

NanoPix Slim™

Ultra compact LED Softlight

User manual
V2.1 - December 2015
Software Version 2.2



NanoPixSlim™

Thank you for choosing the LDDE NanoPixSlim™.

The NanoPixSlim™ is a color mixing system (Additive RGB, WW, KW color mixing) with LEDs as light source and is controlled by DMX512. The NanoPixSlim™ is the most compact Softlight LED with a continuous full-range dimming of 0 to 100%.

The LDDE smooth_operator® technology allows a completely light-linear brightness control with a response time of only about 20 milliseconds, which allows for flicker-free slow fades, flash and stroboscope effects (up to 25Hz).



smooth_operator_controlled (soc®) steht für:

- Stepless and light-linear dimming from 0 to 100%
- 16bit resolution
- Absolutely flicker-free fades
- Digitally optimized color mixing
- Separate regulation of color and intensity
- Flash and stroboscope (1 to 25Hz)
- HDTV - flicker free - PWM up to 8kHz

Features of the NanoPixSlim™ system

- LEDs (RGB,WW,CW) for optimum energy balance (only 77W full load)
- soc® technology for 0 - 100% control
- Stroboscope effect up to 25Hz
- Extremely small size
- Only 2,5 kg total weight (without accessories)
- Up to 3 NanoPixSlim™ daisy chaining
- XLR 4-pin connection cable for power/data
- Optional barn door
- Variable mounting points

Scope of Delivery

The following items are included in the delivery of the NanoPixSlim

- 1 x NanoPixSlim™
- 2 x 16mm Spigot
- Manual

Safety Guidelines



- » Please read these safety guidelines carefully before you take the NanoPixSlim into service
- » Check the suitability of the product for the intended use.
- » The NanoPixSlim is not suitable for outdoor use (IP20).



- » Do not attempt to repair or dismantle the NanoPixSlim fixture: Opening and removing the internal covers can result in electrocution or other serious injuries.
- » In case of product failure, please contact LDDE or an authorised LDDE-dealership.
- » Do not touch the fixture while it is in use.
- » Disconnect the fixture from the power supply before re-positioning and cleaning.
- » Ensure that when the luminaire systems are installed in decorations, a sufficient clearance of around 30cm is required for adequate cooling and ventilation.
- » Protect the fixture from shocks and impacts.
- » Protect the fixture from moisture and water and avoid contact with moist or wet appliances.
- » Relative air humidity during operation should be between 20% and 85%.
- » Ensure that the fixture is not covered and adequate ventilation is in place.
- » Do not insert objects into openings of the housing that are connected to live parts as this can lead to short circuiting. Danger of electric shock and risk of fire.



- » The fixture is to be removed from service if:
 - there is visible damage
 - parts have become loose
 - there is visible damage to cable connections

- » LDDE products are manufactured and delivered in concordance with EU directive 2002/96/EU of the European Parliament and the Council on Waste Electrical and Electronic Equipment (WEEE). Help protect the environment and dispose of used products at your local recycling station. Your dealership can offer further advice on correct disposal.

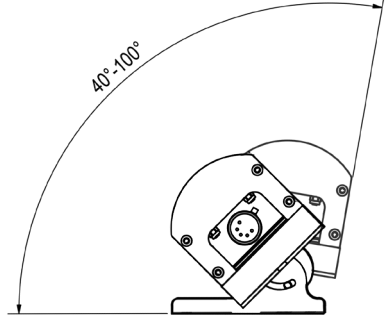
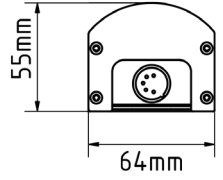
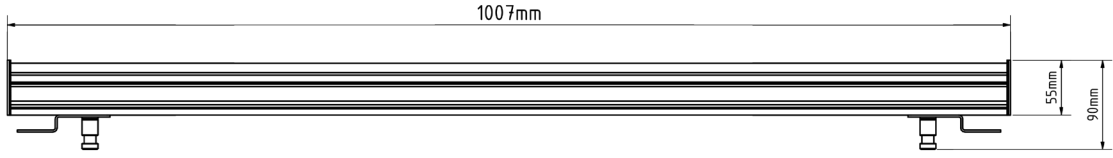


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System overview

Overview



Mounting

To mount the NanoPixSlim™, use the optional mounting kit / stand (Order code: 20050312004)



To mount the mounting set / stand, use the supplied screw nuts. On the profile of the NanoPixSlim is a mounting bracket including 16mm Spigot for mounting the mounting set, this can be moved to any position.

Mounting set / stand

1. To ensure maximum flexibility, the stand can be mounted in different positions, see Fig. 3-4. Then mount the NanoPixSlim™ at the desired position. If necessary, the angle of radiation can also be changed with the retaining screws located on the stands.

Fig.1: Mounting bracket with 16mm Spigot



Fig.2: Accessories - Mounting kit / stand



Fig.3: Stand is mounted on the mounting bracket

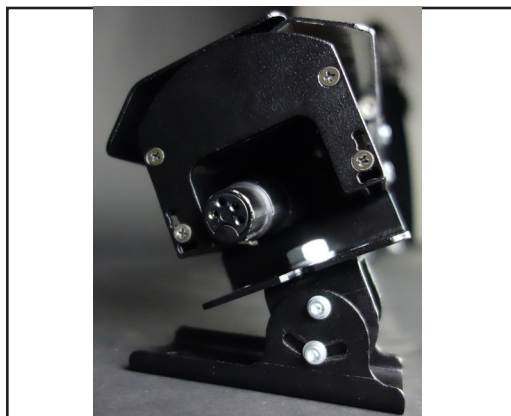
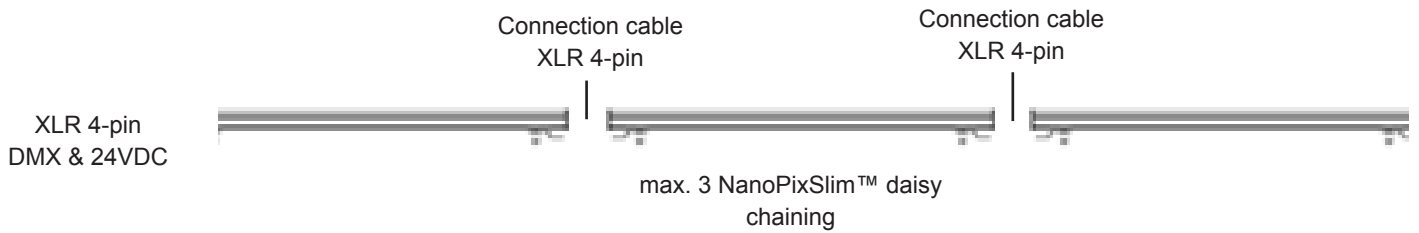


Fig.4: Stand mounting on M8 thread



Cabling



Important instructions!

Keep the cable lengths as short as possible to avoid voltage drops
Direct connection to mains voltage destroys the luminaire.

Commissioning

Factory setting

The NanoPixSlim™ is delivered with factory settings in 7-channel mode, which can be changed via the BCD switch on the back of the device or with a LDDE RemoteControl.



Warning!

Never cover the lighting system!
Overheating hazard!

Overview factory settings

Channel mode	7
Dimming parameter	Normal
Working light	disabled
PWM frequency	8kHz
Fade to Zero	Enabled
Status LED	On

DMX control

DMX addressing

The NanoPixSlim™ uses a maximum of 11 DMX channels.

The DMX address, also called the start address, is the first channel to which the device responds. It is a logical address to be sent to the control commands. In this way, the controller can send independent commands to multiple devices. The NanoPixSlim™ models occupy up to eleven consecutive addresses, depending on the operating mode selected.

Ensure that the address area is only occupied by one device if you want to control the devices of a data line independently of each other. If the channels of a device overlap the channels of another device, one of the devices does not respond as expected. Two NanoPixSlim™ of the same type can have the same start address. They then receive the same commands and can not be controlled independently.

Example of addressing with start address 125:

Model	Address area
NanoPixSlim™ (7-Channel)	125 - 131

Set the DMX address

The DMX address is controlled via three BCD switches.

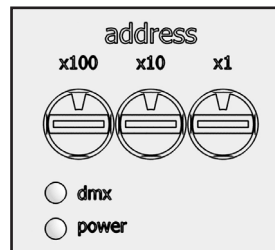
The unit is set up on the factory

Start address 1 set. Choose in your

Control a DMX address for the

NanoPixSlim™ and use the

BCD switch to set the desired address.



Beispiel: einstellen des

DMX Kanals 125

X100 = 1

X10 = 2

X1 = 5

Channel assignment

After addressing, the channel assignment is as follows

1	Intensity
2	R (red)
3	G (green)
4	B (blue)
5	WW (warm white)
6	CW (cold white)
7	Stroboscope

Operating Mode - DMX Chart

Operating Mode

The NanoPixSlim™ has 5 different DMX modes.

The respective mode can be changed by means of BCD switch or LDDE RemoteControl.



Changes with BCD switch possible **only before** commissioning!
 Changes with LDDE RemoteControl possible **only during operation!**

Overview DMX channels

The table below shows the different available modes and the DMX channels required for the corresponding mode.

Channel	8-bit interpolated	CH-Mode 5 (905)	CH-Mode 6 (906)	CH-Mode 7 (907)
1	Intensity	xxx	1	1
2	R (red)	1	2	2
3	G (green)	2	3	3
4	B (blue)	3	4	4
5	WW (warm white)	4	5	5
6	CW (cold white)	5	6	6
7	Stroboscope	xxx	xxx	7
Channel	16-bit	CH-Mode 10 (910)	CH-Mode 11 (911)	
1	Red	1	1	
2	Red fine	2	2	
3	Green	3	3	
4	Green fine	4	4	
5	Blue	5	5	
6	Blue fine	6	6	
7	Warm White	7	7	
8	Warm White fine	8	8	
9	Cold White	9	9	
10	Cold White fine	10	10	
11	Stoboskop	xxx	11	



In brackets, the BCD & Remote command is used to set the desired mode.
 For example. To switch to the 10-CH mode, use 910 on the BCD switch.

Changing Operating Mode

Settings with LDDE RemoteControl

To change the settings of the NanoPixSlim™, you need a LDDE RemoteControl. This allows for various changes to the basic settings and the DMX mode during operation.



Changes to the settings and / or DMX addresses affect **all LDDE devices** which are addressed via the same DMX cable!

To change the settings on the NanoPixSlim™ with the LDDE RemoteControl, please follow the steps below.

1. Disconnect the DMX connection to the NanoPixSlim™
2. Please note that no devices that could perform DMX value changes, such as a light console, are connected to this DMX line.
3. Connect the DMX cable between NanoPixSlim™ and the LDDE RemoteControl.
4. Send the desired setting or DMX address to the NanoPixSlim™
5. After sending, the LEDs of the NanoPixSlim™ light up in the following colors.

green..... DMX address
blue Settings / Parameters
red..... Invalid command

Settings with BCD switch

The settings of the NanoPixSlim can be made using the BCD switch on the back of the device, therefore the NanoPixSlim must be disconnected from the power supply.

To make changes, please proceed as follows.

1. Disconnect NanoPixSlim™ from the power supply!
2. Set the desired mode to the BCD switch
3. Connect NanoPixSlim™ back to power supply.
4. Status LEDa and LEDs on the NanoPixSlim™ illuminate "blue" for approx. 2 seconds.
5. Set the desired DMX start address again.

Overview Operating Mode - Settings

Channel Mode with Standard configuration

- 905 - CH-Mode 5 Red, Green, Blue, Warm white, Cold white
- 906 - CH-Mode 6 Intensity, Red, Green, Blue, Warm white, Cold white
- 907 - CH-Mode 7 Intensity, Red, Green, Blue, Warm white, Cold white, Stroboscope
- 910 - CH-Mode 10 (16-bit / 2-CH each color) Red, Green, Blue, Warm white, Cold white
- 911 - CH-Mode 11 (16-bit / 2-CH each color) ... Red, Green, Blue, Warm white, Cold white, Stroboscope

Fade to Zero

- 802 - Enabled For a new DMX value (below DMX value 15) is dimmed to 0
- 801 - Disabled For a new DMX value (below DMX value 15) , Snap to 0

Status LED

- 850 - Disabled The status LED is switched off.
- 851 - Enabled The status LED is switched on

Dimming parameters

- 921 - "Linear" "Linear" no characteristic is used
- 922 - "Normal" "Normal" characteristic is used
- 923 - "Smooth" "Smooth" characteristic is used

Working light

- 930 - Deactivated Working light is deactivated
- 931 - Activatedif there is no DMX signal for 4 seconds --> WW & CW will be switched on
- 935 - Activated 50% Working light at 50% Intensity--> WW & CW
- 937 - Activated 70% Working light at 70% Intensity--> WW & CW
- 939 - Activated 100% Working light at 100% Intensity--> WW & CW

PWM frequency

- 880 - 8 kHz PWM frequency is set to 8 kHz
- 858 - 5,8 kHz PWM frequency is set to 5.8 kHz

Technical specifications

Dimensions / Weight

Length	1007 mm
Width	64 mm
Height (without mounting bracket)	55 mm
Weight (without accessories).....	2,50 kg

Control

Protocol	DMX512/1990
Daisy chaining	max. 3 devices

Dimming

Dimming	0 - 100%
DMX channels	5 / 6 / 7 / 10 / 11 DMX channels
Address setting	BCD switch or LDDE RemoteControl

Photometrics

LED Engine	RGB, warm white, cold white
Average life span	approx. 30.000 hours

Connections

Input / Output	XLR 4-pin power/data
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Electrical specifications

Operating voltage	24VDC
Input voltage range.....	21-28VDC
Max. Power consumption	77W
Max. Current consumption	2,8A @ 240VAC

Construction

Housing	Aluminium continous casting profile
Color	black
Minimum clearance in of the LED	100mm
Minimum clearance for sufficient cooling	300mm
Kühlung	convection cooling
Protection class.....	IP20

Safty standards

Certifications	EN 55015, EN 60669, EN 60929, EN 61000-3-2,
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EN 61000-3-3, E

Temperatures

Maximum ambient temperature.....	ta: +40°C
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Maintenance and Service

Should you encounter problems, please contact LDDE or one of our authorised LDDE-dealerships.

LDDE Vertriebs GmbH
A-1110 Vienna, Austria
T:el.: +43.1.7671811-0
Fax: +43.1.7671811-99
office@ldde.com
www.ldde.com

Warranty & Liability

We offer a 24 month warranty on this NanoPix fixture. This includes free repair of faults that are verifiably due to manufacturing defects. Such repairs are solely performed by the manufacturer.

Warranty expires due to:

- Alterations and repairs by unauthorised individuals
- Damage caused by third parties
- Damage resulting from non-compliance with the manual's instructions
- Connection to power supply with incorrect voltage
- Operating errors or damage caused by improper use or negligence.

LDDE declines any liability for damages to the fixture as well as consequential damages which result from negligence, improper use and setup, wrong setting into operation and use, ignoring of valid safety regulations and unsuitable use.



Konformitätserklärung
nach Richtlinie 2004/108/EG und
2006/95/EG

Hersteller: LDDE Vertriebs GmbH
Dreherstraße 64
1110 Wien, Österreich

erklärt hiermit, dass das nachfolgend angeführte Gerät

Produkt: LDDE NanoPixSlim

den einschlägigen grundlegenden Schutzanforderungen, die in den Richtlinien des Rates zur Angleichung der Rechtsvorschriften der Mitgliedsstaaten über die EMV,- und Niederspannungsrichtlinie festgelegt sind den folgenden Normen entspricht:

Normen: EN 55015, EN 61000-3-2, EN 61000-3-3, EN 61000-6-1, EN 61000-6-3

A handwritten signature in black ink, appearing to read 'Kurt Reiter'.

Kurt Reiter
(Geschäftsführer)

Wien, am 25.November 2014
(Datum)