

SCHNICK
SCHNACK
SYSTEMS

LED Effects Technology for professionals.



Introduction

In many smaller project-specific installations, the first in early 2007, we dealt with the challenging subject of LEDs specifically made for outdoor areas. At first, we consciously kept this segment small knowing that even big companies had failed to create a viable solution.

Almost seven years have since passed and we are finally able to confidently present our first series production. Although uncommon in this performance class, our superior grade and durable Nichia RGB-LEDs use a thermally conductive connection to the outer housing. This offers best-possible lifetime. The LEDs are located under a polymer casting that is both UV stable, durable and conforms to protection class IP67.

Superior grade, German-made connectors with turned gold plated contacts also ensure best-possible reliability on the electrical interface. The machined aluminum terminal block lets you hide the connectors in the profile so that no cables are visible.

Highly weather-resistant coatings as well as an elaborate pretreatment of the profiles guarantee the longevity of the surface. The V4A stainless steel fastenings ensure some distance to the wall, offset any structural unevenness, and allow rain water runoff. Because of their material composition, these fastenings can be mounted on any surface. At the same time, they can be easily and quickly attached anywhere on the profile.

Electronically, the system benefits from ten years of experience by the LED effect lighting pioneer:

It is the only profile on the market that is compatible with all major protocols: DMX, DPB, Artnet, sACN, DVI, SDI. It thus offers maximum artistic freedom because it does not restrict a lighting artist in choosing a control option. Even if most installations are fed by a video signal, video's fixed frame rate entails numerous restrictions, which can be avoided by direct controlling of the pixels. This is especially evident whenever fast chasers, scrolling text or flashes are implemented.

Schnick-Schnack-Systems also lets you simultaneously feed a single system with two sources. This is not only interesting for all artistic issues, but also for reasons of redundancy. When using video signals, system-wide synchronization ensures perfect results. The system speed effortlessly achieves the 60fps update rate.

The 32-bit processors used here have complex 3 x 16 bit colour management algorithms and provide perfect white and pastel tones, despite the use of RGB LEDs, as well as perfectly homogeneous LEDs. Every single LED in the system is not only factory calibrated, the system also permits on-site colour calibration, which is especially recommended after a few years of operation in order to permanently ensure the homogeneity of the system.

Of course, you can upgrade the system firmware from a central location via the network in order to support any future standards or developments. Every profile reports its status information, such as temperature, data error rates, input voltage or LED defects, back to the controller. This makes remote diagnosis easy.

And even when you need to replace a profile, the requirements to on-site personnel are low thanks to the Smart Link Technology of Schnick-Schnack-Systems. Complicated addressing or even modifications in the controller are not required here. A technician only has to insert the input plug, and, if necessary, the output plug again, after it has been replaced.

Since the facade is generally not oriented to the LED system, this profile is available at any desired length and in the standard colours black and white. Starting from a quantity of 500m you can also change the profile or the LED pitch. From a quantity of 100m you can select the profile colour within certain limits. (However, you can expect increased delivery times for custom solutions as those mentioned above. Regarding colours, release tests are required on weather resistance and on their interaction with the casting.)

Schnick-Schnack-Systems is able to perform in-house CNC profile machining and fully automated PCB assembly to speed up delivery time and to ensure quality. This way, Schnick-Schnack-Systems is not only able to deliver the series quickly, but can also demonstrate the necessary flexibility whenever any plan deviations should occur during installation.

Features LED-Profile C50

- Generation 3 compatible
- seven years' experience in IP67 Outdoor LED Profiles
- available in every length from 5 to 40 LEDs per Profile (250mm-2000mm)
- available in black and white
- thermally conductive connected Nichia RGB-LEDs ensure best possible lifetime
- UV-stable materials
- IP67 waterproof
- turned gold plated contacts in IP67 connectors "Made in Germany"
- weather resistant coating on pretreated profile
- stainless steel mountings on any position
- maximum control flexibility: DMX, DPB, Artnet, sACN, DVI, SDI
- system wide sync
- 60fps
- plenty of feedback information
- internal 3 x 16 bit colour management, factory calibration
- on site calibration possible
- firmware update via network possible
- custom modifications possible for medium size projects
- high flexibility due to in house machinery

Mechanical data

LED-Profile C50	Length	Current (I_{max})	Channels
LED-Profile C50-245	245mm	0.150A	15
LED-Profile C50-295	295mm	0.170A	18
LED-Profile C50-345	345mm	0.190A	21
LED-Profile C50-395	395mm	0.210A	24
LED-Profile C50-445	445mm	0.230A	27
LED-Profile C50-495*	495mm	0.250A	30
LED-Profile C50-545	545mm	0.320A	33
LED-Profile C50-595	595mm	0.340A	36
LED-Profile C50-645	645mm	0.360A	39
LED-Profile C50-695	695mm	0.380A	42
LED-Profile C50-745	745mm	0.400A	45
LED-Profile C50-795	795mm	0.420A	48
LED-Profile C50-845	845mm	0.440A	51
LED-Profile C50-895	895mm	0.460A	54
LED-Profile C50-945	945mm	0.480A	57
LED-Profile C50-995*	995mm	0.500A	60
LED-Profile C50-1045	1045mm	0.570A	63
LED-Profile C50-1095	1095mm	0.590A	66
LED-Profile C50-1145	1145mm	0.610A	69
LED-Profile C50-1195	1195mm	0.630A	72
LED-Profile C50-1245	1245mm	0.650A	75
LED-Profile C50-1295	1295mm	0.670A	78
LED-Profile C50-1345	1345mm	0.690A	81
LED-Profile C50-1395	1395mm	0.710A	84
LED-Profile C50-1445	1445mm	0.730A	87
LED-Profile C50-1495*	1495mm	0.750A	90
LED-Profile C50-1545	1545mm	0.820A	93
LED-Profile C50-1595	1595mm	0.840A	96
LED-Profile C50-1645	1645mm	0.860A	99
LED-Profile C50-1695	1695mm	0.880A	102
LED-Profile C50-1745	1745mm	0.900A	105
LED-Profile C50-1795	1795mm	0.920A	108
LED-Profile C50-1845	1845mm	0.940A	111
LED-Profile C50-1895	1895mm	0.960A	114
LED-Profile C50-1945	1945mm	0.980A	117
LED-Profile C50-1995*	1995mm	1.000A	120



LED-Profile C50 (black, top view)



LED-Profile C50 (white, top view)



LED-Profile C50 (black, rear view without mounting)



LED-Profile C50 (white, rear view without mounting)

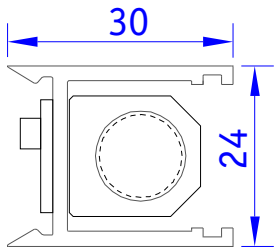
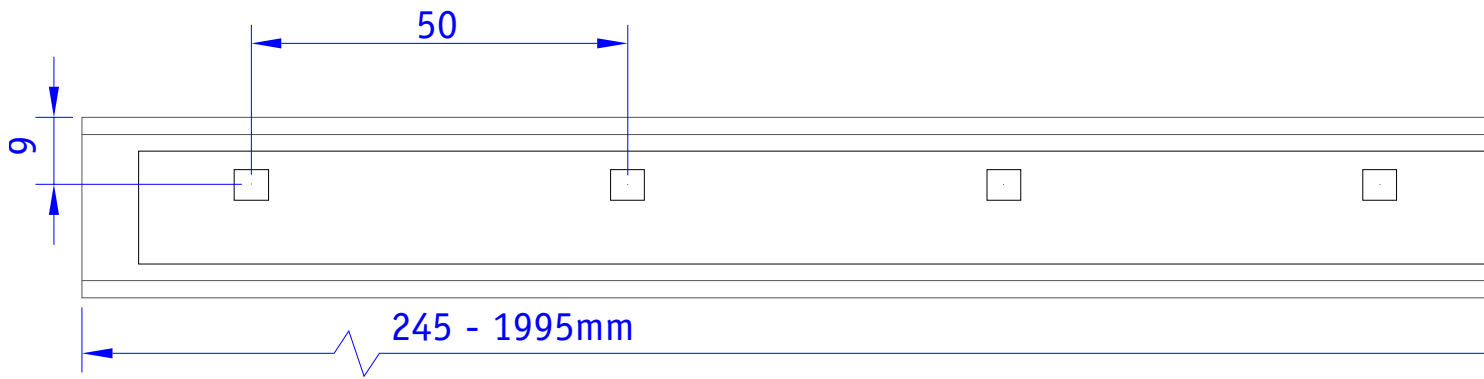
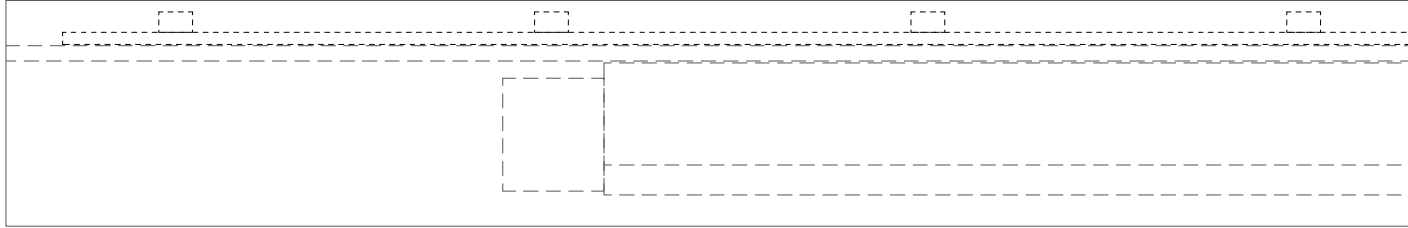


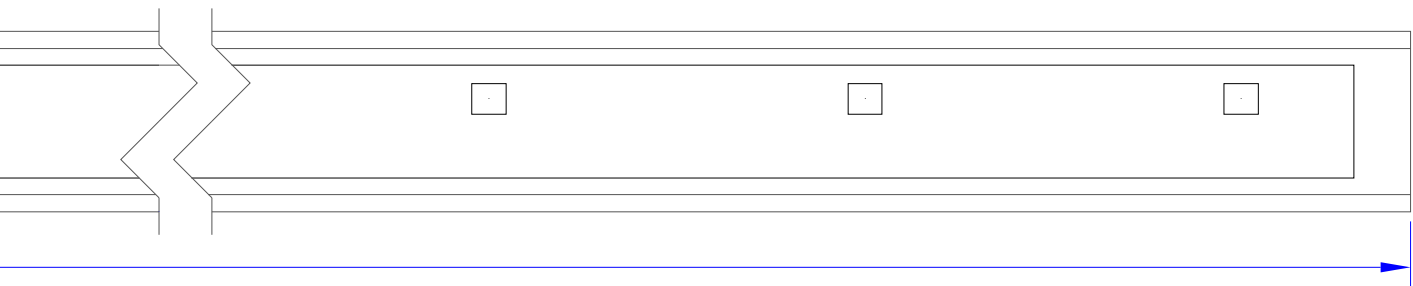
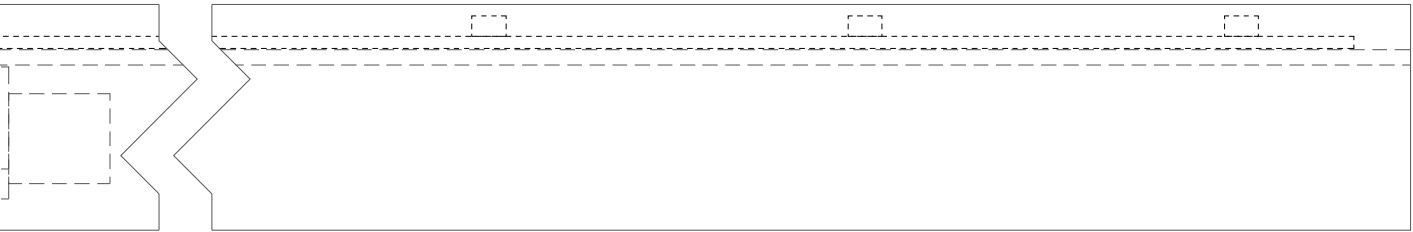
LED-Profile C50 (black, side view with mounting)



LED-Profile C50 (white, side view with mounting)

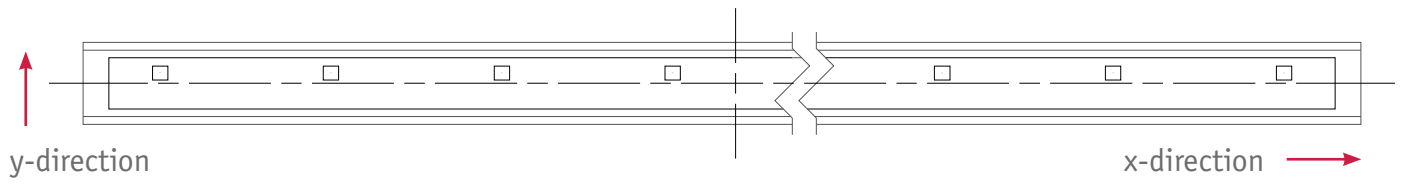
CAD drawing (without scale)*



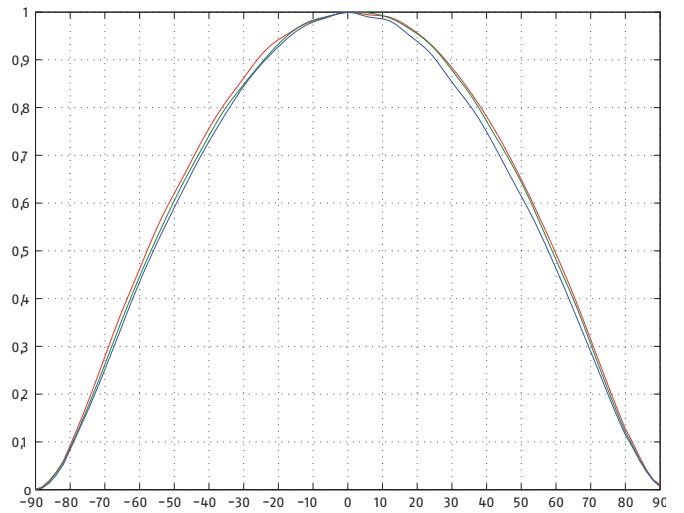
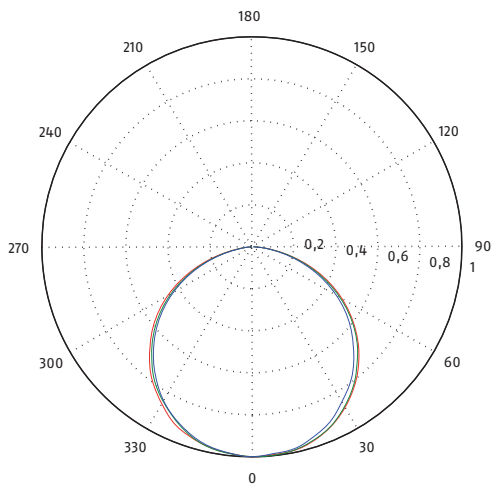


Distance/lux table

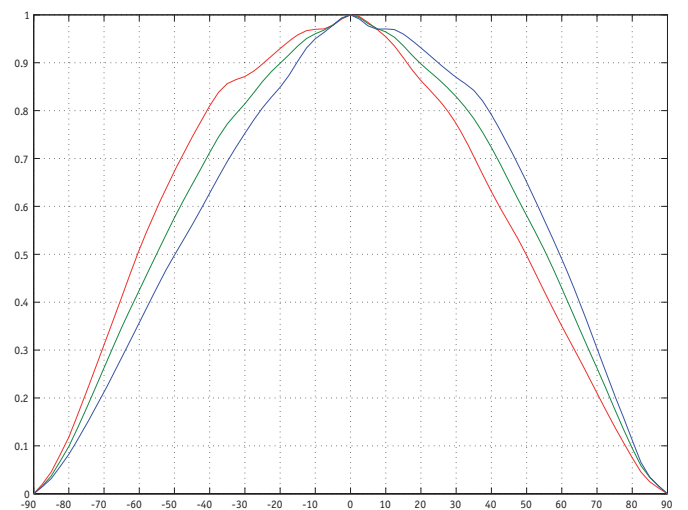
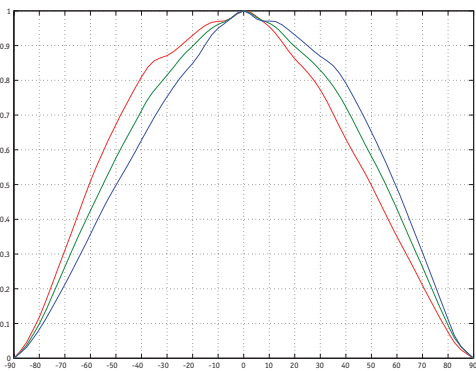
LED-Profile C50	Illuminance at 0.5m distance	Illuminance at 1m distance	Illuminance at 2m distance
LED-Profile C50-245	50lx	12.5lx	3.125lx
LED-Profile C50-295	60lx	15lx	3.75lx
LED-Profile C50-345	70lx	17.5lx	4.375lx
LED-Profile C50-395	80lx	20lx	5lx
LED-Profile C50-445	90lx	22.5lx	5.625lx
LED-Profile C50-495*	100lx	25lx	6.25lx
LED-Profile C50-545	110lx	27.5lx	6.875lx
LED-Profile C50-595	120lx	30lx	7.5lx
LED-Profile C50-645	130lx	32.5lx	8.125lx
LED-Profile C50-695	140lx	35lx	8.75lx
LED-Profile C50-745	150lx	37.5lx	9.375lx
LED-Profile C50-795	160lx	40lx	10lx
LED-Profile C50-845	170lx	42.5lx	10.625lx
LED-Profile C50-895	180lx	45lx	11.25lx
LED-Profile C50-945	190lx	47.5lx	11.875lx
LED-Profile C50-995*	200lx	50lx	12.5lx
LED-Profile C50-1045	210lx	52.5lx	13.125lx
LED-Profile C50-1095	220lx	55lx	13.75lx
LED-Profile C50-1145	230lx	57.5lx	14.375lx
LED-Profile C50-1195	240lx	60lx	15lx
LED-Profile C50-1245	250lx	62.5lx	15.625lx
LED-Profile C50-1295	260lx	65lx	16.25lx
LED-Profile C50-1345	270lx	67.5lx	16.875lx
LED-Profile C50-1395	280lx	70lx	17.5lx
LED-Profile C50-1445	290lx	72.5lx	18.125lx
LED-Profile C50-1495*	300lx	75lx	18.75lx
LED-Profile C50-1545	310lx	77.5lx	19.375lx
LED-Profile C50-1595	320lx	80lx	20lx
LED-Profile C50-1645	330lx	82.5lx	20.625lx
LED-Profile C50-1695	340lx	85lx	21.25lx
LED-Profile C50-1745	350lx	87.5lx	21.875lx
LED-Profile C50-1795	360lx	90lx	22.5lx
LED-Profile C50-1845	370lx	92.5lx	23.125lx
LED-Profile C50-1895	380lx	95lx	23.75lx
LED-Profile C50-1945	390lx	97.5lx	24.375lx
LED-Profile C50-1995*	400lx	100lx	25lx



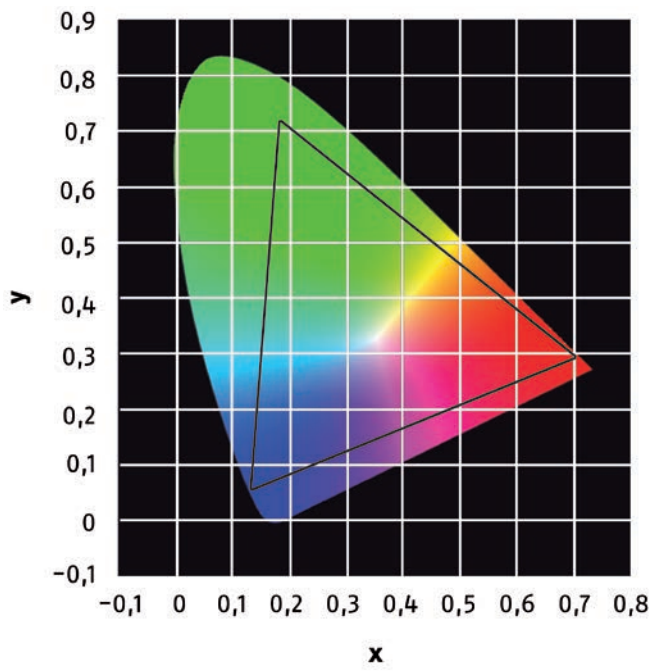
Light distribution curves, x-direction



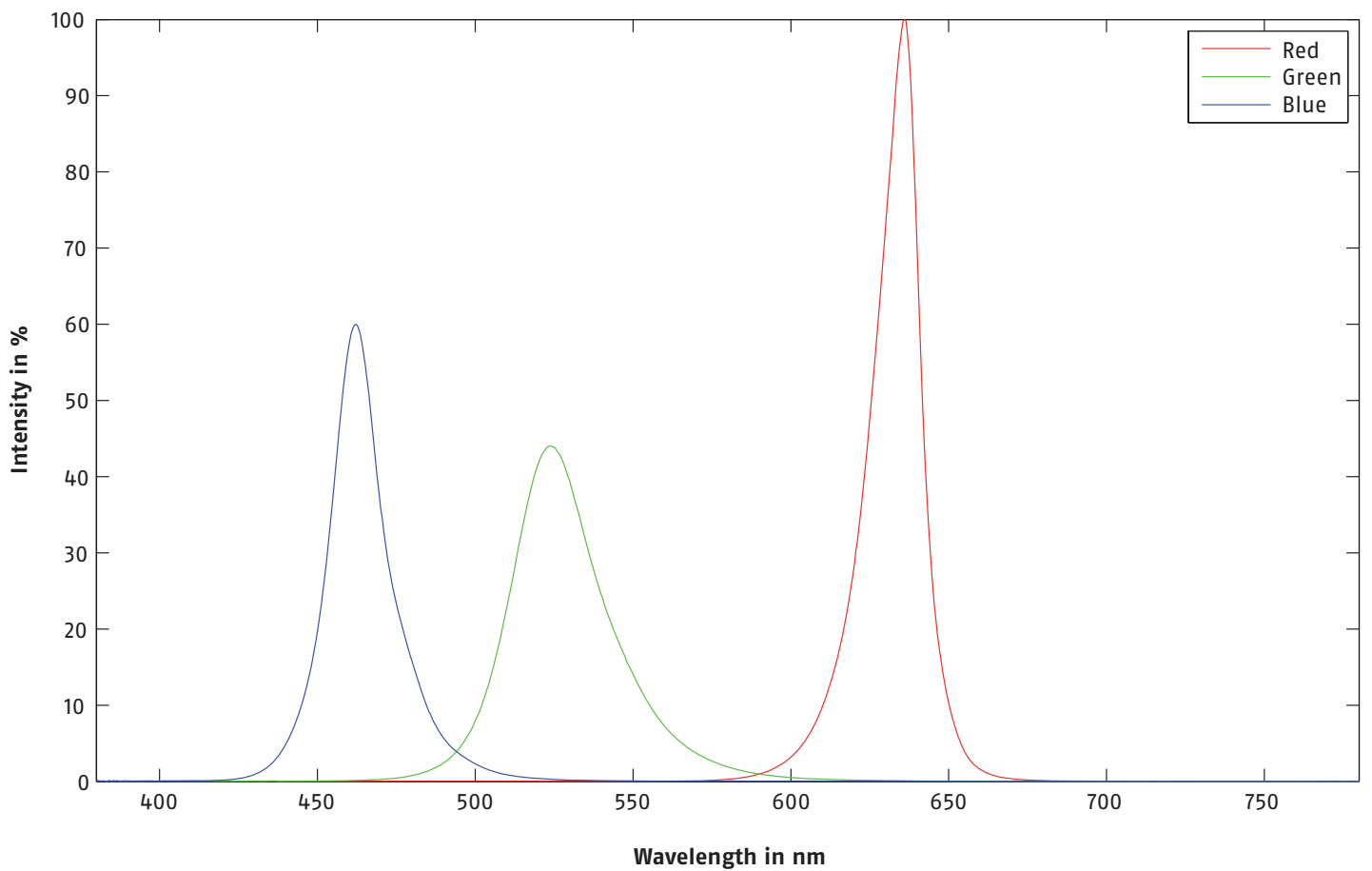
Light distribution curves, y-direction



Gamut diagram



Spectral distribution



Item numbers

LED-Profile C50	Item number (white profiles)	Item number (black profiles)
LED-Profile C50-245	213.1025	213.0025
LED-Profile C50-295	213.1030	213.0030
LED-Profile C50-345	213.1035	213.0035
LED-Profile C50-395	213.1040	213.0040
LED-Profile C50-445	213.1045	213.0045
LED-Profile C50-495*	213.1050	213.0050
LED-Profile C50-545	213.1055	213.0055
LED-Profile C50-595	213.1060	213.0060
LED-Profile C50-645	213.1065	213.0065
LED-Profile C50-695	213.1070	213.0070
LED-Profile C50-745	213.1075	213.0075
LED-Profile C50-795	213.1080	213.0080
LED-Profile C50-845	213.1085	213.0085
LED-Profile C50-895	213.1090	213.0090
LED-Profile C50-945	213.1095	213.0095
LED-Profile C50-995*	213.1100	213.0100
LED-Profile C50-1045	213.1105	213.0105
LED-Profile C50-1095	213.1110	213.0110
LED-Profile C50-1145	213.1115	213.0115
LED-Profile C50-1195	213.1120	213.0120
LED-Profile C50-1245	213.1125	213.0125
LED-Profile C50-1295	213.1130	213.0130
LED-Profile C50-1345	213.1135	213.0135
LED-Profile C50-1395	213.1140	213.0140
LED-Profile C50-1445	213.1145	213.0145
LED-Profile C50-1495*	213.1150	213.0150
LED-Profile C50-1545	213.1155	213.0155
LED-Profile C50-1595	213.1160	213.0160
LED-Profile C50-1645	213.1165	213.0165
LED-Profile C50-1695	213.1170	213.0170
LED-Profile C50-1745	213.1175	213.0175
LED-Profile C50-1795	213.1180	213.0180
LED-Profile C50-1845	213.1185	213.0185
LED-Profile C50-1895	213.1190	213.0190
LED-Profile C50-1945	213.1195	213.0195
LED-Profile C50-1995*	213.1200	213.0200

Electrical data

Features	LED-Profile C50
Voltage	18-26V
Current (I_{\max})	see table on page 4

Pin assignment



Pin	Assignment
1	GND
2	Data-
3	Data+
4	+24V / max. 5A
5	nc

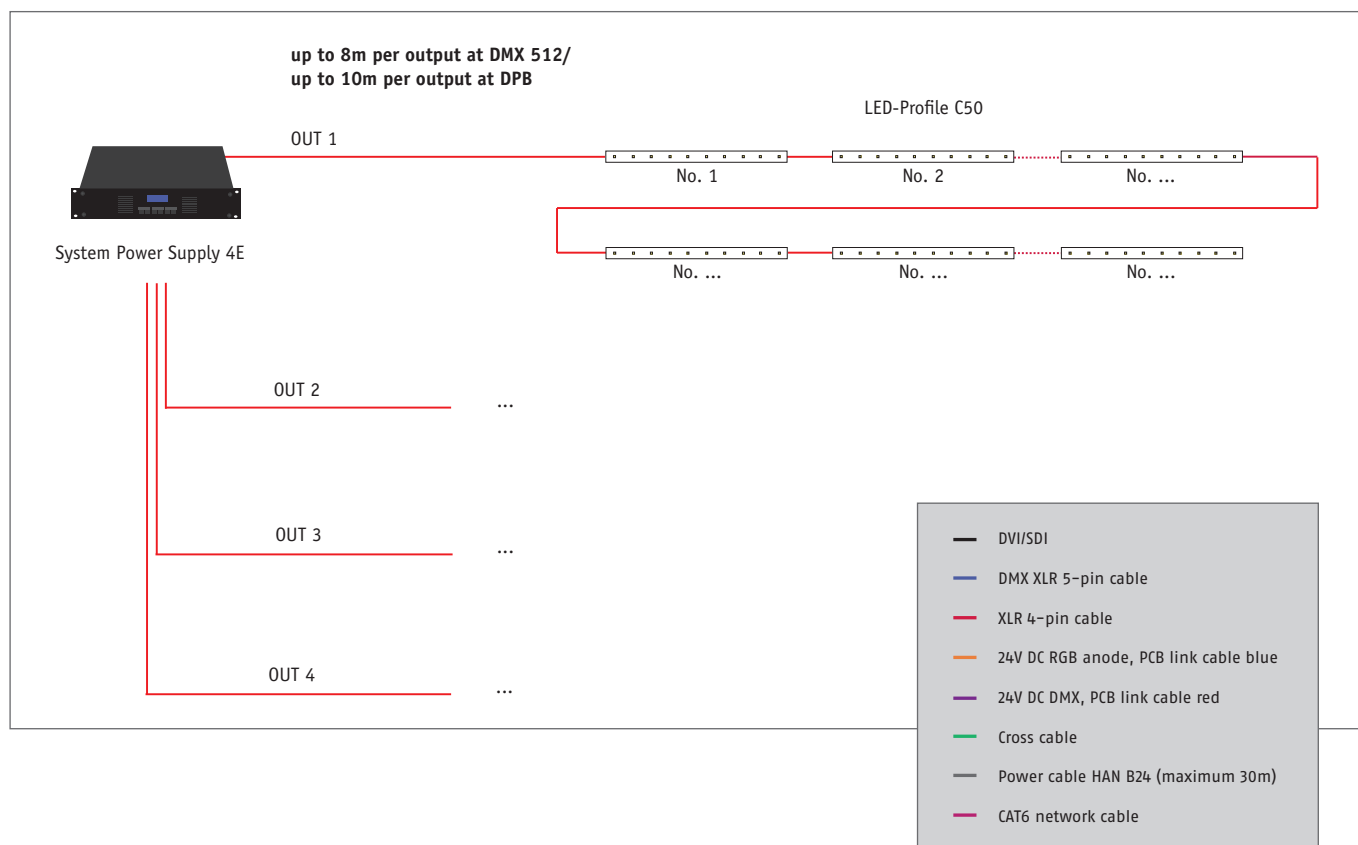
System Power Supply 4E



Protocol DMX 512	Protocol DPB
32m per controller 8m per output	40m per controller 10m per output



Cabling example



Why Schnick-Schnack-Systems?

The installation times get shorter and shorter, and at the same time the complexity of the systems and the demands of the customer increase.

We are a partner providing –while keeping even tight deadlines– high-quality and reliable systems that are not just easy to install, but are also easy to operate.

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