



Kalzip® Luminaire systems

LED media façades

Designed for bright ideas

System description

In combination with the newly developed Kalzip FC façade system, Kalzip offers a further additional option for aluminium building envelopes. Using the latest LED technology, façades can be illuminated directly and indirectly, both partly and completely.

The spectrum of the lighting variants ranges from individual façade fields or contours through to entire façade areas and enables the architecture to be pre-

sented or façades to be used for commercial and informative purposes. The façade aesthetics are not impaired in any way by this during the day. Thanks to the further development of LED lighting technology and a cooperation with livingprojects, one of the world's leading companies in the field of outdoor lighting technology, Kalzip can offer a unique turnkey combination of Kalzip FC panels and modern LED strings, i.e. including installation and commissioning.

Use of media façades in

- Shopping centres
- Sport and leisure facilities
- Public buildings
- Highly frequented inner-city buildings
- Museums and event buildings



Structure and components

The Kalzip FC façade system is a rear-ventilated aluminium rainscreen façade system with penetration-free and flexible fastening technology. The unique Vario system installation differs from conventional systems by its extremely economic installation. Individual façade panels can be installed independently of each other and can be dismantled if necessary for inspection and maintenance purposes. The Kalzip FC façade system is thus the ideal carrier system for the high-quality association with integrated LED light technology.

Exclusively panels of the type Kalzip FC 30/400/1.2 (400 mm building width) are used for the Kalzip Luminaire system. The planning of the façade is accomplished in a conventional sense in terms of building physics and construction taking into account the particular planning and installation advantages of the Kalzip FC façade system. Appropriate installation spans for FC 30/400 panels for the mounting of the LEDs are to be taken into account.

These special FC panels are already provided in the factory with blankings for mounting the LED nodes for a so-called pixel distance of 100 x 100 mm. The LED nodes are mounted by means of clicking a special mounting adaptor into the FC panel from the rear. The sun visor, which is mounted on the mounting adaptor, guarantees maximum light bundling, resulting in a significantly better light yield.



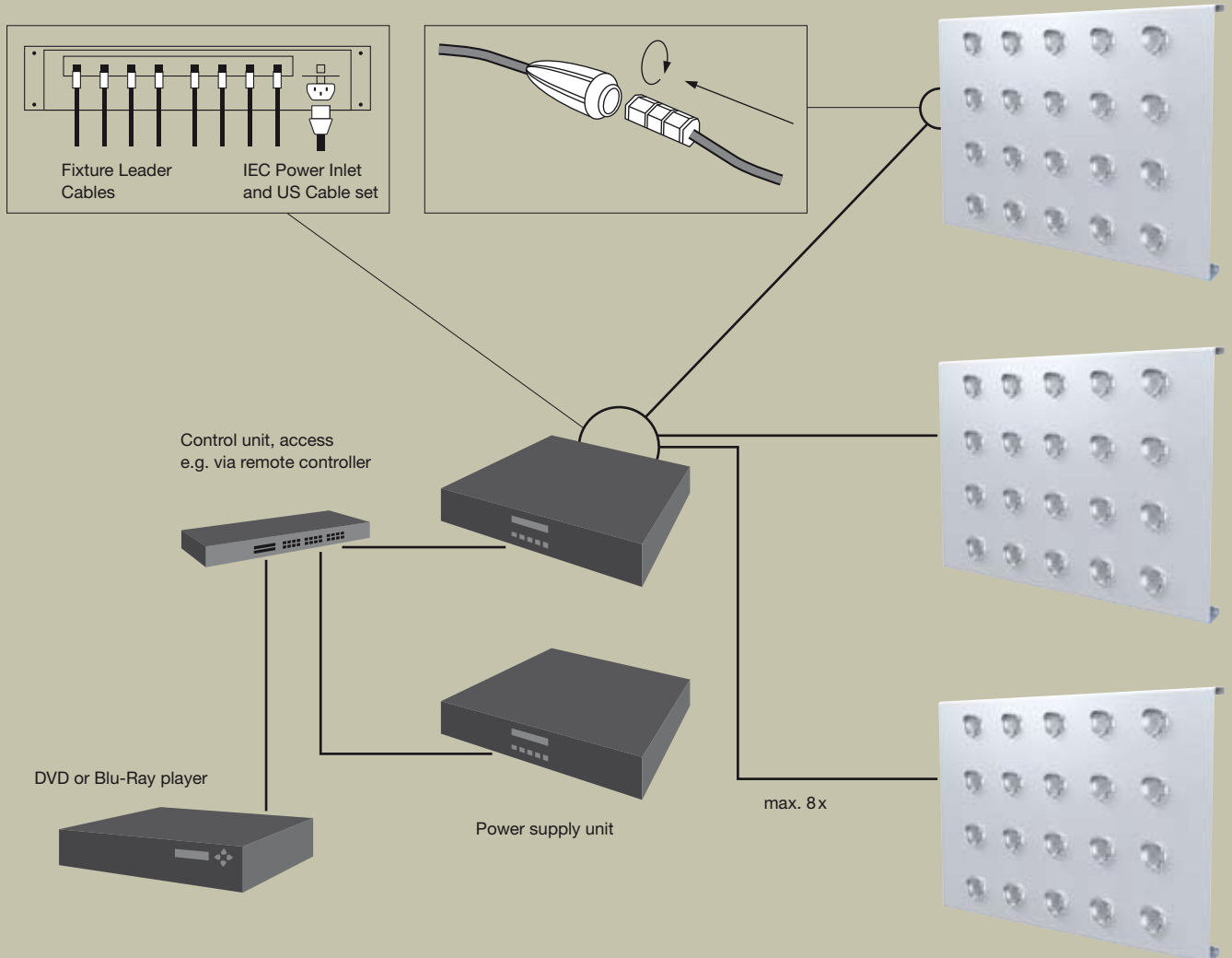
Excellent colour reproduction with high-tech elements

Kalzip uses exclusively Philips iColor Flex LMXs for the Luminaire systems, which ensure excellent colour reproduction and homogeneity over the entire surface.

Each LED node represents one pixel in the subsequent media façade. The maximum illumination intensity corresponds to 6.56 candela per node with a maximum power requirement of 1 W / node. These nodes are pre-mounted in so-called strings by the system partner livingprojects.

The LED nodes are supplied with power and controlled according to the project requirements by means of the associated Philips system power supply and control components. The graphic data can be input and controlled at any time by the user.

Control components





Areas of application

Kalzip Luminaire systems are not suitable as daytime lighting systems and offer sufficient contrast for the operation of this lighting technology only when dusk sets in.

Kalzip Luminaire systems are particularly suitable for high resolution video recordings, for external advertising or for the broadcasting of film or TV contents. For this kind of use, planning on the basis of common video resolutions or variations of same is recommended, for example:

- VSE Digital Video 1024 x 768 pixels
- PAL Video 704 x 576 pixels
- NTSC Video 704 x 480 pixels

For viewing these applications, a distance of approx. 100 m to the media façade is recommended for optimal picture sharpness with the 100 x 100 mm pixel spacing.

For the optimum perception and contrast of high-resolution contents, a maxi-

mum viewing distance of 20 times the screen height is recommended. Subsequently, the perception of contrast decreases proportionally to the distance, wherein a distance of 50 times should not be exceeded for the perception of moving images.

Example:

Video contents are to be displayed on a 130 m wide and 10 m high industrial building for external advertising purposes:

The planning of an LED screen with a resolution of 1024 x 76 pixels (a width of approx. 102.4 m and a height of approx. 7.6 m of the used media façade area) would be suitable here. Contents would be perceived optimally at a distance of at least 100 m; for the representation of contrast, a maximum viewing distance of between 150 and 380 m is recommended. The arrangement and adaptation of picture and animation contents to the screen format can be carried out by livingprojects.

A low resolution is suitable for a laminar accentuation of architecture, plays of colour and corporate architecture, as well as for displaying text messages and logos etc. The recommended distance between the viewer and the media façade thereby depends individually on the planned contents and the desired perception (contrast, image sharpness etc.) of the display.

Technical data

LED Phillips iColor LMX

Power requirement / LED node	max. 1 Watt for full RGB display; the power requirement is reduced to 2/3 in standard operation (i.e. no permanent RGB display)
Colours	16.7 million additive RGB colours
Maintenance interval	after 50,000 hours at full power
Input voltage	24 V
Voltage factor	0,995
Controller protocol	DMX 512
Node dimensions (H x W x D)	31 x 32 x 14 mm
Integrated waterproof 3-pin plug connector	
Operating temperature	-20° – 50°C
Air humidity	0 to 95 %, non-condensing
Number of nodes in a row (string)	50 nodes
Testing, approval	according to UL, CUL, CE
LED class	Class 2
Protected against dust, steam and splash water according to IP 66	

Power supply unit

Type	sPDS 480 approx. 24V
Input voltage	100 - 240 V, autom. switching, 50/60 Hz
Max. input current	6 A @ 100 V, 5 A @ 120 V
Output power	24 V, 480 W (6.0 W per output)
Dimensions	89 x 483 x 457 mm
Weight	12 kg
Connections	data-RJ45, output 8 x 4-pin plug connector, input IEC 320
Operating temperature	-10° – 50°C
Air humidity	0 to 95 %, non-condensing
Test mark, certificates	UL/cUL, CE, PSE
Operating environment	Dry, protected against wetness, IP 20

Cabling and accessories

Cabling behind the panel / LMX = 50 cm	
Static cable, symmetrical signal. 7.9 m, 15.2 or 30.5 m (from power supply to panel)	

Form of delivery

Materials

Aluminium EN AW-3004,
EN AW-3005 or EN AW-6025

Dimensions

Length: min. 1,000 mm,
max. 10,000 mm
(other profile lengths on enquiry)
Profile height: 30 mm
Cover width: 400 mm

Load-bearing capacity values

Load-bearing capacity values are based on Eurocode 9 and DIN 18807 in accordance with building authority approval no. Z-14.1-581 issued by the German Institute of Building Technology.

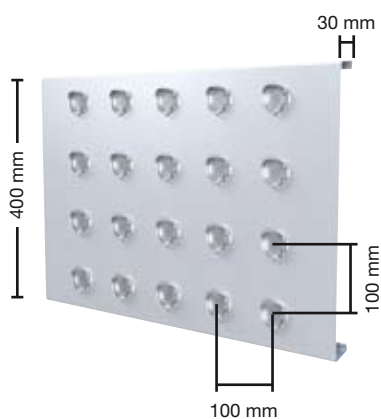
Surfaces

- Stucco embossed
- AluPlusPatina
- Microlined

Colours

- Standard colour RAL 9006
- Special colours on enquiry

Profile 30/400 in the thickness 1.2 mm
with edge return
Pixel spacing 100 x 100 mm.



Project development

Together with architects and planners, Kalzip advises and specifies the implementation of a building project with Luminaire systems. In the case of an execution, the surface intended for the LED lighting technology will be handed over to our partner, livingprojects. The façade surfaces without LEDs are implemented as usual by installation companies who have been certified and trained by Kalzip.

Exclusively LED nodes and accessory components from Phillips, one of the world's leading manufacturers of LED technologies, are used for the media façade. Livingprojects takes care of the complete configuration, planning, installation, commissioning, maintenance and warranty of these LED components. An accredited cooperation partner is at your disposal in livingprojects.

After-sales service, maintenance and warranty

- Livingprojects supplies a turnkey media façade including delivery, installation and commissioning.
- The operator can control the function of the media façade itself after instruction, or can have it done by an advertising agency. Livingprojects offers a standard protocol for this in DMX 512.

The Kalzip total Luminaire system package consists on the one hand of the warranty for the FC façade system and on the other of all electronic components and a maintenance package, which can be adapted individually to the requirements and the customer's wishes.

Kalzip offers a warranty on all components belonging to the FC façade system, including colour coatings and surfaces as well as the punched FC profiles.

Livingprojects guarantees all performances such as installation, assembly and system configuration.

- The life span of the LED nodes is 50,000 hours, corresponding to 17 years at an average operating duration of 8 hours/day
- The light yield after 50,000 hours is 50 %
- Phillips gives a 3 year warranty on the LEDs
- In order to attain the life span of 50,000 hours, the system is designed and suitable for an operating temperature of between -20° and +50°C.

In addition to this product warranty given by Phillips, livingprojects offers a comprehensive service package. There is an optional extended warranty from livingprojects not only on the individual components but also on the running operation of the media façade. These service performances vary from an annual inspection and check through to 24/7 service with and without the exchange of individual LEDs on site.

Approval and marking

The Kalzip FC façade system is approved according to the European Construction Products Directive and bears the CE mark.

The LEDs are approved according to UL, CE, IP66.

Our cooperation partner:

livingprojects[®]
Solid-State Lighting Solutions



www.kalzip.com

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