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DATASHEET

NICHIA LED MODULE SMARTARRAY L12 ECONOMY WARM WHITE 2700K CRI80 375LM 350MA 9.17V 3.2W 50MM

SKU: 30771



NICHIA LED MODULE SMARTARRAY L12 ECONOMY WARM WHITE 2700K CRI80 375LM 350MA 9.17V 3.2W 50MM

Article number (SKU)	**30771**	
Product name		
Classification	Economy	
Model identifier (equivalent models)	SmartArray L12 Economy	
Photometric data (at Tj = 80°C, ± 10%)	**Photometric data (at Tj = 85°C, ± 10%)**	
Light color	Warm white	
Binning	3-Step MacAdam	
Color temperature (**K**)	2700 K	
Dominant wavelength (**nm**)	-	
Luminous flux (lm)	375 lm	
Radiant power (**mW**)	-	
CRI (**Ra**)	>80	
Luminous efficacy (lm/W)	117 lm/W	
Beam angle FWHM	116°	
Lifetime L80B10C1 (**h**)	>60,000 h	
Photometric code	827/339	
Electrical data (at Tj = 85°C, ± 10%) (reference settings)		
Operating mode	Constant current	
Voltage (**V**)	9.17 V	
Current (**mA**)	350 mA	
Power (**W**)	3.2 W	
Standby power (W)	0 W	
Dimmable	Yes	
Dimensions / Mechanical data	**Metric units**	**Imperial units**
Length	50 mm	1.969 in
Width	7 mm	0.276 in
Height	1.55 mm	0.061 in
Number of LEDs (pcs)	12 pcs	
Weight (g)	0.8 g	
Heat dissipation	-	
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	E	
Mains voltage luminous efficacy (lm/W)	127.62 lm/W	
Version		
Technical data date	20 January 2023	

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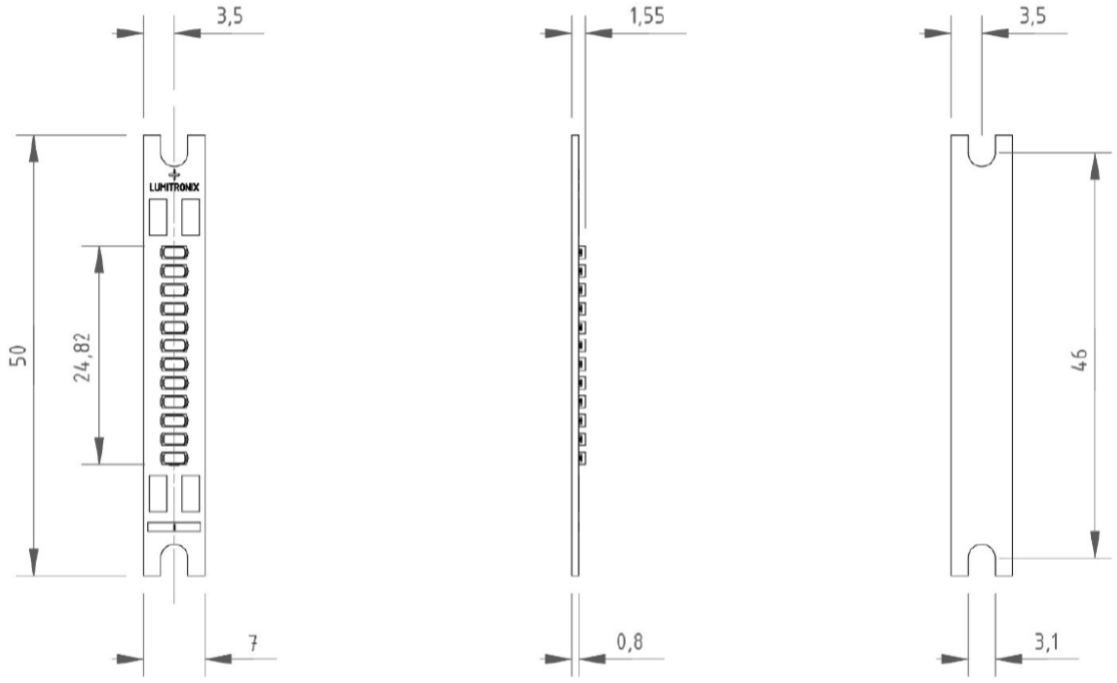

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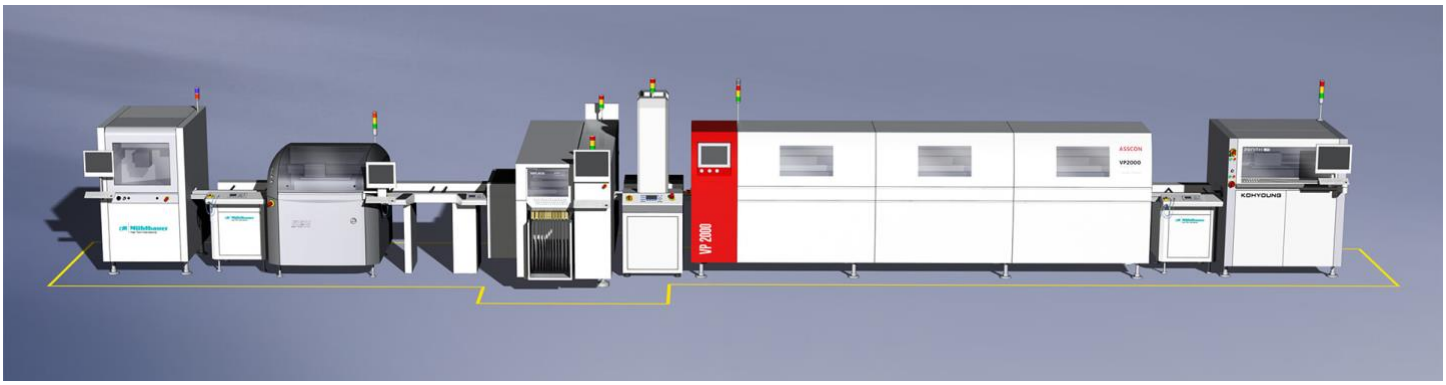
MANUFACTURING

made in Germany

5 YEAR WARRANTY

This product carries a five-year commercial warranty. Refer to https://www.lumistrips.com/lumistrips-en-warranty for warranty terms.

We develop and manufacture LED modules and strips in Hechingen, Germany, drawing on more than 20 years of experience in LED technology.



Our capabilities cover rigid modules, flexible LED strips and custom assemblies, with support from development and prototyping through to series production.

CUSTOM DEVELOPMENT AND SUPPORT

- Custom options can include PCB dimensions, LED selection, optics and control electronics, subject to technical feasibility.
- Development support covers PCB layout, thermal design and system integration.
- Prototypes can be assembled and evaluated in our in-house lighting laboratory.
- Supply your optical targets, dimensions, supply and control requirements, operating environment and expected quantity when requesting a custom design.





Our manufacturing capabilities include surface-mount technology (SMT) assembly for rigid PCBs and reel-to-reel production for flexible LED substrates. The process is selected to suit the product design and production volume.

Production quality controls include:

- Laser marking for PCB identification and traceability
- Solder paste inspection before component placement
- Automated component placement
- Controlled reflow soldering
- Three-dimensional automated optical inspection

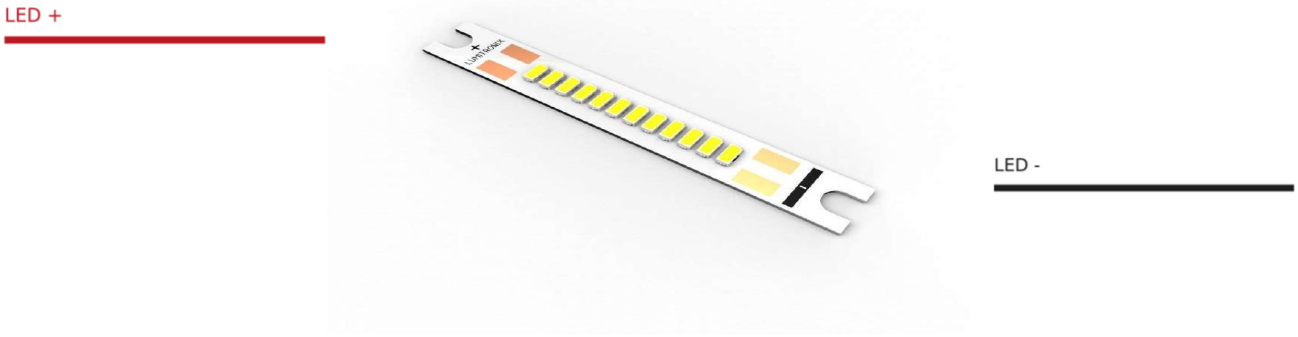
Manufacturing management systems: ISO 9001 for quality, ISO 14001 for environmental management and ISO 45001 for occupational health and safety. These certifications apply to the manufacturing centre; product approvals are listed separately in the technical data.

LED SELECTION AND PERFORMANCE

The SmartArray L12 Economy uses twelve Nichia white LEDs on a compact 50 mm linear module. SKU 30771 is the 2700 K, CRI >80, 375 lm version.

- Optical: 2700 K warm white, CRI >80, 3-step MacAdam binning, 116° FWHM and 375 lm.
- Electrical: constant-current operation at 350 mA, approximately 9.17 V and 3.2 W.
- Thermal: Tc -40 °C to +85 °C, ambient -40 °C to +50 °C, storage -40 °C to +100 °C.
- Performance values apply at the stated reference conditions and depend on current, temperature and luminaire design.

ELECTRICAL CONNECTION



Connect the SmartArray L12 Economy to a regulated constant-current LED driver and observe the polarity markings on the PCB. Use conductors and connection methods suitable for the final luminaire and installation environment.
SKU 30771 is specified for 350 mA operation with a reference forward voltage of approximately 9.17 V and a nominal electrical power of 3.2 W. Do not connect the module directly to an uncontrolled constant-voltage supply.

DRIVER SELECTION

Select a constant-current driver regulated at 350 mA whose output-voltage range accommodates the connected module or series string over all operating conditions. One module is rated at approximately 9.17 V and 3.2 W at the stated reference point.

HANDLING AND INSTALLATION

Electrical isolation

Disconnect the supply before installation or wiring. Installation must be performed by qualified personnel in accordance with applicable electrical and safety requirements.

Mechanical handling and ESD

Use electrostatic-discharge (ESD) precautions. Handle the PCB by its edges and avoid pressure on LEDs or other components. Do not bend or mechanically stress the rigid PCB.

Mounting and temperature

Support the module at the intended mounting points and verify that the Tc and ambient temperatures remain within the specified limits in the completed installation. The source technical table specifies -40 °C to +85 °C at Tc and -40 °C to +50 °C ambient.

Storage and environment

Store the module within the specified -40 °C to +100 °C range and protect it from contamination, moisture and aggressive chemicals during storage and installation.

Power supply protection

Use an electronically regulated constant-current LED driver with appropriate short-circuit, overload and overtemperature protection for the application. The module itself should not be relied upon to provide system-level protection.

Checks before operation

Check polarity, driver current, wiring and mounting before applying power. Confirm that the selected driver is compatible with the SmartArray L12 Economy and its 350 mA operating current.

DOCUMENT INFORMATION

This individual datasheet is based on the supplied SmartArray L12 Economy source documentation for SKU 30771. Product-specific values and performance diagrams shown here correspond to that source document. Distribution and reproduction are subject to the applicable document terms.
We reserve the right to make technical changes.

ORDERING AND PRODUCT INFORMATION

www.ledrise.eu / www.lumistrips.com