



Lumistrips

# DATASHEET

LUMIBARTW-112-4090+ NICHIA H6 SERIES TW LED STRIP  
ZHAGA CRI92 TRIGAIN WHITE 2000+4000+6500K  
1140LM 24V 112 LEDS 28CM MODULE

**SKU: 38562**

---

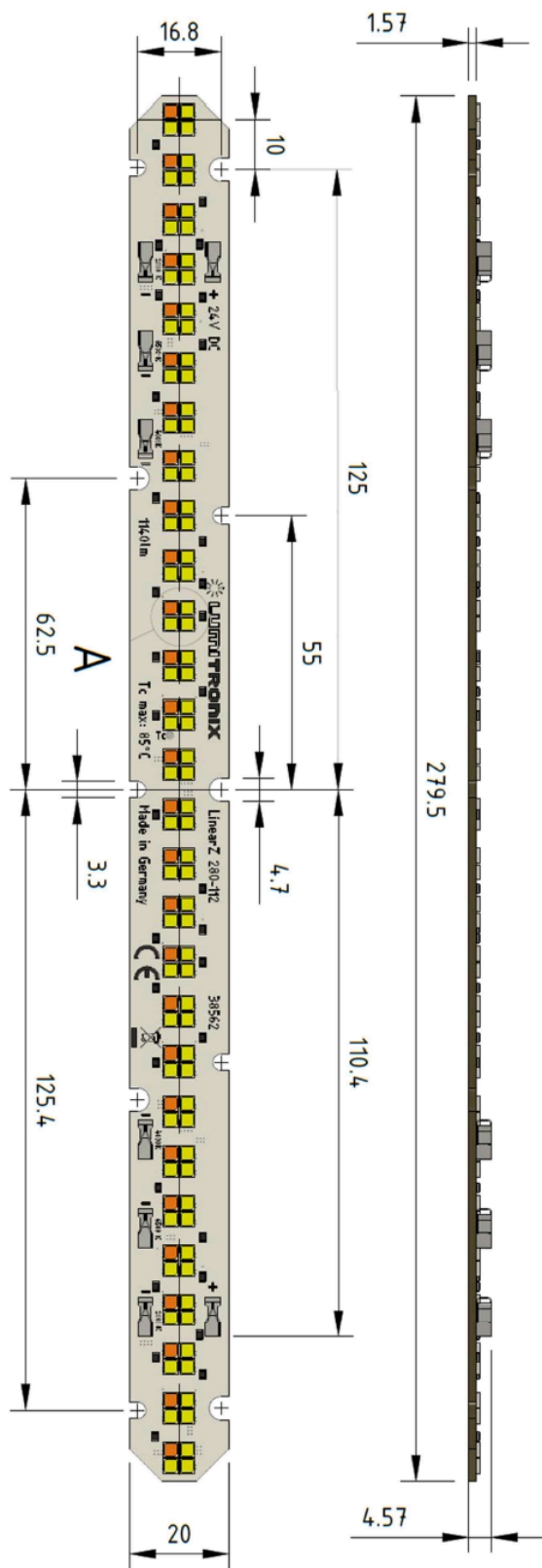


LUMIBARTW-112-4090+ NICHIA H6 SERIES TW LED STRIP ZHAGA CRI92 TRIGAIN WHITE  
2000+4000+6500K 1140LM 24V 112 LEDS 28CM MODULE

Article number (SKU)		38562	
Product name	LumiBarTW-112-4090+ Nichia H6 Series TW LED Strip Zhaga CRI92 TriGain white 2000+4000+6500K 1140lm 24V 112 LEDs 28cm module		
Classification	Professional		
Model identifier (equivalent models)	LinearZ 112		
Photometric data (at TJ = 65°C ± 10%)			
Light color	Warm white   Pure White   Cold white		
Binning	3-Step MacAdam		
Color temperature (K)	2000 K   4000K   6500 K		
Dominant wavelength (nm)			
Luminous flux (lm)	510 lm   1140 lm   520 lm	1820 - 4000 lm/m	
Radiant power (mW)			
CRI (Ra)	>92		
Efficiency (lm/W)	89 lm/W   171 lm/W   155 lm/W		
Beam angle FWHP	120°		
Lifetime L80B10C1 (h)	>60000 h		
Photometric code	920/339   940/339   965/339		
Electrical data (at TJ = 65°C, ± 10%) (reference settings)			
Operating mode	Constant voltage		
Voltage (V)	24 V		
Current (mA)	240 mA   280 mA   140 mA		
Power (W)	5.7 W   6.7 W   3.36 W	12 - 23 W/m	
Dimmable	Yes		
Dimensions / Mechanical data		Metric units	Imperial units
Length		279.5 mm	10.984"
Width		20 mm	0.786"
Height		4.55 mm	0.179"
Number of LEDs (pcs)	112 pcs		
Weight (g)	22 g		
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	B		
Mains voltage luminous efficacy (lm/W)	171 lm/W		
Version			
Date	25. Sept 2022		



LUMIBARTW-112-4090+ NICHIA H6 SERIES TW LED STRIP ZHAGA CRI92 TRIGAIN WHITE  
2000+4000+6500K 1140LM 24V 112 LEDS 28CM MODULE



## WHAT IS THE NICHIA H6 SERIES?

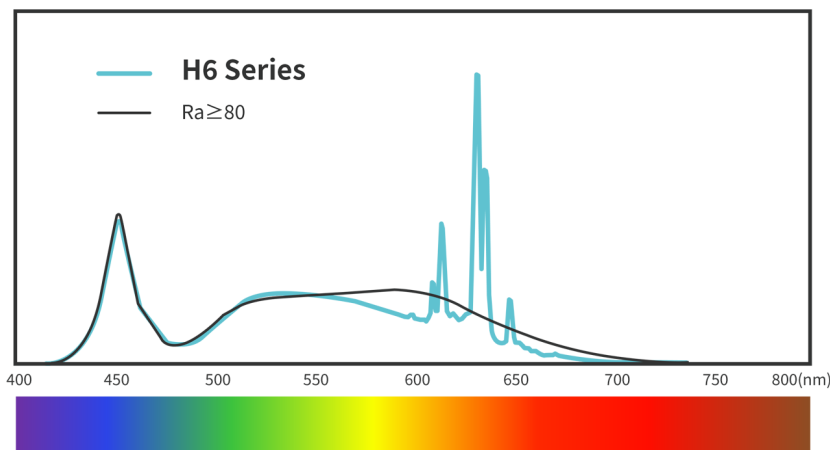
The new H6 Series from Nichia is combining innovative phosphor and LED technologies, to optimize the light spectrum with a unique red narrow band phosphor technology . This leads to the technology breakthrough, of overcoming the trade-off between efficacy and CRI, by delivering the industry's highest joint-boost in color quality and efficacy. It ushers in a new era of LED adoption, one where the focus on quality of light can take center stage.

### Comparison of Color Rendering: Fluorescent Lamps vs. LEDs

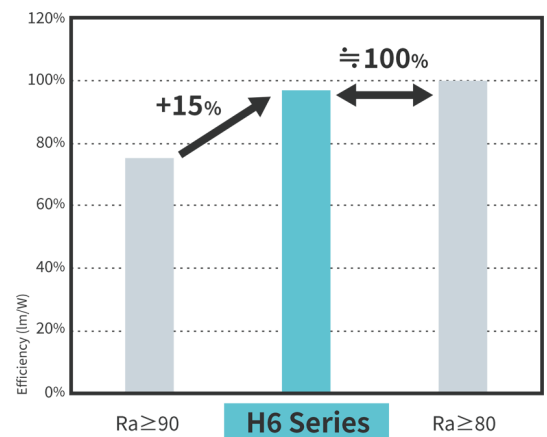
	CCT (K)	CRI															
		Ra	R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14	R15
Standard FL	5077	69	62	79	90	65	66	72	77	43	-68	50	57	63	66	94	53
Tricolor FL	5267	87	99	94	63	91	92	84	90	84	40	60	81	70	98	74	96
LED Ra $\geq$ 80	5132	83	82	87	90	83	82	82	87	68	8	68	82	58	83	94	76
<b>LED H6 Series</b>	5136	92	99	93	82	92	96	88	93	95	98	78	90	66	97	89	98

Nichia's measurement using a spectrometer (CL-F70)

Nichia H6 series achieves a color quality better than traditional LEDs (RA $\geq$ 90, r9 $\geq$ 50, r15 $\geq$ 85) while maintaining an efficacy better than RA  $\geq$ 80 leds.



Spectrum of the H6 Series LEDs



Comparison of Luminous Efficacy :  
H6 Series LEDs vs. (Ra $\geq$ 80) LEDs

LUMIBARTW-112-4090+ NICHIA H6 SERIES TW LED STRIP ZHAGA CRI92 TRIGAIN WHITE  
2000+4000+6500K 1140LM 24V 112 LEDS 28CM MODULE

## H6 Series



## Ra ≥ 80



Make everyday life more vivid  
(Especially the difference in the reddish color is remarkable)

## H6 Series



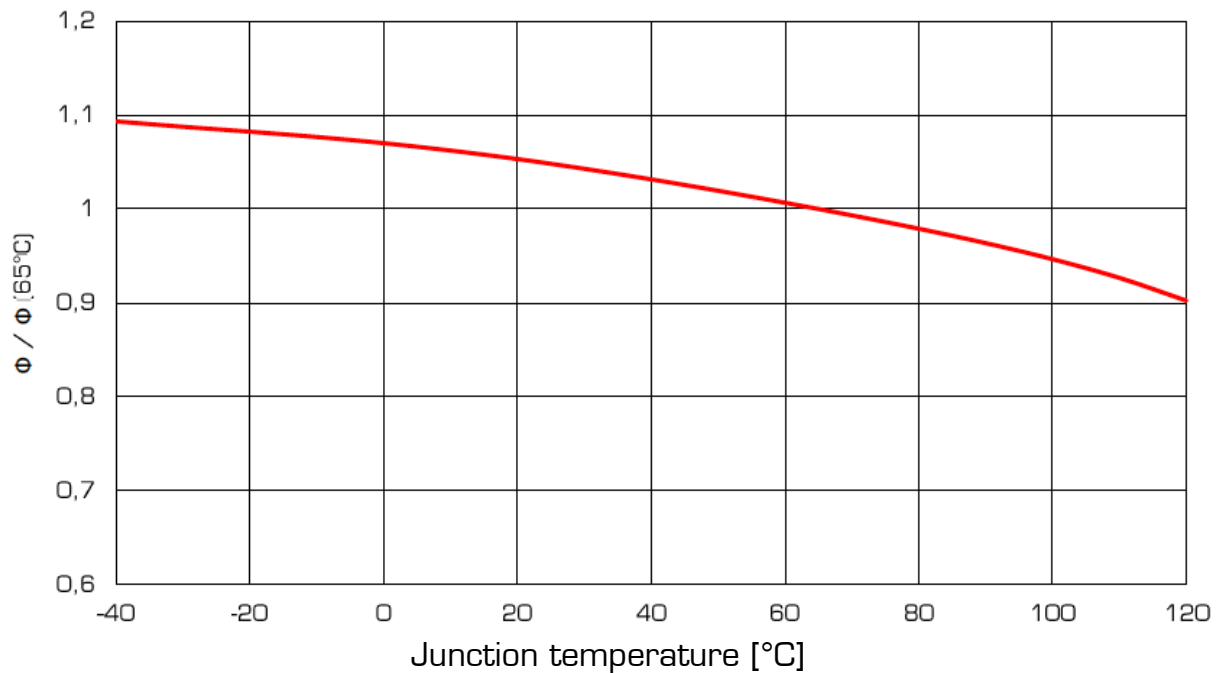
## Ra ≥ 80



Sharp, clear, and high fidelity for color reproduction

LUMIBARTW-112-4090+ NICHIA H6 SERIES TW LED STRIP ZHAGA CRI92 TRIGAIN WHITE  
2000+4000+6500K 1140LM 24V 112 LEDS 28CM MODULE

### LUMINOUS FLUX vs. TEMPERATURE



### WARRANTY INFO



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

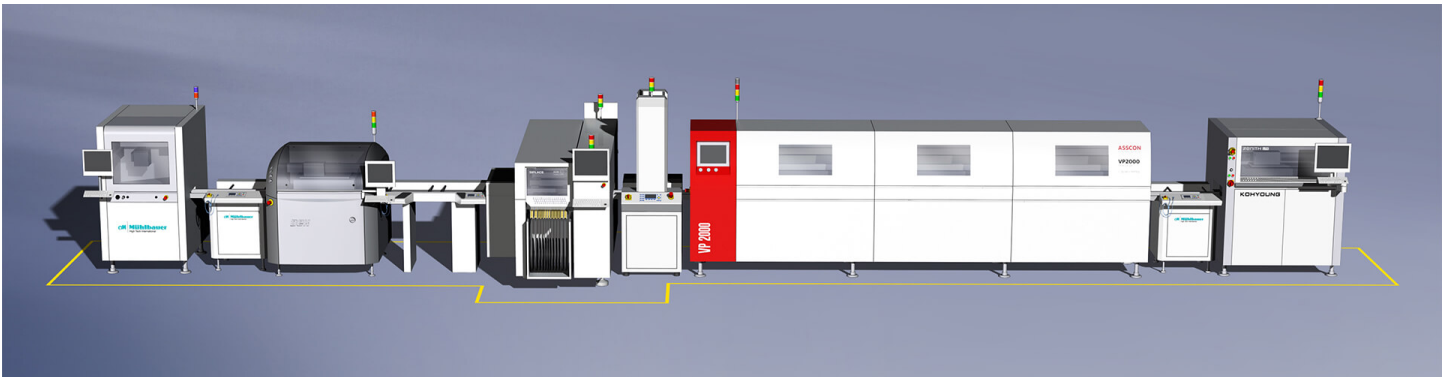


LUMIBARTW-112-4090+ NICHIA H6 SERIES TW LED STRIP ZHAGA CRI92 TRIGAIN WHITE  
2000+4000+6500K 1140LM 24V 112 LEDS 28CM MODULE

## MANUFACTURING INFO



The LED module 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

## LUMIBARTW-112-4090+ NICHIA H6 SERIES TW LED STRIP ZHAGA CRI92 TRIGAIN WHITE 2000+4000+6500K 1140LM 24V 112 LEDS 28CM MODULE

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.



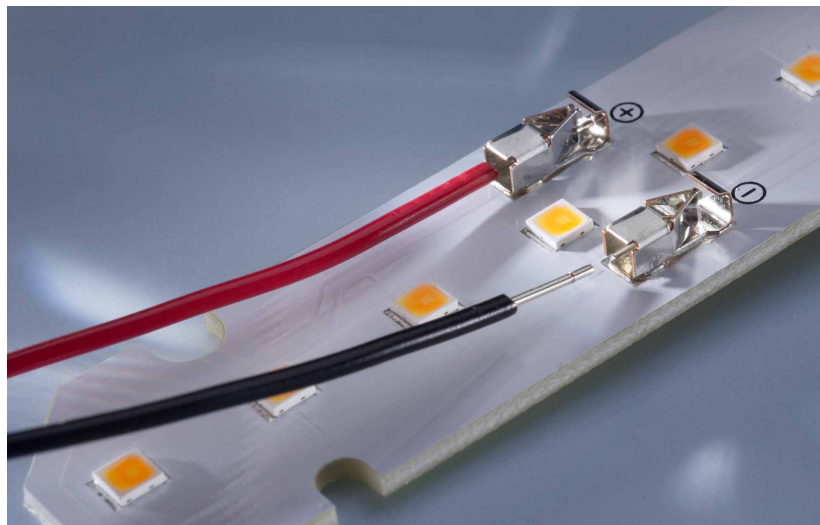
LUMIBARTW-112-4090+ NICHIA H6 SERIES TW LED STRIP ZHAGA CRI92 TRIGAIN WHITE  
2000+4000+6500K 1140LM 24V 112 LEDS 28CM MODULE

- **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:

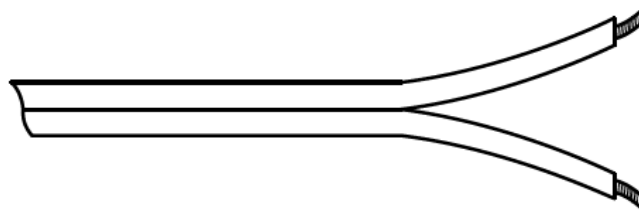
- We use LEDs from top brands and have superior designs
- We offer **professional support** for lighting projects
- The PCBs use high quality materials for best resistance, current flow and heat transfer
- Performance values in this datasheet match those in real world applications
- Function perfectly 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 mm<sup>2</sup> (AWG 18).



# LUMIBARTW-112-4090+ NICHIA H6 SERIES TW LED STRIP ZHAGA CRI92 TRIGAIN WHITE 2000+4000+6500K 1140LM 24V 112 LEDS 28CM MODULE

## LED MODULE PRODUCT NAME EXPLAINED

BackMatrix3080 Nichia LED Module warm white CRI80 3000K 6500lm 24V 49 LEDs 29x29cm (23233 lm/sqm)

Product name	Primary application:	Spectrum quality (CRI):	LED brand	Photometric data	Electrical data	Key Photometric and electrical data per meter, for easy comparison to other LED modules
	10XX = LED module for ambient light (up to 5000 lm/sqm)	xx80 = minimum acceptable	Product type		Dimensions	
	20XX = LED module for general light, when combined with other sources (up to 15000 lm/sqm)	xx90 = good			Mechanical data	
	30XX = LED module for general light (up to 25000 lm/sqm)	xx95 = very good				
	40XX = LED module for work light (up to 100000 lm/sqm)	xx98 = best (full spectrum light)				

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.

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

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

