



Lumistrips

# DATASHEET

LUMIBAR-52-RSP HORTICULTURE NICHIA RSPOA LED STRIP  
ZHAGA WARM WHITE 3000K 25PPF 1600LM 350MA  
37.5V 52 LEDS 56CM MODULE

**SKU: 34333**

---



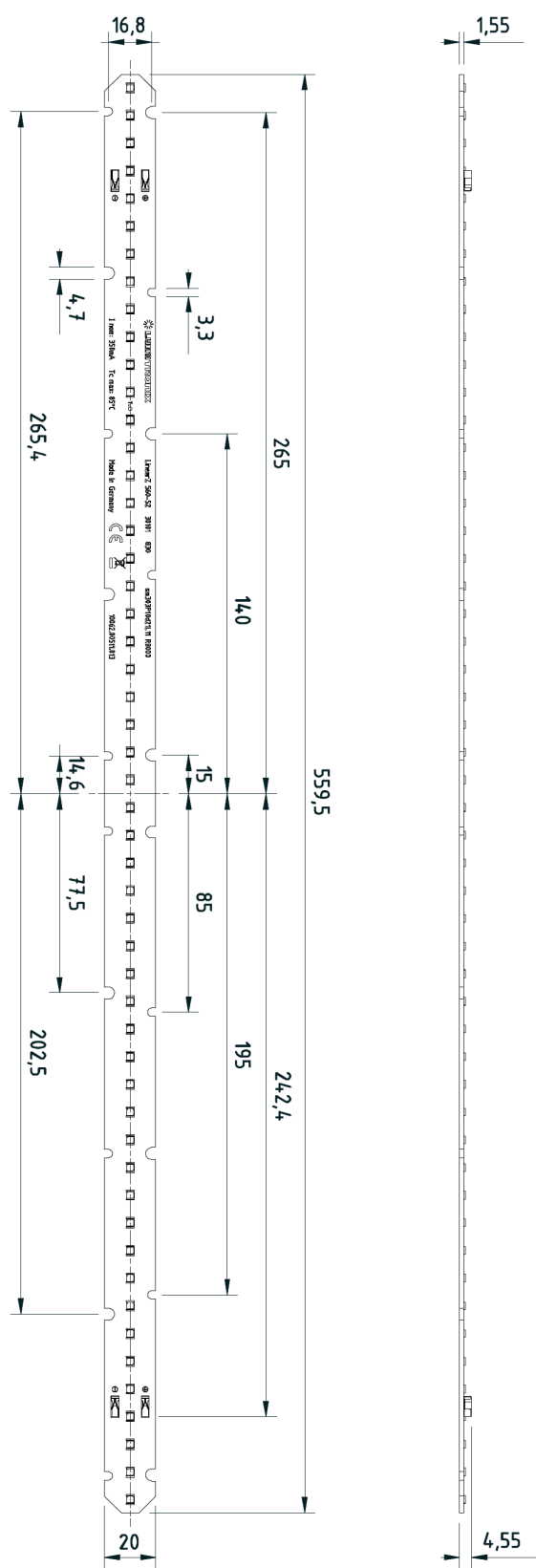
LUMIBAR-52-RSP HORTICULTURE NICHIA RSP0A LED STRIP ZHAGA WARM WHITE 3000K 25PPF  
1600LM 350MA 37.5V 52 LEDS 56CM MODULE

Article number (SKU)		34333	
Product name		LumiBar-52-RSP Horticulture Nichia RspOa LED Strip Zhaga warm white 3000K 25PPF 1600lm 350mA 37.5V 52 LEDs 56cm module	
Classification		Professional	
Model identifier (equivalent models)		LinearZ 560-52 Horticulture	
Photometric data (at TJ = 65°C, ± 10%)			
Light color		Warm white	
Binning		3-Step MacAdam	
Color temperature (K)		3000 K	
Dominant wavelength (nm)			
Luminous flux (lm)		1600 lm	2858 lm/m
Photosynthetic photon flux PPF (μmol/s)*		25 μmol/s	
CRI (Ra)		-	
Efficiency (lm/W)		121 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)		13.12 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)		121 lm/W	
Version			
Date		15. Aug 2022	



\*based on research by Nichia, Japan

LUMIBAR-52-RSP HORTICULTURE NICHIA RSP0A LED STRIP ZHAGA WARM WHITE 3000K 25PPF  
1600LM 350MA 37.5V 52 LEDS 56CM MODULE

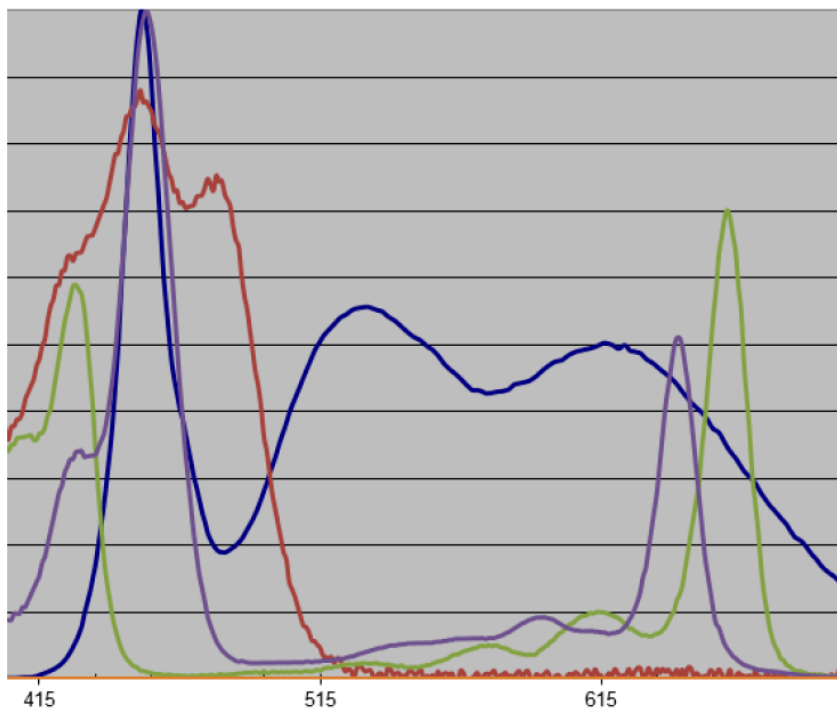


LUMIBAR-52-RSP HORTICULTURE NICHIA RSP0A LED STRIP ZHAGA WARM WHITE 3000K 25PPF  
1600LM 350MA 37.5V 52 LEDS 56CM MODULE

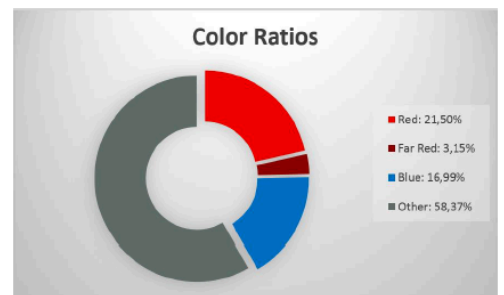
## NICHIA RSP0A PPF MEASUREMENTS, SINGLE LED & 14 LUMIBAR-52 MODULES

	Status*2	3000K (n=3~5) *				5000K (n=3~5) *				Condition
		Luminous Flux (lm)	Radiant Flux (mW)	PPF (μmol/s)	PPF (μmol/J)	Luminous Flux (lm)	Radiant Flux (mW)	PPF (μmol/s)	PPF (μmol/J)	
NFSx757G 0.2W	MP	26	91	0.41	1.92	27	95	0.42	2.00	Ta=25°C Ifp=65mA

Product Family	LED Part Number	Flux	Flux Units	Electrical Power (W)	Total Photon Flux (μMol/s) 315-880nm	PPF (μMol/s) 400-700nm	Total Radiometric Power (mW)	Efficiency (μMol/J)
Nichia Horticulture White	NFSW757GT Rsp0a	23000,000	lm	186,000	374,378	354,472	79445,56	1,91

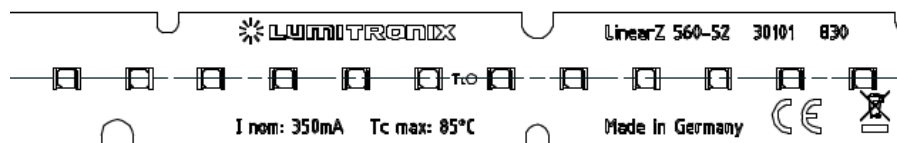


- Result
- Beta Carotene
- Chlorophyll A
- Chlorophyll B

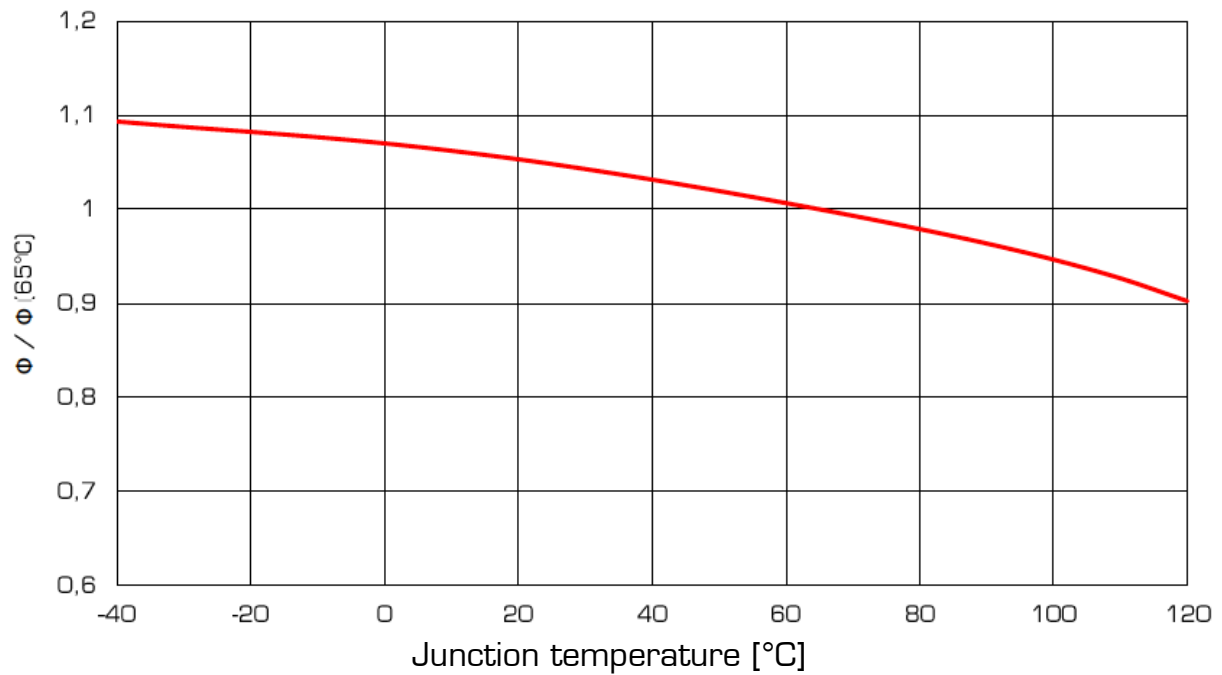


## CUSTOM LOGO

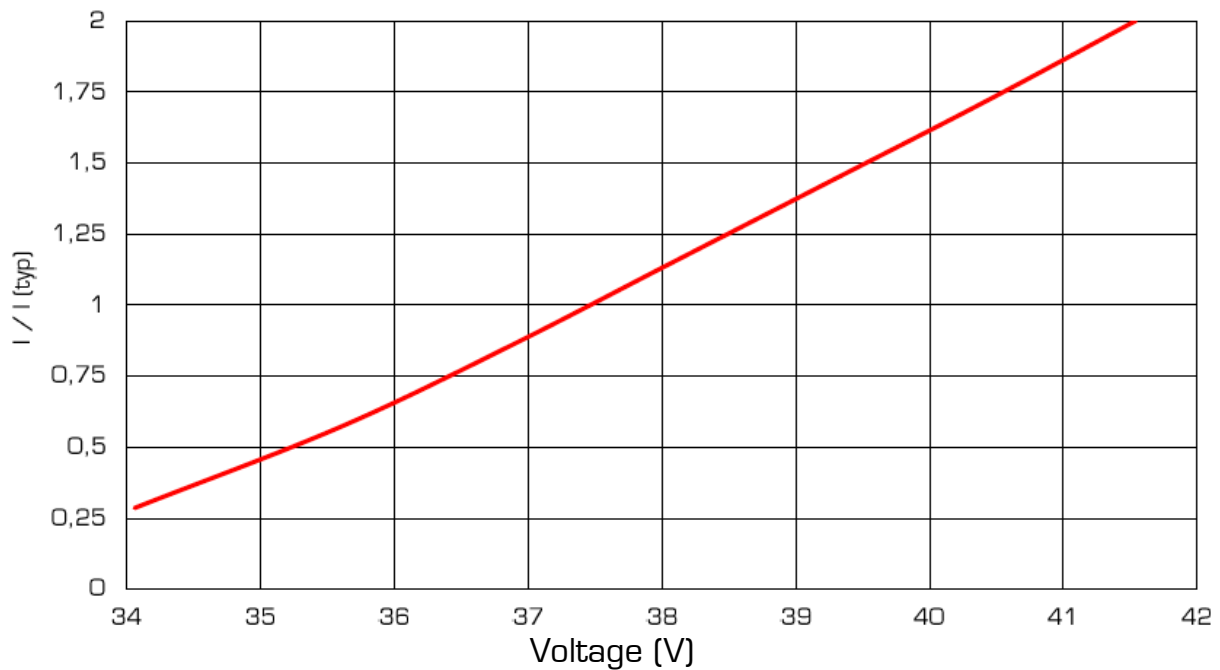
Replace "Lumitronix" with your logo, for orders of 100 pcs or more, production time 10 weeks. Contact us for details.



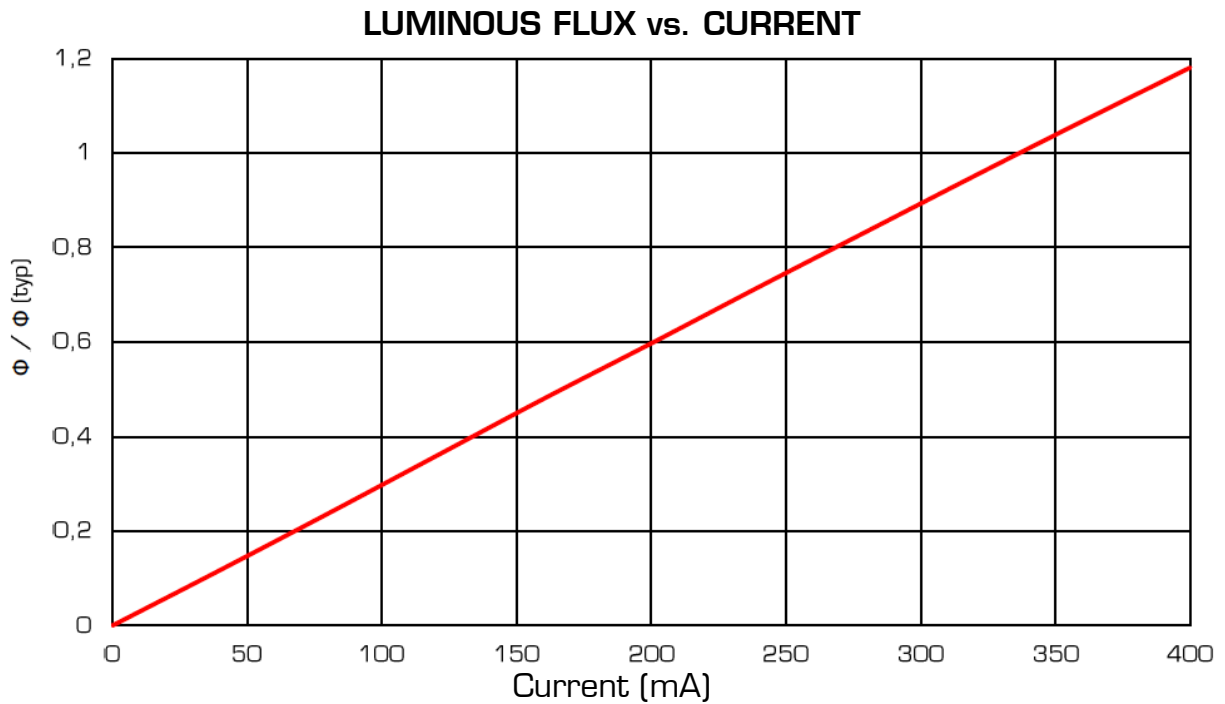
### LUMINOUS FLUX vs. TEMPERATURE



### CURRENT vs. VOLTAGE



LUMIBAR-52-RSP HORTICULTURE NICHIA RSP0A LED STRIP ZHAGA WARM WHITE 3000K 25PPF  
1600LM 350MA 37.5V 52 LEDS 56CM MODULE



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

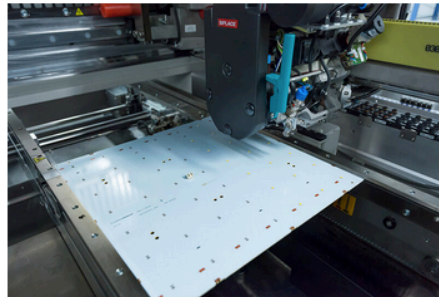
#### WARRANTY INFO



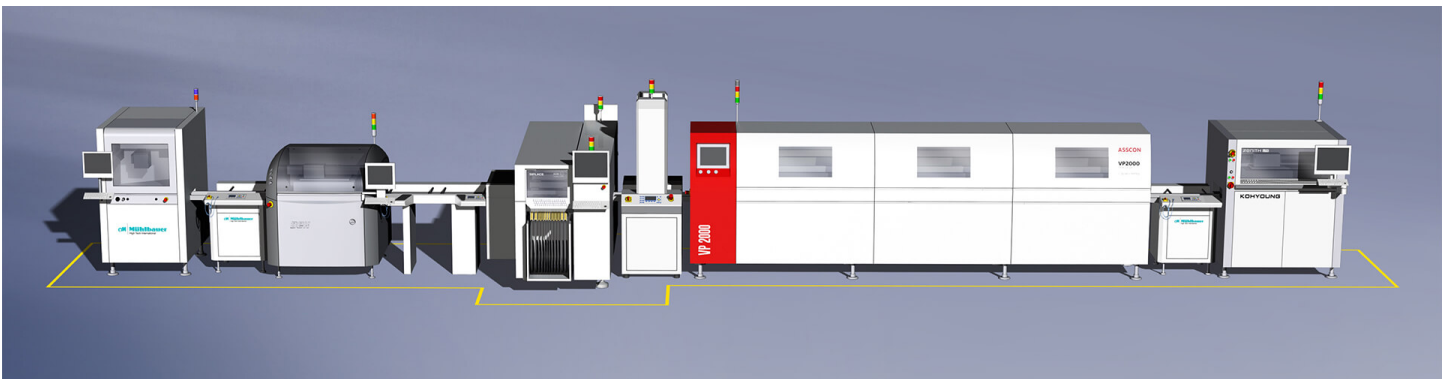
This LED Strip has 5 years commercial warranty. Please refer to <https://www.lumistrips.com/lumistrips-en-warranty> for warranty terms.

LUMIBAR-52-RSP HORTICULTURE NICHIA RSP0A LED STRIP ZHAGA WARM WHITE 3000K 25PPF  
1600LM 350MA 37.5V 52 LEDS 56CM MODULE

## MANUFACTURING INFO



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.



**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

## LUMIBAR-52-RSP HORTICULTURE NICHIA RSP0A LED STRIP ZHAGA WARM WHITE 3000K 25PPF 1600LM 350MA 37.5V 52 LEDS 56CM MODULE

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.

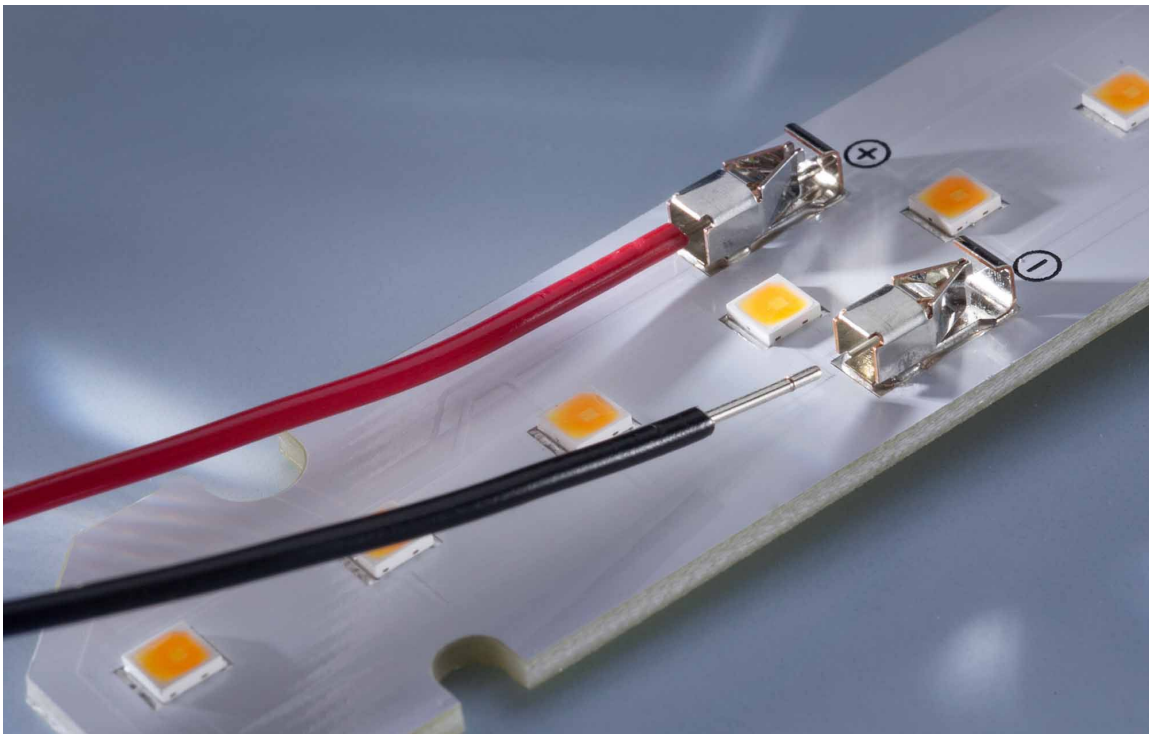
- **Nichia** is the LED market leader, with over 25% market share and decades of experience. Nichia researchers invented the blue and white LED production technology, also receiving the Nobel Prize for this achievement. Nichia LEDs are the **most efficient** (200 lm / w efficacy), durable (> 100,000 hours) and are also available with unique technologies such as **Optisolis**, CRI98+ natural light spectrum and **Rsp0a**, 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:**

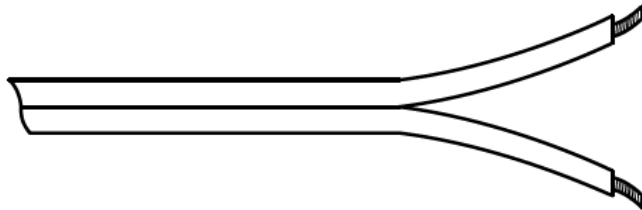
- We use LEDs from top brands and have superior designs
- We offer **professional support** for lighting projects
- The PCBs use high quality materials for best resistance, current flow and heat transfer
- Performance values in this datasheet match those in real world applications
- Function perfectly 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:  $2 \times 0.75 \text{ mm}^2$  (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.

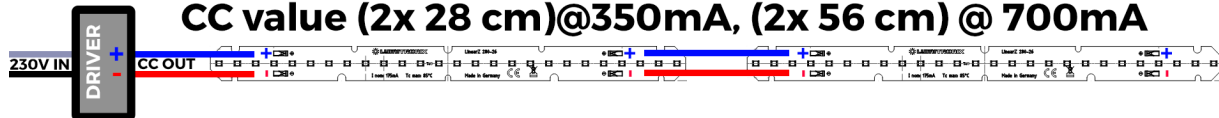
At the same time, the negative (-) of the first LED strip is wired to (-) of the second, then (-) of the second to (-) of the third and continuing.

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**

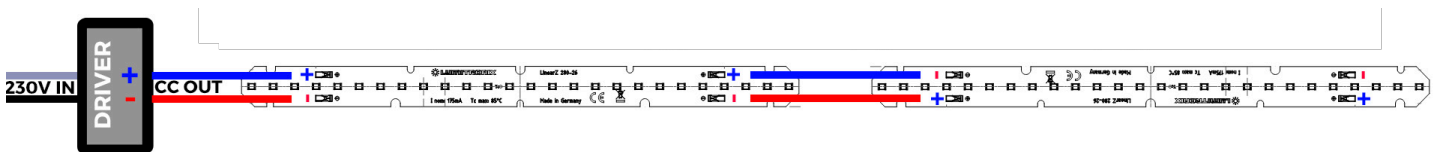


#### 4 LUMIBAR LED STRIPS IN PARALLEL

**CC value (4x 28 cm)@700mA, (4x 56 cm) @ 1400mA**



### SERIES LED STRIP CONNECTION



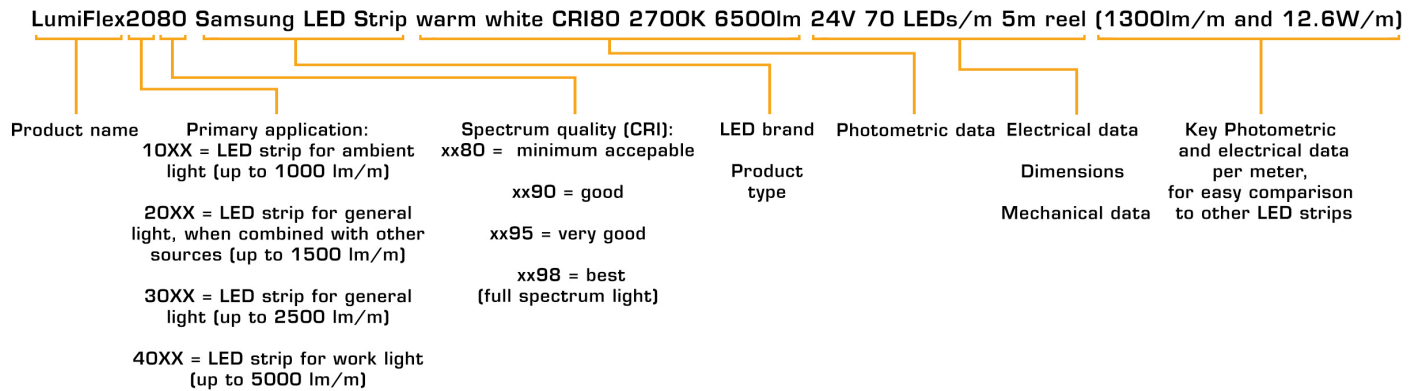
The series connection is applied by connecting the positive (+) terminal of the first LED strip to the negative (-) terminal of the second LED strip. This pattern is repeated for further LED strips, from the negative (-) of the second strip to the positive (+) of the third strip and so on. At the same 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

# LUMIBAR-52-RSP HORTICULTURE NICHIA RSP0A LED STRIP ZHAGA WARM WHITE 3000K 25PPF 1600LM 350MA 37.5V 52 LEDS 56CM MODULE

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.

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.

**This LED strip can be purchased via the following websites:**

[www.ledrise.eu](http://www.ledrise.eu) / [www.lumistrips.com](http://www.lumistrips.com)