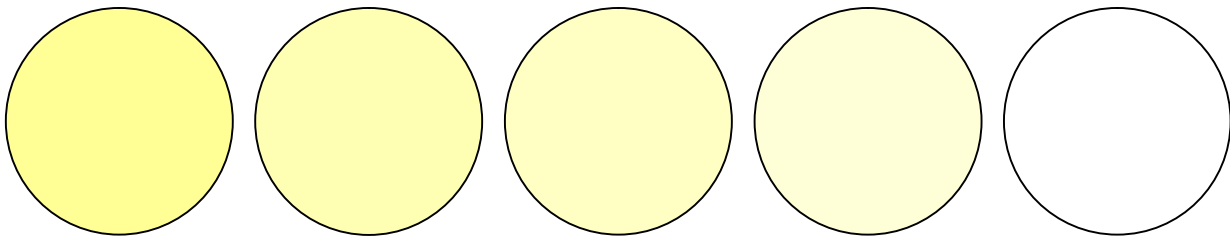


# Datasheet

10-050-N6-xx-xx-xx



**Flexible and separable LED strip RoHS compliant,  
self-adhesive**

**+++ 2.700°K to 6.500°K ++++  
CRI 80 / CRI 90**

**Product name:**

10-050-N6-xx-xx-xx

	xx	Color rendering index	80	CRI 80
			90	CRI 90
	xx	Color temp.	27	2.700° K
			30	3.000° K
			40	4.000° K
			50	5.000° K
		65	6.500° K	
xx	Overall power/mtr.	20	20Watt/mtr.	
6	LED per Step		6 Piece	
N	LED		NICHIA	
050	Step-length		50 mm	
10	Bandwidth		10,5 mm	

**LED Typ:**

CRI 80	NFSL757DT-V1 (R8000 Spec.)	sw27 - sw45
	NFSW757DT-V1 (R8000 Spec.)	sw50 - sw65
CRI 90	NFSL757DT-V1 (R9050 Spec.)	sw27 - sw45
	NFSW757DT-V1 (R9050 Spec.)	sw50 - sw65

More Info to the LEDs:

[www.nichia.co.jp/en/product/led\\_search.html](http://www.nichia.co.jp/en/product/led_search.html)

## Dimension:

Overall length:	6.000 mm
Width:	10,50 mm
Height:	2,50 mm
LED/mtr.:	120 Piece
LED- Distance:	8,33 mm
Divisible in:	120 unit á 50 mm
LED Abmessung	3,0 x 3,0 x 0,52 mm
Operating voltage:	24 Volt DC
LED / Current to small unit:	6 Piece / 65 mA
Color rendering index:	CRI 80 / CRI 90

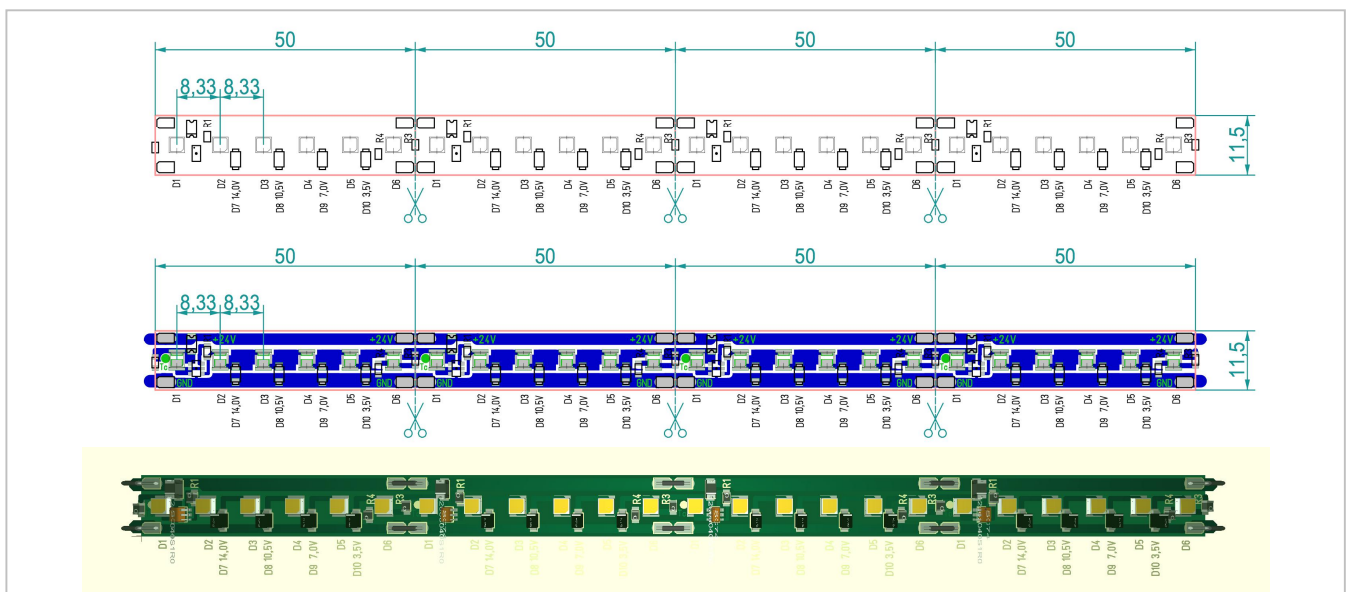
RoHS compliant  
Rear side 3M tape, heat resistant  
ANSI & MacAdam 3 Step compliant  
Up to 50,000 hours lifetime  
White solder mask

## Special length:

it is possible to step from 50 mm to divide further. By solder on the corresponding Z-diode, a step can be shortened to a length of:

D7	14,0V	17mm
D8	10,5V	25mm
D9	7,0V	34mm
D10	3,5V	42mm

## Drawing:



All disclosures in mm

## Technical Operating Specifications 10-050-N6-xx-xx-xx

- All figures 2 and 4 relate to a length of 6.000mm except Tab luminous flux / LED; Lumen / Watt and luminous flux / mtr.!
- There are more variations on the performance and the luminous flux possible!
- The color temperatures listed are standard values. Other color temperatures are possible!

### CRI 80

Product	Color	Colortemp. [K]	Quantity LEDs	Voltage [V DC]	Current [A]	Power [W]	Angle [°]
10-050-N6-31-65-80	Cool White	6.500	720	24	7,8	187,2	120
10-050-N6-31-50-80	Cool White	5.000	720	24	7,8	187,2	120
10-050-N6-31-40-80	Neutral White	4.000	720	24	7,8	187,2	120
10-050-N6-31-30-80	Warm White	3.000	720	24	7,8	187,2	120
10-050-N6-31-27-80	Warm White	2.700	720	24	7,8	187,2	120

Product	Lumen per LED In [lm]	Lumen per Watt In [lm]	Lumen per Meter In [lm]	Operating-temp. In [°C]	Storage-temp. In [°C]	Voltagerange [VDC]
10-050-N6-31-65-80	32,7	125,8	3924	-40 ... 85	-40 ... 100	22,5 ... 26
10-050-N6-31-50-80	32,7	125,8	3924	-40 ... 85	-40 ... 100	22,5 ... 26
10-050-N6-31-40-80	29,5	113,5	3540	-40 ... 85	-40 ... 100	22,5 ... 26
10-050-N6-31-30-80	29,5	113,5	3540	-40 ... 85	-40 ... 100	22,5 ... 26
10-050-N6-31-27-80	29,5	113,5	3540	-40 ... 85	-40 ... 100	22,5 ... 26

### CRI 90

Product	Color	Colortemp. [K]	Quantity LEDs	Voltage [V DC]	Current [A]	Power [W]	Angle [°]
10-050-N6-31-65-90	Cool White	6.500	720	24	7,8	187,2	120
10-050-N6-31-50-90	Cool White	5.000	720	24	7,8	187,2	120
10-050-N6-31-40-90	Neutral White	4.000	720	24	7,8	187,2	120
10-050-N6-31-30-90	Warm White	3.000	720	24	7,8	187,2	120
10-050-N6-31-27-90	Warm White	2.700	720	24	7,8	187,2	120

Product	Lumen per LED In [lm]	Lumen per Watt In [lm]	Lumen per Meter In [lm]	Operating-temp. In [°C]	Storage-temp. In [°C]	Voltagerange [VDC]
10-050-N6-31-65-90	25,7	98,8	3084	-40 ... 85	-40 ... 100	22,5 ... 26
10-050-N6-31-50-90	25,7	98,8	3084	-40 ... 85	-40 ... 100	22,5 ... 26
10-050-N6-31-40-90	23,5	90,4	2820	-40 ... 85	-40 ... 100	22,5 ... 26
10-050-N6-31-30-90	23,5	90,4	2820	-40 ... 85	-40 ... 100	22,5 ... 26
10-050-N6-31-27-90	23,5	90,4	2820	-40 ... 85	-40 ... 100	22,5 ... 26

## Important Notes

### Safety Information


- The LED module itself and all its components must not be mechanically stressed.
- Assembly must not damage or destroy conducting paths on the circuit board.
- In order to drive LM-Electronic LED-Modules safely, it is absolutely necessary to operate them with an electronically stabilized power supply protecting against short circuits, overload and overheating.
- Installation of LED modules (with power supplies) needs to be made with regard to all applicable electrical and safety standards. Only qualified personnel should be allowed to perform installations.
- Observe correct polarity!  
Depending on the product incorrect polarity will lead to emission of red or no light. The module can be destroyed! Correct polarity immediately!
- Parallel connection is highly recommended as safe electrical operation mode. Serial connection is not recommended. Unbalanced voltage drop can cause hazardous overload and damage the LED module.
- Please ensure that the power supply is of adequate power to operate the total load.
- When mounting on metallic or otherwise conductive surfaces, there needs to be a electrical isolation at soldering points between module and the mounting surface.
- The maximum length of 10-050-N6-xx-xx-xx is 6,000 mm with a two pole power feed at one end.
- Pay attention to standard ESD precautions when installing the module.
- The module, as manufactured, has no conformal coating and therefore offers no inherent protection against corrosion. The ability to customize the length of the module by cutting at specifically marked points is a key feature of the product and hence the reason for no factory installed conformal coating. For these reasons, it is recommended that the user completes all module modifications first (cutting, wiring) and then applies a conformal coating in the final stages of installation.
- Damage by corrosion will not be honored as a materials defect claim. It is the user's responsibility to provide suitable protection against corrosive agents such as moisture and condensation and other harmful elements.
- For applications involving exposure to humidity and dust the module must be protected by a fixture or housing with a suitable protection class. The module can be protected against condensation water by treatment with an appropriate circuit board grade conformal coating. The conformal coating should have the following features:
  - Optical transparency
  - UV-resistance
  - thermal expansion matching the thermal expansion of the module  $15-30 \cdot 10^{-6} \text{ cm/K}$
  - low permeability of steam for all climatic conditions
  - resistance against corrosive environment

### Assembly Information

- Connection with soldering wires on unmounted module: Do not pre-tin the solder pads but pre-tin the wires and solder for max. 4 s at 300 °C. Allow solder points to completely cool down before the next soldering. Prevent shear- or peel forces.
- Soldering of wires with the module mounted on a heat sink: Pre-tin solder pads and wires and solder for max 3 s at 350 °C. Allow solder points to completely cool down before the next soldering. Prevent shear- or peel forces.
- The smallest unit (75 mm – 6 LEDs) can be removed by cutting with scissors between the designated solder pads.
- The mounting of the module is facilitated by means of the double-sided adhesive on the back-surface of the module. Care must be taken to provide a clean and dry mounting surface, free of oils or silicone coatings as well as dirt particles. The mounting substrate must have sufficient structural integrity. Take care to completely remove the adhesive backing. Once the module is appropriately positioned, press on the module with about 20N/cm<sup>2</sup> (refer to application techniques of 3M adhesive transfer tapes). Make sure the module has got a holohedral contact to the mounting surface.
- The minimum bending radius is 2 cm.
- The thermal length expansion coefficient of the modul is  $17 \cdot 10^{-6} \text{ cm/K}$ . When installing in environments with large variations in temperature (e.g. outdoor applications) and operating length of more than 2 m, the use of metallic mounting surfaces is necessary. Otherwise it is advisable to use an additional thicker adhesive tape to absorb the stress of any mismatch in expansion coefficients.

## Label

**10-050-N6-xx-xx-xx**

			
<hr/>			
<b>10-050-N6-xx-xx-xx</b>			
24V DC xxx Watt	1 unit 120 unit	50mm 6000mm	xxx A xxx A
<hr/>			
<b>JJJJWWDD</b>		<b>BIN: xxxx</b>	