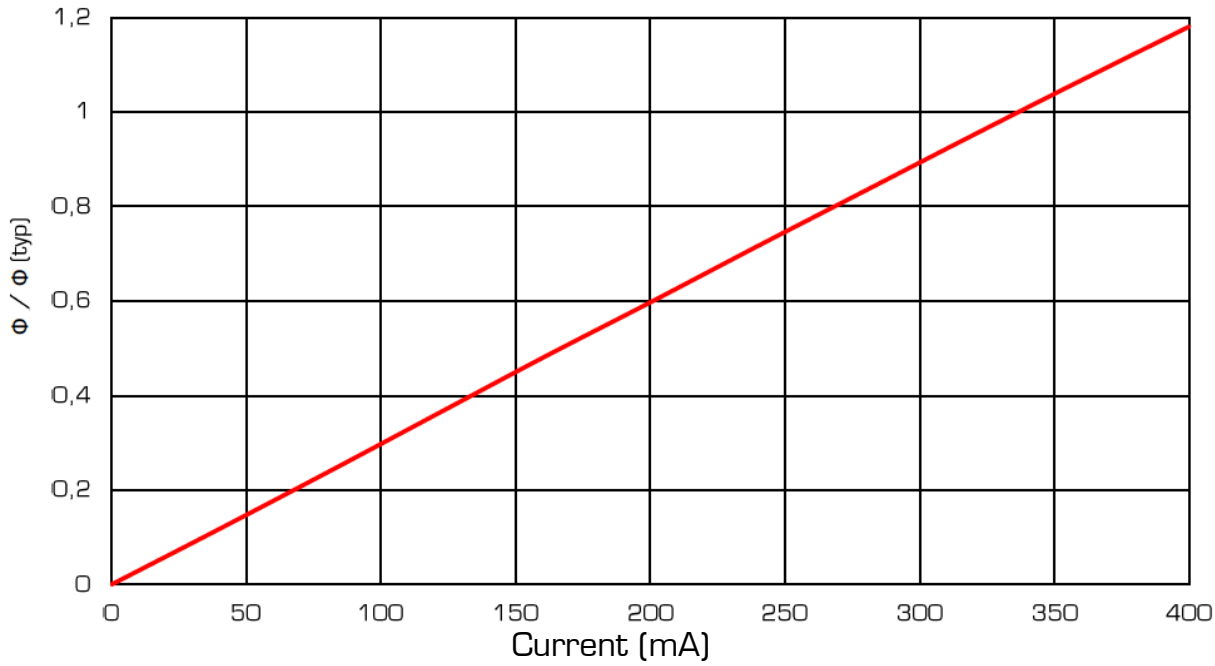
CURRENT vs. VOLTAGE



LUMINOUS FLUX vs. CURRENT



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

WARRANTY INFO

This LED Strip has 5 years commercial warranty. Please refer to https://www.lumistrips.com/lumistrips-en-warranty for warranty terms.

MANUFACTURING INFO

made in Germany

The LumiBar 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.

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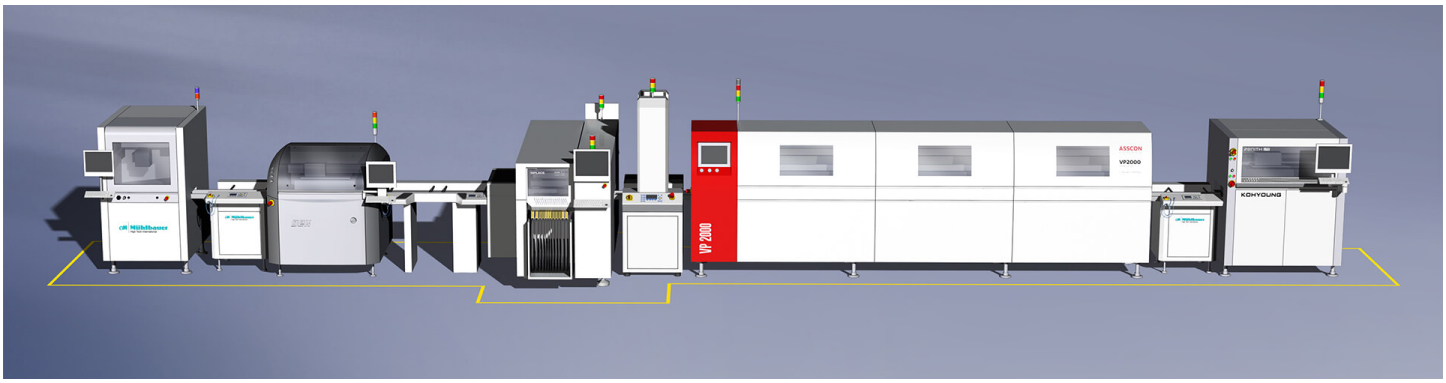


This LED strip is made on a ISO-certified production line that has been tailored specifically to the requirements of assemblies with LED technology. Nearly one million components can be processed per day in the production line.

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

ISO 9001 quality management system.

OHSAS 18000 health and safety management system.

ISO 14001 Environment Management System

Our professional LED Strips and Modules use LEDs from market leaders

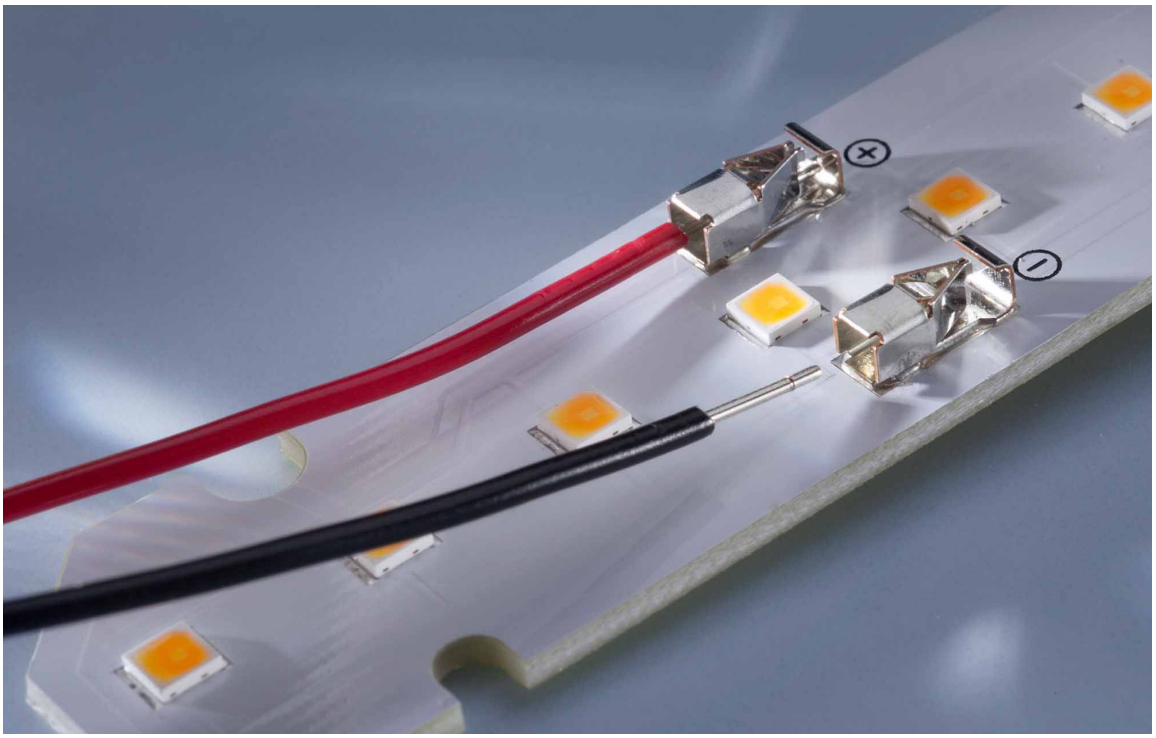
We develop and produce our LED strips at a state of the art facility in Germany, with the highest quality standards and by using only LEDs from market leaders such as Nichia, Samsung or Toshiba.

- **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

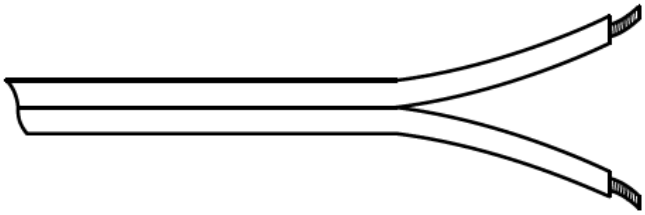
Our strips have high quality components and professional support:

- 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 strips

CONNECTION OF LED STRIP



The professional LumiBar strip is connected via a solderless connection to the connection inputs provided for this purpose. **The form factor and connection is designed according to the Zhaga standard (Book 7 L28W2).**
The wire insulation has to be removed at the connection point. Recommend wire cross-section of inner conductor: 2 x 0.75 mm² (AWG 18).



MULTIPLE LED STRIP CONNECTION NOTES

Several Lumibar strips can be connected in series to a constant current (CC) driver. They can be wired for parallel or series connection, as follows:

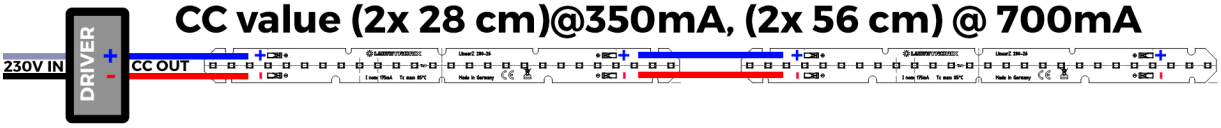
PARALLEL LED STRIP CONNECTION

The parallel circuit is laid out by connecting the positive (+) of the first LED strip to the (+) of the second LED strip. This pattern is repeated for more LED strips, from the (+) of the second strip to (+) of the third strip, and so on.

At the same time, the negative (-) of the first LED strip is wired to (-) of the second, then (-) of the second to (-) of the third and continuing.

The voltage and total current of the string has to be supported by the CC LED, as mentioned in the driver datasheet.
The below shows this connection for 2, 3 or 4 Lumibar LED strips of 28 cm and 56 cm, respectively.

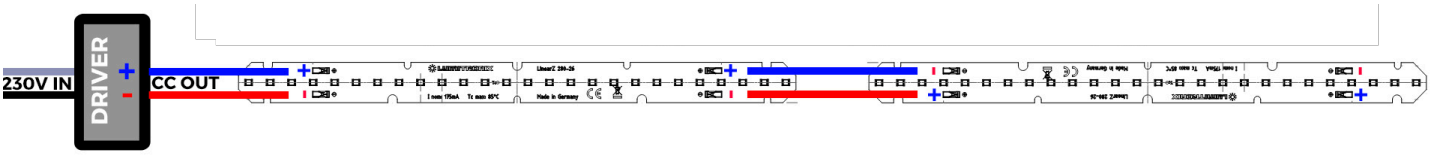
2 LUMIBAR LED STRIPS IN PARALLEL
CC value (2x 28 cm)@350mA, (2x 56 cm) @ 700mA



3 LUMIBAR LED STRIPS IN PARALLEL
CC value (3x 28 cm)@525mA, (3x 56 cm) @ 1050mA

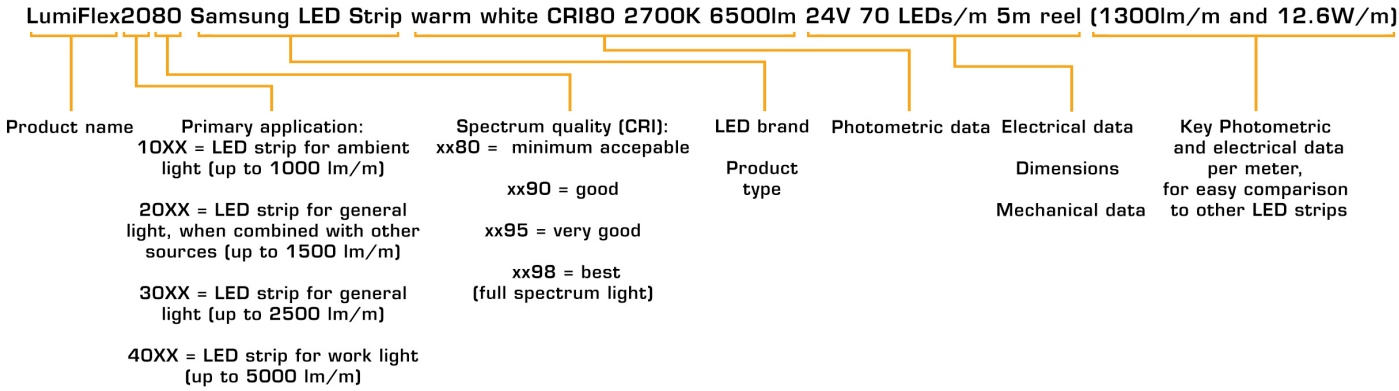
4 LUMIBAR LED STRIPS IN PARALLEL
CC value (4x 28 cm)@700mA, (4x 56 cm) @ 1400mA

SERIES LED STRIP CONNECTION



The series connection is applied by connecting the positive (+) terminal of the first LED strip to the negative (-) terminal of the second LED strip. This pattern is repeated for further LED strips, from the negative (-) of the second strip to the positive (+) of the third strip and so on. At the same time, the negative (-) of the first LED strip is wired to the (+) of the second, then the (-) of the second to the (+) of the third and so on.
In a series connection of LED strips, the current of the string is equal to the current of the first LED strip, while the voltage is the sum of the voltages for all LED strips (voltage of the first LED multiplied by the number of LED strips). The sum voltage of the string has to be supported by the CC LED driver.

LED STRIP PRODUCT NAME EXPLAINED



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.

This LED strip can be purchased via the following websites:
www.ledrise.eu / www.lumistrips.com