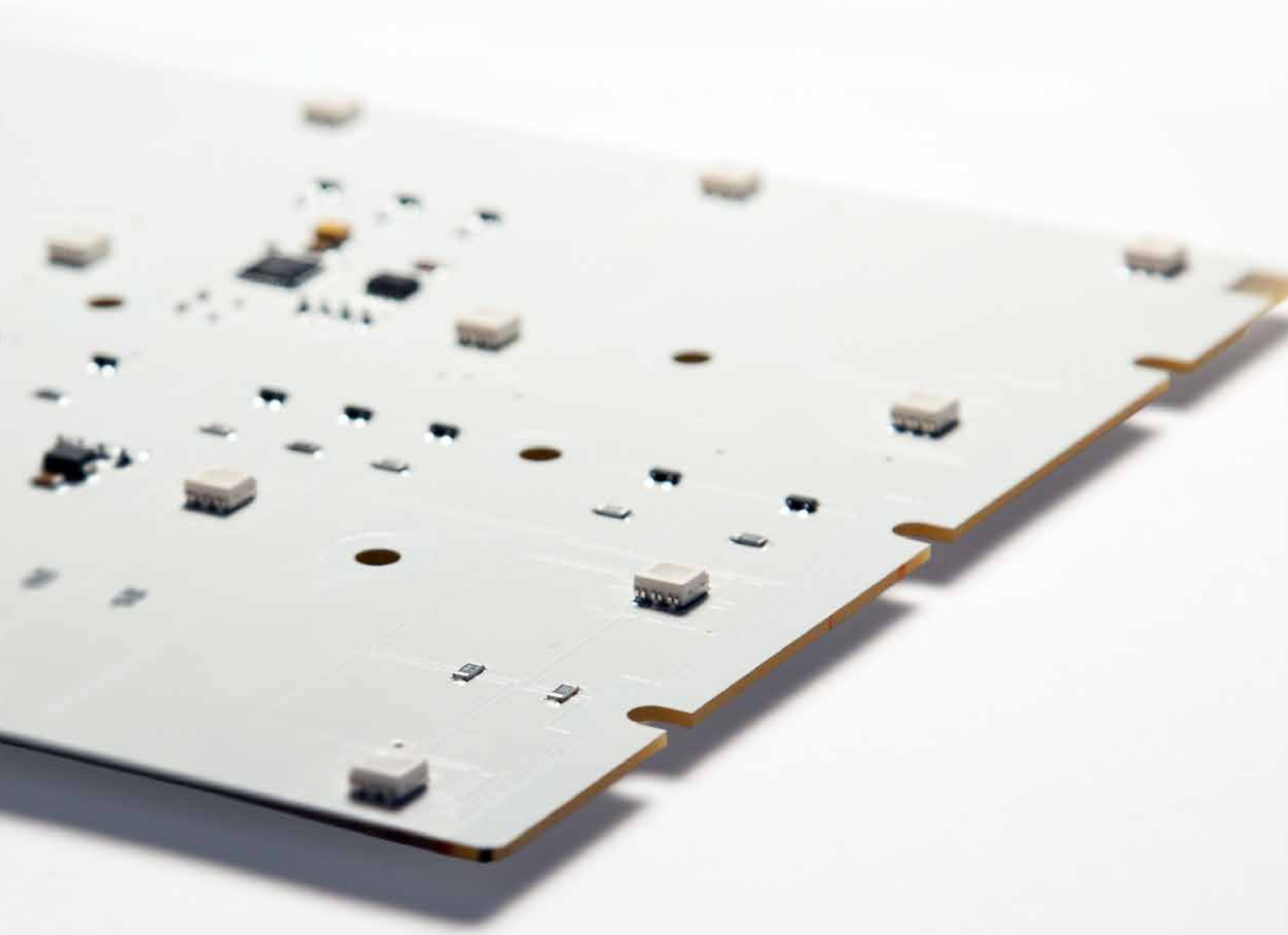
SCHNICK
SCHNACK
SYSTEMS

LED-Tile B50

Product Sheet



Introduction

FEATURES

- Automatic Addressing System (Smart Link) – no addressing at the board
- Compatible with other series from Schnick-Schnack-Systems
- Free patch, colour change and scroll text control software
- Made in Germany

- Premium quality LEDs
- Optimum RGB colour mixing in an SMD-component (no coloured shadows)
- Equal colours due to the best possible bin intensity and batch-based voltage adjustment
- Wider 115° beam angle
- Camera friendly dimmer control
- Equal brightness despite different cable lengths due to integrated linear regulator
- Enough "headroom" for longer durability

- Direct control with DMX 512-A
- Direct connection to 24V DC

- Pliable, fiberglass reinforced board
- Re-useable for various applications
- Through hole connectors enable many mating cycles
- Minimal surface temperature
- Diverse mounting options

Use

The Product B Series LED Tiles are equipped with premium quality, efficient RGB LEDs. The individual LEDs on a single LED Tile can be controlled as a group. They are therefore the ideal LED light source for the short-distance illumination in any colour of surfaces, edges or other decorative elements. The B Series LED Tiles are most often used, among other applications, to set colour accents in vaults or on walls, to backlight steps, floors and expansive wall surfaces as well as to accentuate edges or lateral light input into large acrylic glass surfaces.

Technology

The B50 LED Tiles measure 164mm×164mm and have 16 LEDs in a 50mm grid. These practical dimensions enable even large lighting systems to be implemented quickly with minimal cabling effort.

The light emitting diodes on the B Series tiles are controlled together with three DMX channels. Since all LED tiles have their own on-board DMX converters, they can be arranged separately as visually independent lighting features. The three primary colours are already mixed in the light emitting diodes so coloured shadows are avoided. Active current regulators on the board can balance out voltage differences that arise from varying cable lengths. All LEDs on the board are controlled together. Due to the arrangement of the LEDs there is no colour shift in the horizontal viewing angle when mounted vertically.

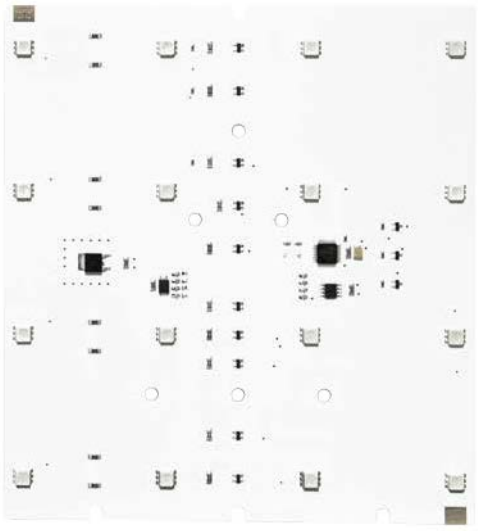
When using diffusers, the distance needed to create a homogeneous surface depends on the material. There should be at least 3,5cm from the topside of the LED to the diffuser. The LED Tiles are mounted with board holders.

Control

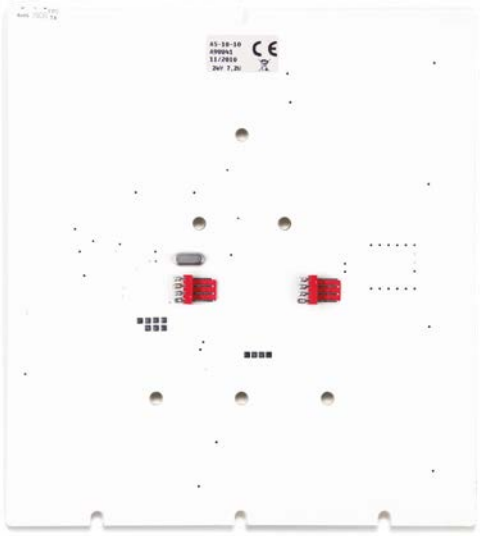
The B Series LED tiles are controlled with the Sys One or the System Power Supply 4 or 4E.

Mechanical data

Features	LED-Tile B50
Backlighted area	200mm × 200mm
Dimensions	180mm × 164mm
LED-Pitch	50mm
Number of RGB LEDs	16
Pin connection and -colour	System connector red
Safety class	IP00
Weight	113g

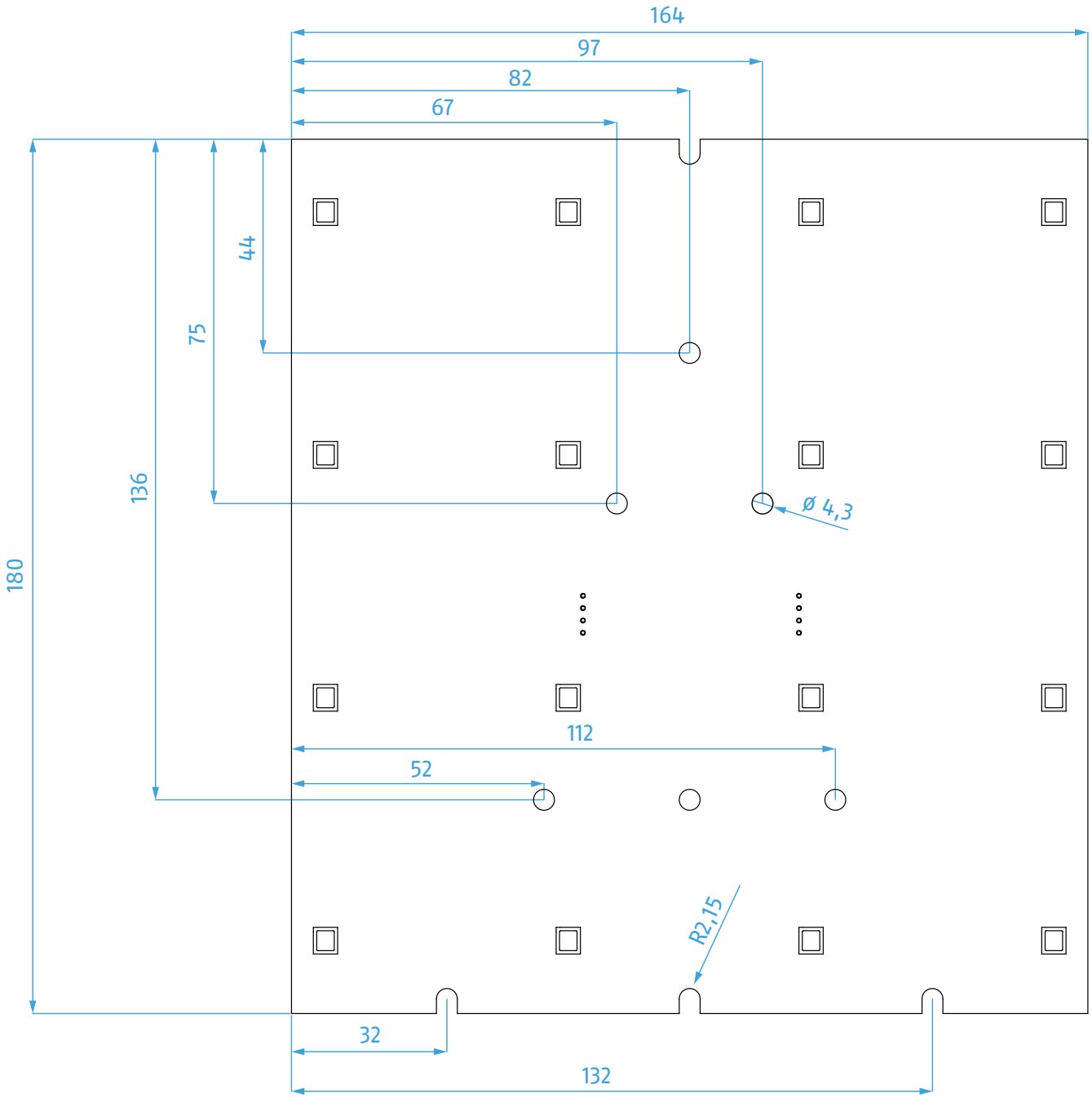


LED-Tile B50 (front view)

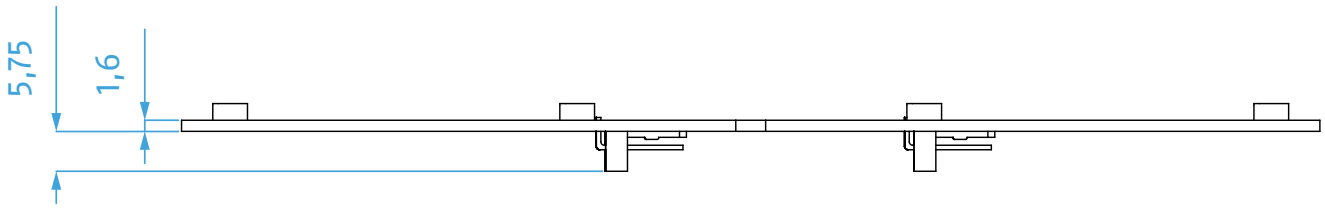


LED-Tile B50 (rear view)

CAD drawing*



* without scale / all units in mm


5,75
1,6

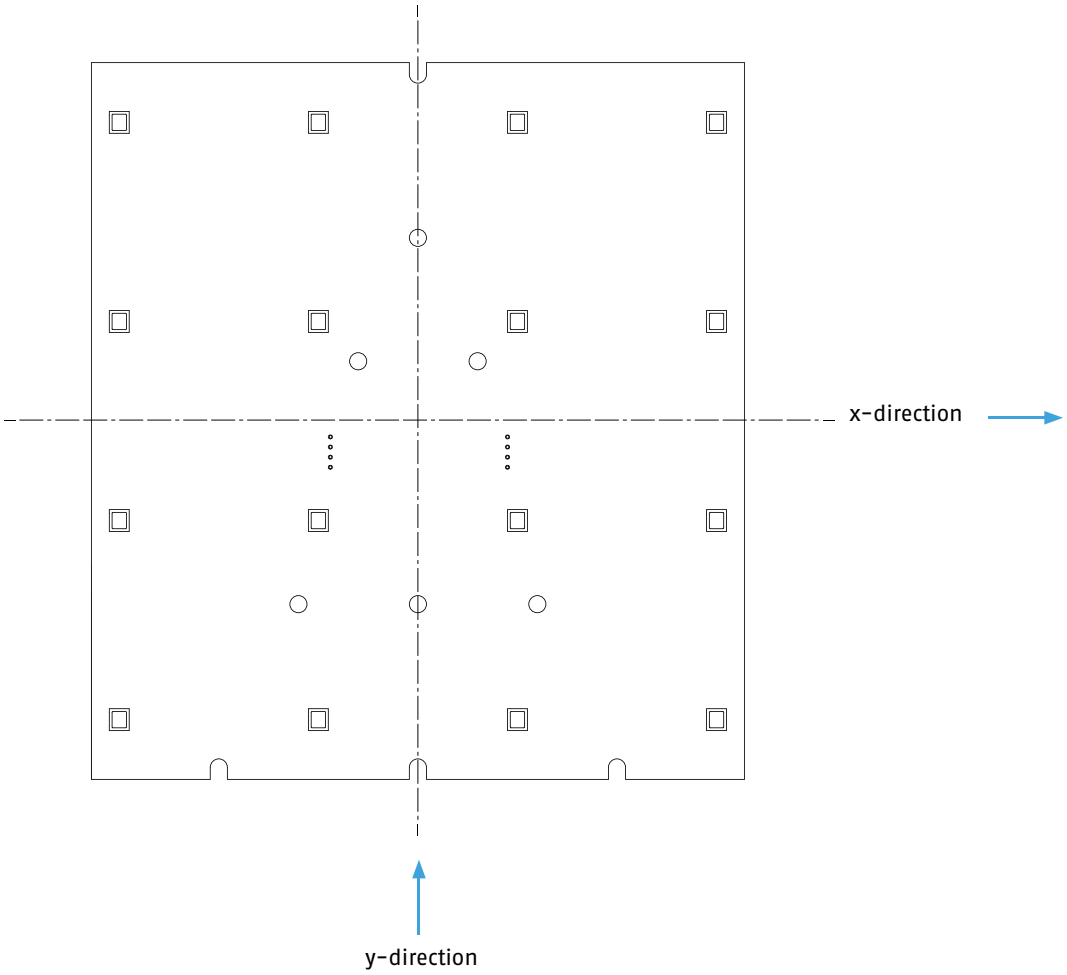
Optical data

Features	LED-Tile B50
Colour	RGB
Emission angle	115°
Lighting current	120lm*
Light intensity	35,2cd*

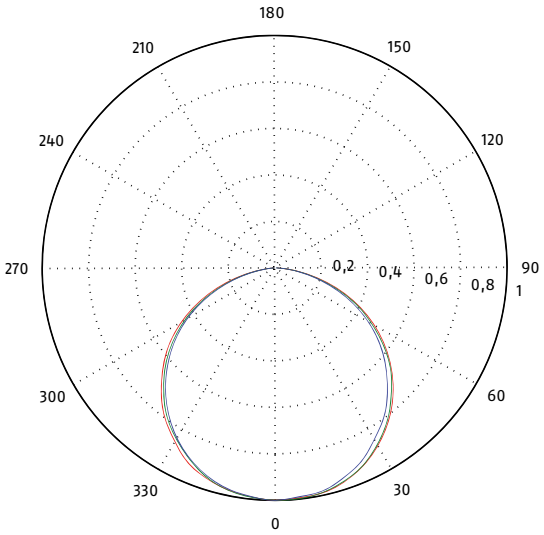
Distance/Lux table

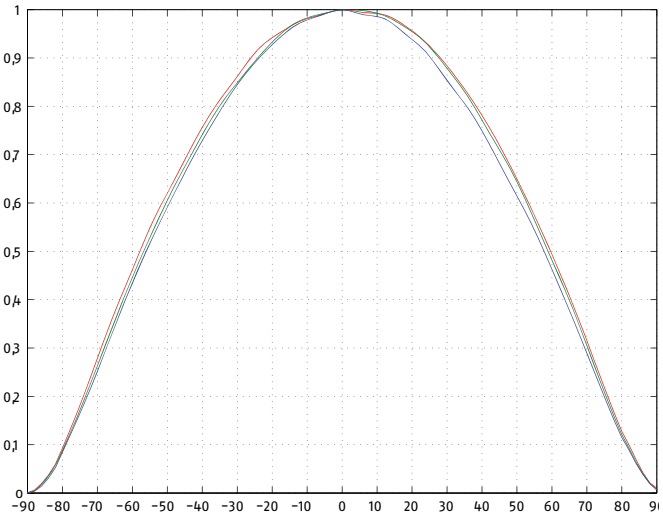
Distance	Lux
0,5m	140,8lx*
1m	35,2lx*
2m	8,8lx*

* The data provided are measured values. As these values are subject to fluctuations, the actual values of the delivered LEDs may deviate from them. The photometric values apply to full white with RGB = 255.

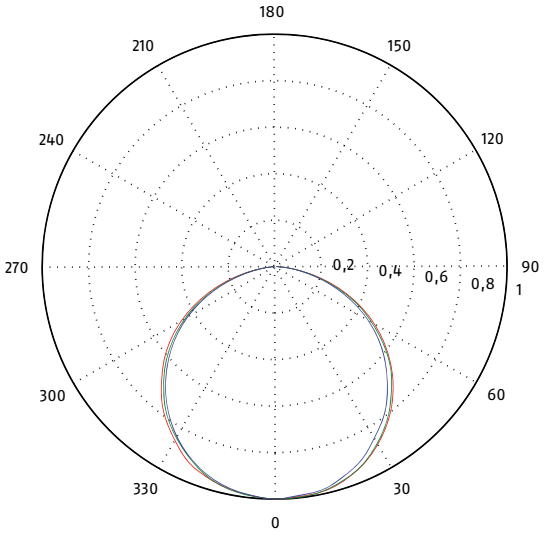


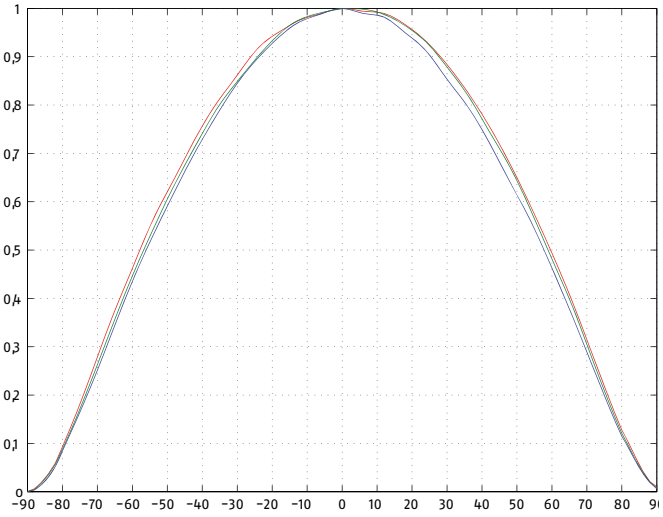
Light distribution curves, x direction



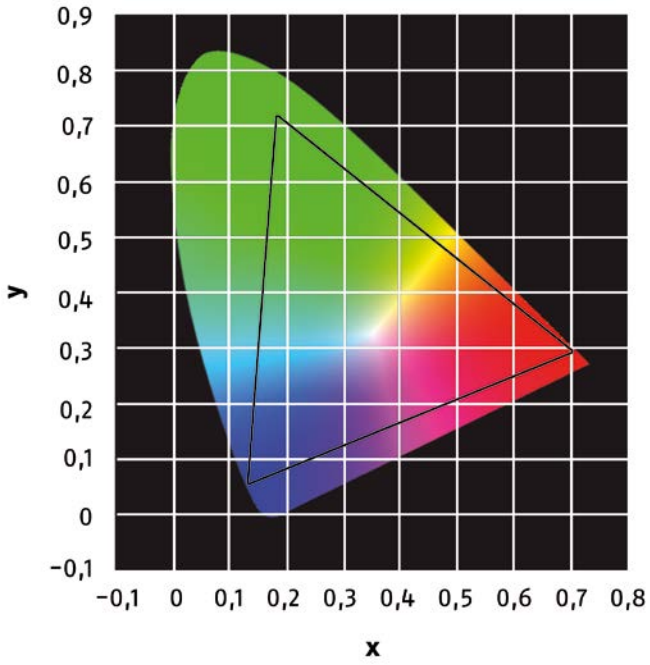


Light distribution curves, y direction

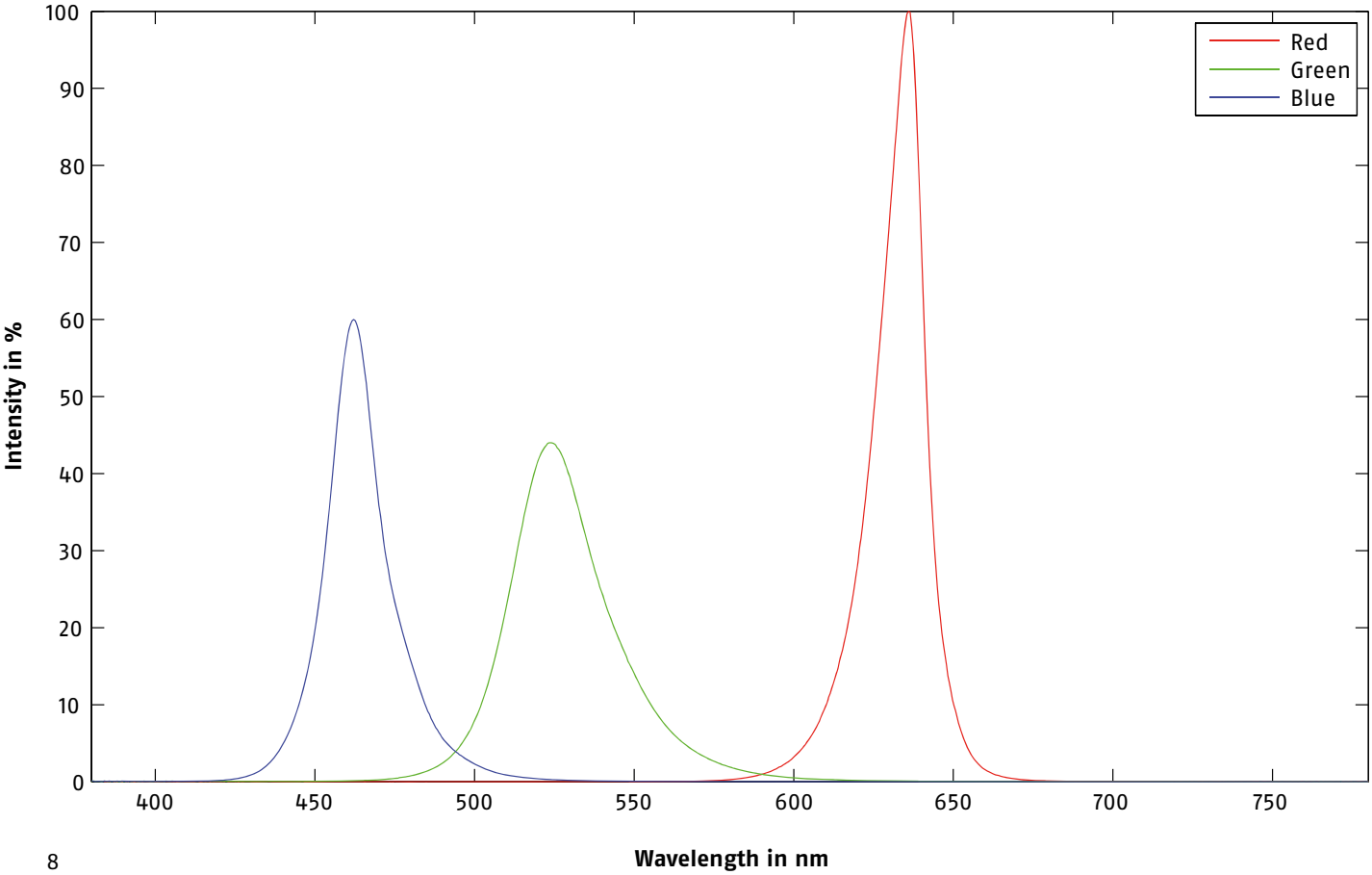




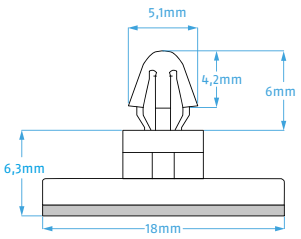
Gamut diagram

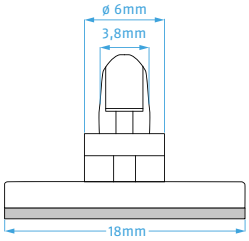


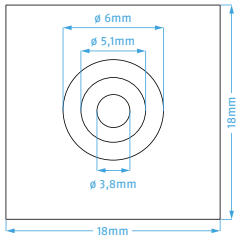
Spectral distribution



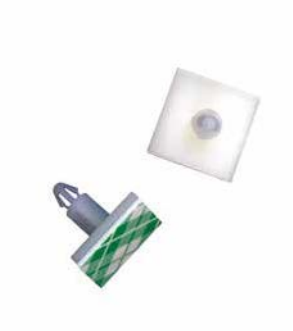
Mounting

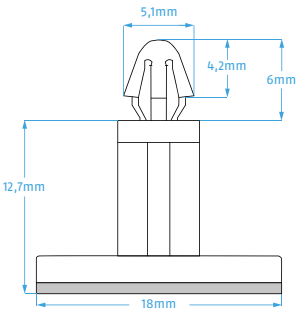


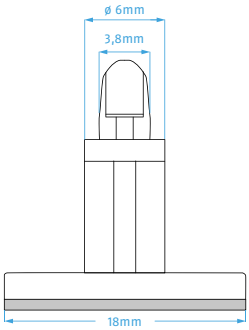


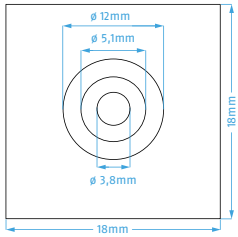


Description	Item number
PCB holders 6mm, self-adhesive version	802.0001

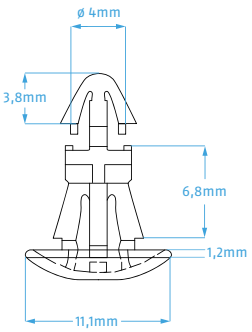


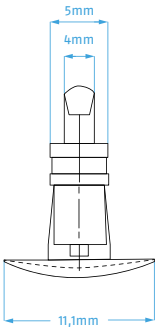


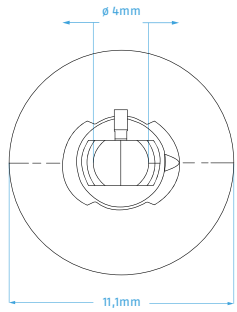




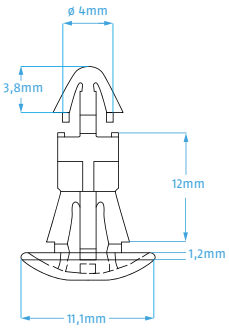
Description	Item number
PCB holders 12mm, self-adhesive version	802.0002

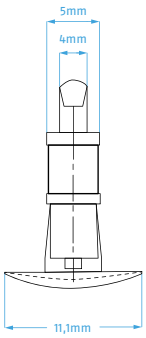


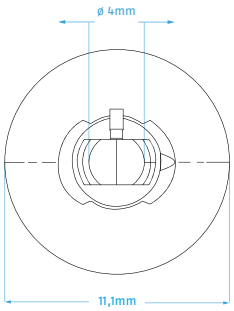




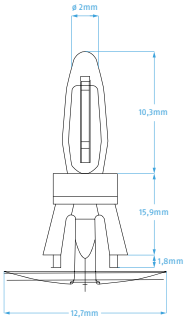
Description	Item number	Drill hole	Material thickness
PCB holders 6mm, plug-in version (for plates)	802.0003	5,4mm	1,5-1,6mm

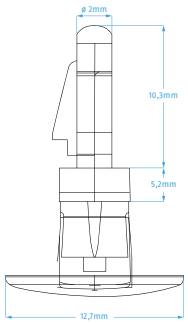


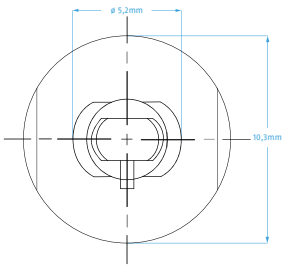




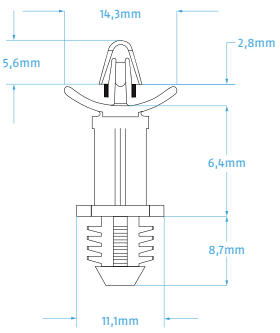
Description	Item number	Drill hole	Material thickness
PCB holder 12mm, plug-in version (for plates)	802.0004	5,4mm	1,5-1,6mm

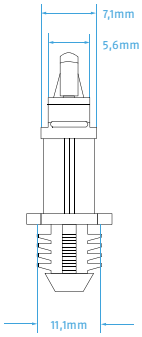


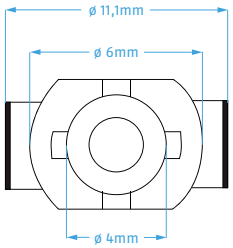




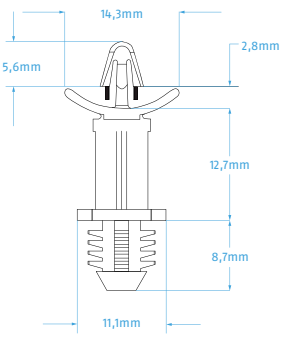
Description	Item number	Drill hole	Material thickness
PCB holder 15mm, plug-in version (for plates)	802.0005	5,4mm	1,5-1,6mm

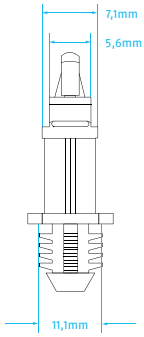


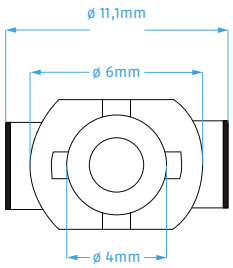




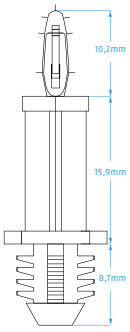
Description	Item number	Drill hole	Material thickness
PCB holder 6mm, drill version (for wood or plastic)	802.0006	7,9mm	minimum 6,4mm

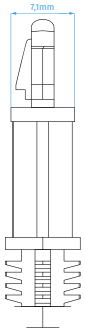


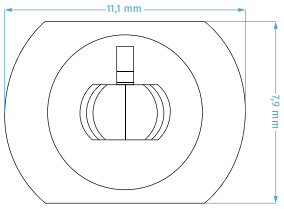




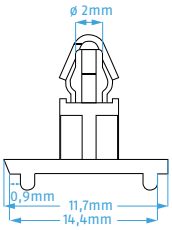
Description	Item number	Drill hole	Material thickness
PCB holder 12mm, drill version (for wood or plastic)	802.0007	7,9mm	minimum 6,4mm

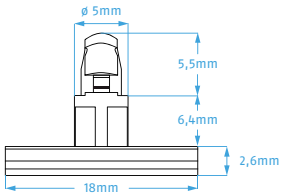


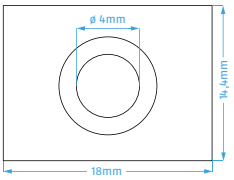




Description	Item number	Drill hole	Material thickness
PCB holder 16mm, drill version (for wood or plastic)	802.0008	7,9mm	minimum 6,4mm







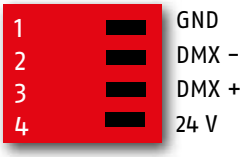
Description	Item number
PCB holder 6mm, plug-in version (for click-profile)	802.0009

Electrical data

Features	LED-Tile B50
Voltage	24V
Current (I_{max})	0,3A

Pin Connection

System connector red



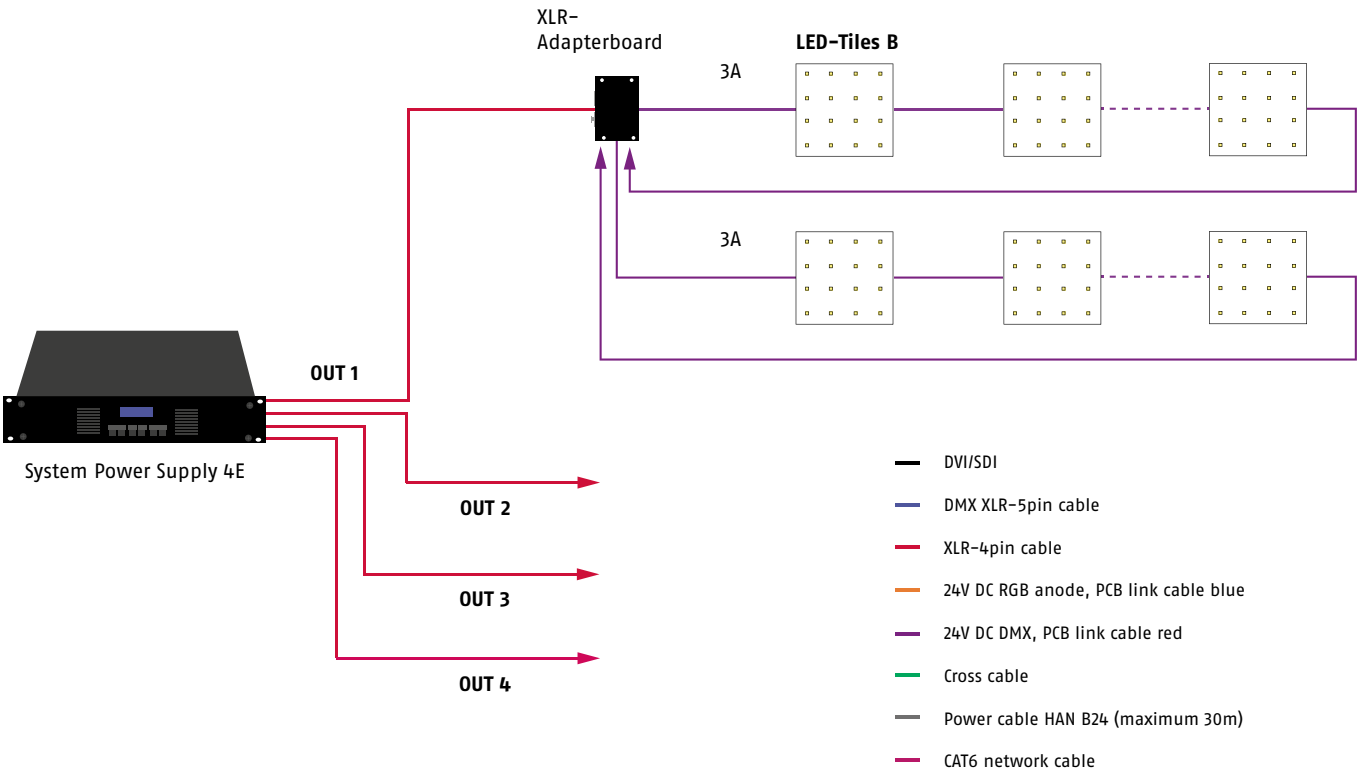
Control options for LED-Tiles B50

System Power Supply 4E

small, controllable groups

LED-Tile B50	Area
maximum 80 LED-Tiles per controller	3,20m²
maximum 20 LED-Tiles per output	0,80m²

Cabling example for System Power Supply 4E with LED-Tile B50

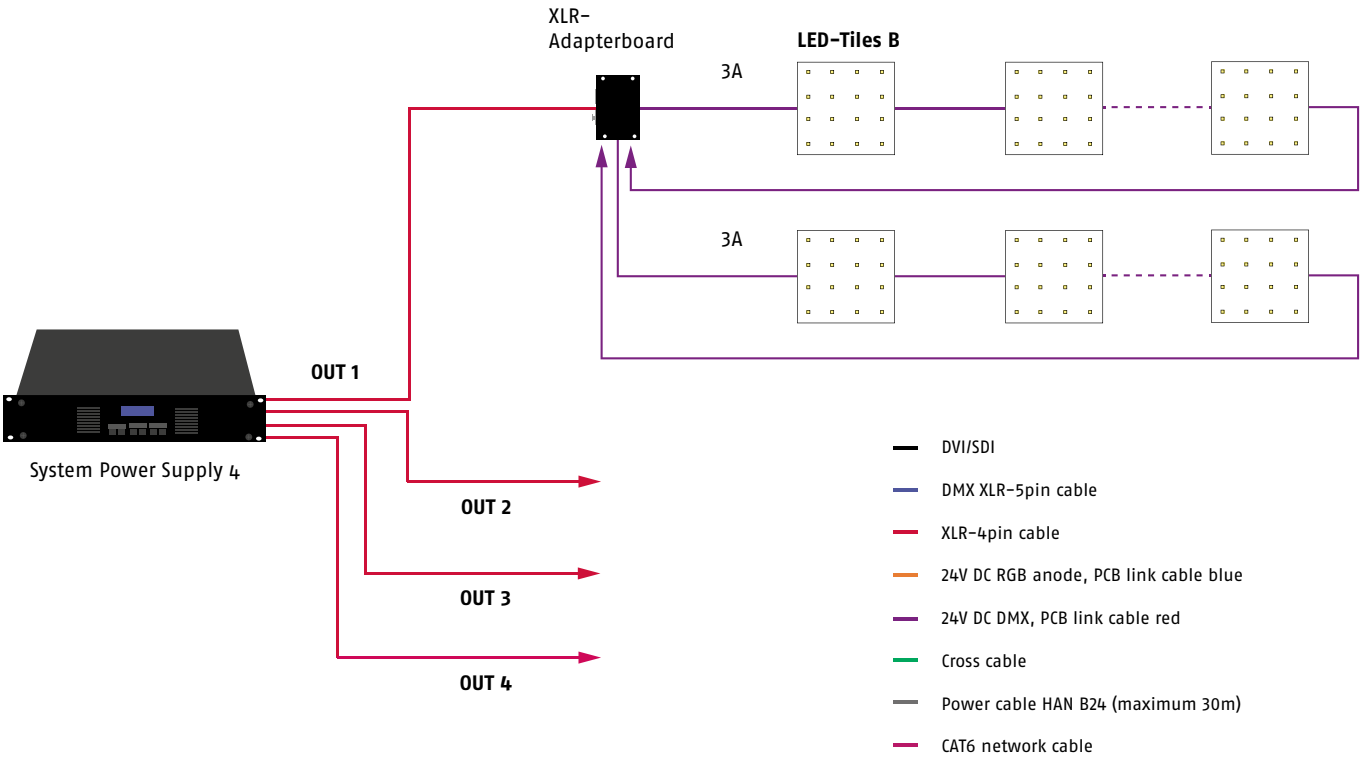


System Power Supply 4

small, controllable groups

LED-Tile B50	Area
maximum 80 LED-Tiles per controller	3,20m²
maximum 20 LED-Tiles per output	0,80m²

Cabling example for System Power Supply 4 with LED-Tile B50

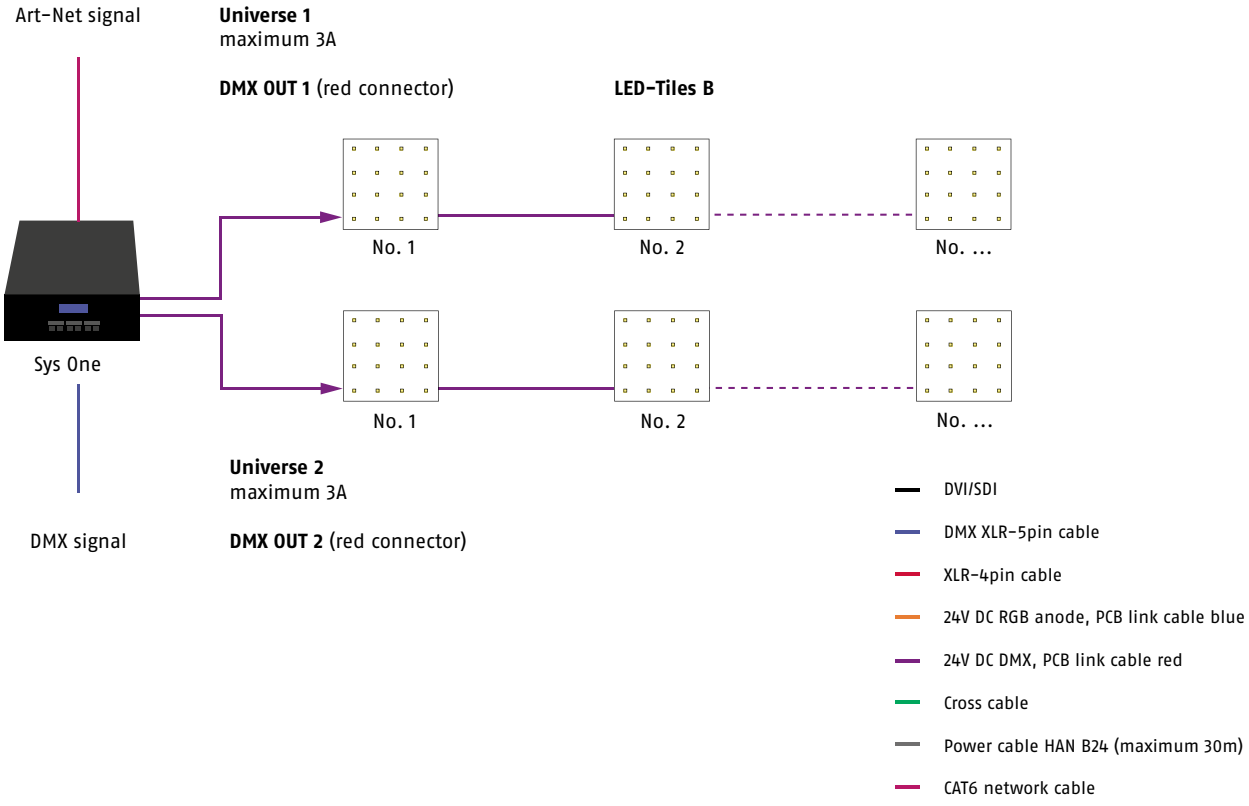


Sys One

Specific feature: fanless operating

LED-Tile B50	Area
maximum 20 LED-Tiles per controller	0,80m²
maximum 10 LED-Tiles per output	0,40m²

Cabling example for Sys One (system connector red) with LED-Tile B50



Order numbers

	Colour	LED-Pitch	Backlighted surface	Current (I_{max})	Channels	Connection	Item number
LED-Tile B50	RGB	50mm	200mm × 200mm	0,3A	3	Systemconnector red	111.0012

	Operating voltage	Current (I_{max})	Channels	Input	Output	Item number
System Power Supply 4E	110-240V AC	4 × 6A*	4 × 3072 channels (DPB) 4 × 512 channels (DMX) 4 × 5 × 5 channels **	Ethercon RJ 45 XLR-5pin IN/Trough	4 × XLR-4pin	203.0003
System Power Supply 4	110-240V AC	4 × 6A	4 × 60	XLR-5pin IN/Trough	4 × XLR-4pin	203.0002
Sys One	110-240V AC	1 × 6A or 2 × 3A or 2 × (3 × 1A)	1 × 512** or 2 × 512**	XLR-5pin IN/Trough	1 × XLR-4pin 2 × Systemconnector red 2 × Systemconnector blue	203.0007

* Note: american version only 4 × 4A at 110V

** depending on the output configuration

ESD warning

Please be aware that electrostatic discharges can destroy LED boards, and our experience shows that this does happen. During assembly, we recommend wearing at least one antistatic wrist strap and avoiding static discharges – such as those that arise when removing protective film or dry cleaning acrylic glass, for example – near LEDs! Antistatic materials should be used when packaging the LED boards. Normal bubble wrap or other plastic bags are not suitable.

For reasons of safety and radio shielding, please only use systems we have approved to provide a power supply for our LED components. All technical information is based on the version at the time of printing.

Why Schnick Schnack Systems?

As installation times become increasingly shorter the complexity of systems simultaneously increases as do the requirements of customers.

We are a supplier who delivers high-quality reliable systems – under tight deadline constraints that are not only quick to install but also simple to operate and service.

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Version July 2016: All technical data and the weight and dimension information were carefully created – errors reserved. Any colour deviations are printing-related.

We reserve the right to make changes that serve further improvement.