CREE LED® High Efficacy
LED Module MOD-24R147x46.2-JR5050K VB01

DK250402

LED Modules MOD-24R147x46.2-JR5050K are LED module based on the CREE LED® J Series® JR5050 K class optimized for cost effective and high efficacy applications and for LEDIL's STRADA IP 24 optics. LED Modules MOD-24R147x46.2-JR5050K are providing optimized and easy integration, with excellent quality, reliability and precision.

A wide range of modules versions are available, offering the flexibility to choose the best combination of price and lumens output while maintaining consistent reliability and accuracy for a variety of applications.

For lighting applications where both high efficiency and durability are a priority, such as streets, squares, avenues, gardens and public spaces lighting.

- High efficacy **203 lm/W** and up to **21908 lm**.
- LM-80 lifetime projections (IEC 62717) **> 109,000 (L70)**[1]
- Quick and effective heat dissipation due to the using MCPCB 1.0 mm with thermal conductivity 2.2 W/mK, or standard FR4 1.6mm, Lead Free HASL.
- EPREL registered product.
- Available CCT 3000K, 4000K.
- Available CRI 80.

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➢ SPECIFICATION

LED FAMILY	MOD-24R147x46.2-JR5050K						
CCT/SDCM	2700K 3-STEP	3000K 3-STEP	3500K 3-STEP	4000K 3-STEP	5000K 3-STEP	5700K 3-STEP	6500K 3-STEP
Viewing Angle	120°						
Nominal Module Lumen Output[2]	CRI 70						
	3460 lm	3636 lm	3695 lm	3821 lm	3821 lm	3821 lm	3821 lm
	CRI 80						
	3267 lm	3393 lm	3485 lm	3569 lm	3569 lm	3569 lm	3569 lm
Nominal Efficacy[2]	CRI 70						
	194 lm/W	204 lm/W	207 lm/W	214 lm/W	214 lm/W	214 lm/W	214 lm/W
	CRI 80						
	183 lm/W	190 lm/W	195 lm/W	200 lm/W	200 lm/W	200 lm/W	200 lm/W
CRI	70; 80						
Nominal Driving Current	280 mA						
Voltage DC (typ.) [2]	72 V						
Power Consumption[2]	17.9 W						
Max. LED module working current [3]	**2000 mA / module**						
Voltage DC (max)[3]	**73.9 V**						
Max power[3]	**146 W**						
Max. LED module lumen output[3]	**CRI 70**						
	21237	**22320**	**22681**	**23454**	**23454**	**23454**	**23454**
	CRI 80						
	20052	**20825**	**21392**	**21908**	**21908**	**21908**	**21908**
Number of LEDs	24						
Power Supply Type	Constant Current						
Risk Group Classification[4]	RG-1 Low Risk for 2700K, 3000K, 3500K, 4000K; RG-2 Moderate Risk for 5000K, 5700K, 6500K when above 365 mA per LED						
Energy Class	**J class CRI 80**						
	B	**B**	**B**	**A**	**A**	**A**	**A**
	J class CRI 90						
	C	**B**	**B**	**B**	**B**	**B**	**B**
Operating Temperature	-30°C ÷ +60°C						
Tc max.	85°C						
Lifetime[1]/Tc life	>60 500 h @ 85˚C/105 ˚C, 240 mA,						

[1] **Lifetime of LEDs as declared by the manufacturer CREE LED® according to IES LM-80-2015 Testing Results Revision:32 :2025.**
[2] **Source performance in real-life conditions at Tc=55°C, 280 mA without heatsink.**
[3] **External heatsink required.**
[4] **According to Eye safety Cree document**

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➢ FEATURES

Application:

- ❖ Task lighting
- ❖ Accent lighting
- ❖ Decorative lighting
- ❖ General lighting
- ❖ Road and park lighting
- ❖ Parking area lighting

Features:

- ❖ The module is dimmable by current set (0-100%)
- ❖ Long Lifetime
- ❖ Energy Saving

EPREL Database link

2700K 70CRI 3000K 70CRI 3500K 70CRI 4000K 70CRI 5000K 70CRI 5700K 70CRI 6500K 70CRI

2700K 80CRI 3000K 80CRI 3500K 80CRI 4000K 80CRI 5000K 80CRI 5700K 80CRI 6500K 80CRI

➢ TYPICAL SPATIAL DISTRIBUTION

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- **RELATIVE LUMINOUS FLUX VS. FORWARD CURRENT (mA)**

- **LUMINOUS EFFICACY (lm/W) VS. MODULE LED POWER (W)**

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- **RELATIVE LUMINOUS FLUX VS. JUNCTION TEMPERATURE**

- **RELATIVE CHROMATICITY VS. TEMPERATURE**

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- **RELATIVE CHROMATICITY VS. CURRENT**

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➢ DIMENSIONS

Notes:
Drawing is not to scale.
All dimensions are in millimeters.

MECHANICAL SPECIFICATION		
Dimensions	147 x 46.2 mm	
Board Thickness	1.0 mm	1.6 mm
Board Material	MCPCB, 5052 Alloy, 2.2W/(m*K); high reflectivity white soldermask	FR4; high reflectivity white soldermask
Shape	Rectangular	

➢ CONNECTION

Inserting solid conductors via push-in termination.

Easy conductor removal, e.g., via 206-859 operating tool.

➢ ELECTRICAL SCHEMA

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➢ ELECTRICAL INSTALLATION

➢ ORDERING CODE

ORDERING CODE / ARTICLE CODE	DESCRIPTION
MOD-24R147x46.2-JR5050K-2770-VB01	Linear Led Module 72V, High Efficacy, High Reflectivity White Soldermask, 24 LED, JR5050K, 2700K, CRI 70, 1.6 mm MCPCB
MOD-24R147x46.2-JR5050K-3070-VB01	Linear Led Module 72V, High Efficacy, High Reflectivity White Soldermask, 24 LED, JR5050K, 3000K, CRI 70, 1.6 mm MCPCB
MOD-24R147x46.2-JR5050K-3570-VB01	Linear Led Module 72V, High Efficacy, High Reflectivity White Soldermask, 24 LED, JR5050K, 3500K, CRI 70, 1.6 mm MCPCB
MOD-24R147x46.2-JR5050K-4070-VB01	Linear Led Module 72V, High Efficacy, High Reflectivity White Soldermask, 24 LED, JR5050K, 4000K, CRI 70, 1.6 mm MCPCB
MOD-24R147x46.2-JR5050K-5070-VB01	Linear Led Module 72V, High Efficacy, High Reflectivity White Soldermask, 24 LED, JR5050K, 5000K, CRI 70, 1.6 mm MCPCB
MOD-24R147x46.2-JR5050K-5770-VB01	Linear Led Module 72V, High Efficacy, High Reflectivity White Soldermask, 24 LED, JR5050K, 5700K, CRI 70, 1.6 mm MCPCB
MOD-24R147x46.2-JR5050K-6570-VB01	Linear Led Module 72V, High Efficacy, High Reflectivity White Soldermask, 24 LED, JR5050K, 6500K, CRI 70, 1.6 mm MCPCB
MOD-24R147x46.2-JR5050K-2780-VB01	Linear Led Module 72V, High Efficacy, High Reflectivity White Soldermask, 24 LED, JR5050K, 2700K, CRI 80, 1.6 mm MCPCB
MOD-24R147x46.2-JR5050K-3080-VB01	Linear Led Module 72V, High Efficacy, High Reflectivity White Soldermask, 24 LED, JR5050K, 3000K, CRI 80, 1.6 mm MCPCB
MOD-24R147x46.2-JR5050K-3580-VB01	Linear Led Module 72V, High Efficacy, High Reflectivity White Soldermask, 24 LED, JR5050K, 3500K, CRI 80, 1.6 mm MCPCB
MOD-24R147x46.2-JR5050K-4080-VB01	Linear Led Module 72V, High Efficacy, High Reflectivity White Soldermask, 24 LED, JR5050K, 4000K, CRI 80, 1.6 mm MCPCB
MOD-24R147x46.2-JR5050K-5080-VB01	Linear Led Module 72V, High Efficacy, High Reflectivity White Soldermask, 24 LED, JR5050K, 5000K, CRI 80, 1.6 mm MCPCB
MOD-24R147x46.2-JR5050K-5780-VB01	Linear Led Module 72V, High Efficacy, High Reflectivity White Soldermask, 24 LED, JR5050K, 5700K, CRI 80, 1.6 mm MCPCB
MOD-24R147x46.2-JR5050K-6580-VB01	Linear Led Module 72V, High Efficacy, High Reflectivity White Soldermask, 24 LED, JR5050K, 6500K, CRI 80, 1.6 mm MCPCB

➢ COMMERCIAL INFORMATION

COMMERCIAL INFORMATION	
Connector	WAGO 2059
Available Lenses	LEDIL STRADA-IP-24
Minimum Order Quantity	10 pcs.
Warranty	2 years
Power Supply	PS-ELG-200-C2100B PS-LCM-40DA Xi FP 75W 0.3-1.0A SNLDAE

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➢ GENERAL TERMS OF USE

1. The range of acceptable input voltages must include the expected voltage dropout across the LED string check on CREE LED Website J Series® 5050
2. Connecting to the power supply should be done when the power supply is off.
3. Modules should be connected to heatsink to dissipate heat from LED module. Temperature on the module shouldn't be higher than recommended by Cree®. Due to power of the module, appropriate heatsink should be used with thermal conductive tape or paste. The lower temperature on LED module causes longer lifetime.
4. During installation of the LED module it is absolutely necessary to use ESD protection. Luminaire design should protect the module from ESD. Installation of the LED module should be done by qualified person.
5. Lenses, diodes and other components on the module must be protected against mechanical damage and exposure to liquids and dirt.
6. The modules shouldn't have contact with hazardous and corrosive substances or aromatic organic compounds such as toluene, acetone, xylene, benzene.
7. For installation of modules use substances recommended and tested by the CREE LED®. List of substances available on the manufacturer's website: cree-led.com

Niviss is not responsible for any damage or failure due to not comply with above rules.

Otherwise, the complaint will not be taken into account.

➢ ENVIRONMENTAL CAUTION

Caution!

It is prohibited to dispose of obsolete and waste electrical and electronic equipment together with regular household wastes. They should be properly sorted and recycled. Old electrical and electronic equipment should be returned to a waste collection point established by a waste-management service. Waste electrical and electronic equipment can be broken down to base materials and then recycled. For more information regarding waste management please contact your local authorities, waste-management service or the seller of electrical and electronic devices.

➢ DATA DOWNLOAD

- 3D PDF FILE
- STEP FILE
- EU DECLARATION OF CONFORMITY (CE)

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