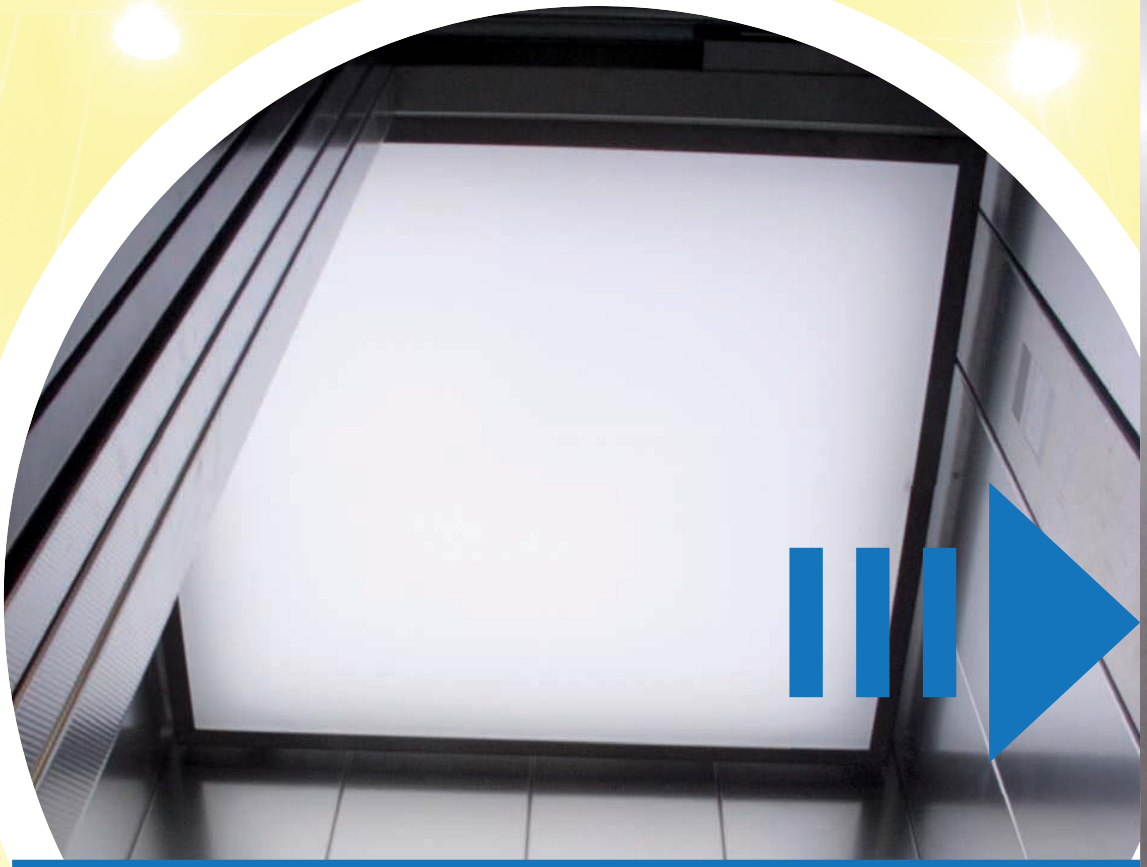
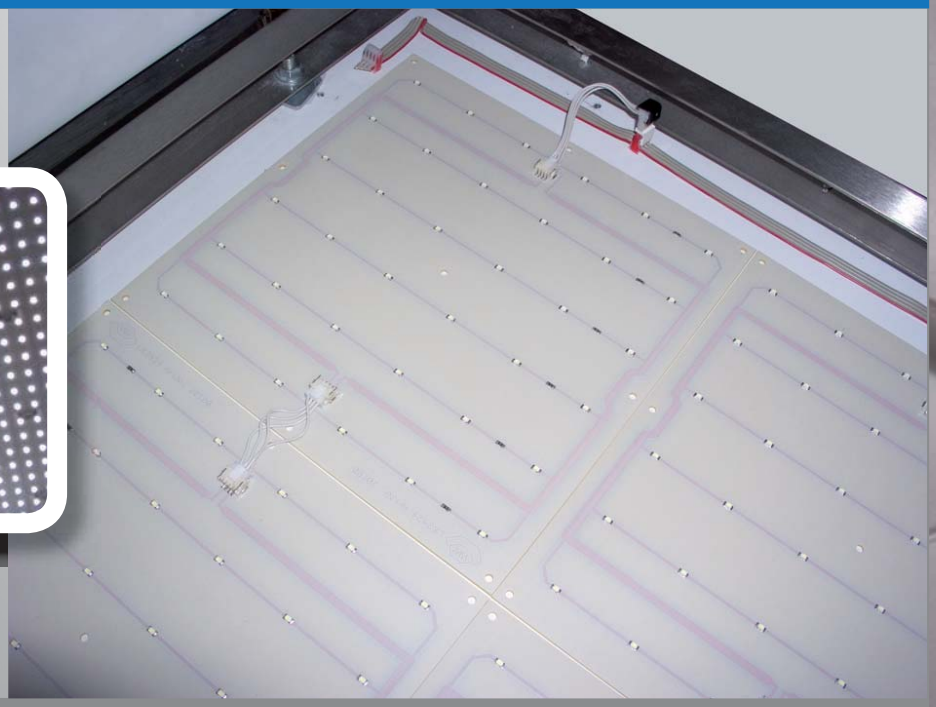
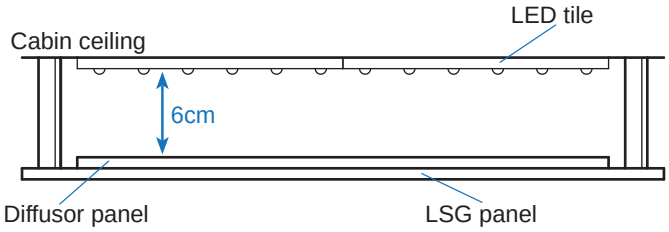


Homogeneous LED-cabin lighting



Homogeneous LED cabin lighting

The LED tiles „Homogen-LED“ have been developed for lift cabin ceilings, which shall show an absolutely homogeneous light radiation. So far this is usually achieved by using a frosted glass ceiling (LSG). A row of fluorescent lamps are placed behind this ceiling at a distance of 15-20cm. The individual tubes behind the glass panel may partly still be visible. In the course of headrooms getting smaller and smaller a deep intermediate ceiling is not always feasible. Here the W+W tiles find a remedy:



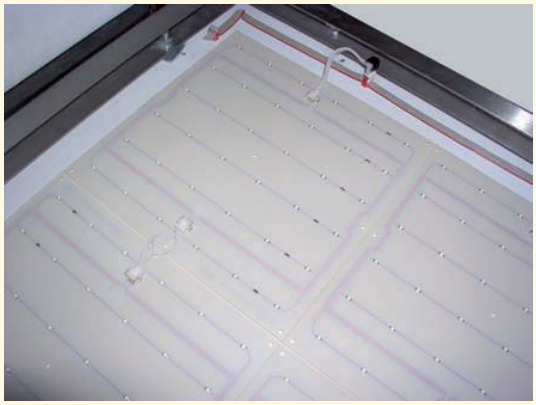
Suspended ceiling
A special diffusor panel is laid on the clear laminated sheet glass in the suspended ceiling. In conjunction with the LED tiles an absolutely homogeneous light is created at a distance of only 6cm between the LED tiles and the diffusor panel!

Construction form
Three tile sizes are available:
24cm x 24cm, equipped with 36LEDs
24cm x 12cm, equipped with 18LEDs
12cm x 12cm, equipped with 9LEDs
The tiles are screwed or glued on the cabin ceiling next to each other. They are interconnected with pluggable cables.

Diffusor panel
Only panels constructed especially for LED lightings (e.g. truLED-plexiglass) can be used as diffusor panels. These panels are available in the specialised trade or can be customized directly at our company.

Technical support
Siegfried Stock: phone +49(0)-211/73848-187

Homogeneous LED cabin lighting



Technical data

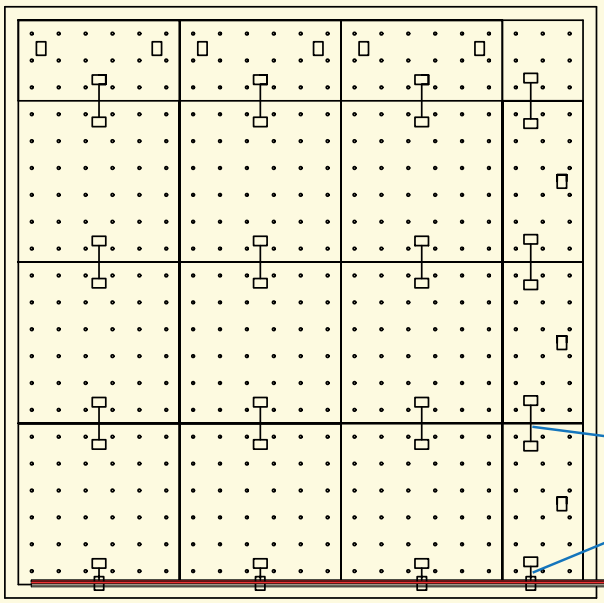
Switching power supply	Input 100-240V AC 50Hz/60Hz, Output 24V- / 2.2A / 50W sufficient for about 1m² cabin ceiling
LED tile 24 x 24cm	36 x LEDs with a total of 2.8W
LED tile 24 x 12cm	18 x LEDs with a total of 1.4W
LED tile 12 x 12cm	9 x LEDs with a total of 1W
Luminous flux:	about 75lm / Watt
Illumination level:	For one square metre about 16 tiles of 24 x 24cm are used. (That makes 576 LEDs with a luminous flux of about 3360lm).
Luminous intensity:	For a surface of 1m² and a ceiling height of 2.2m about 200lux were measured in a cabin covered with stainless steel.
Durability:	90% efficiency after 50.000 operating hours
Diffusor panel:	3mm thick, especially developed for an LED technique, cut according to your requirements. **(Please order the diffusor panel with the same measurements as your glass panel)**

The distance between the LED tile and the diffusor panel has to be at least 60mm in order to create a homogeneous light field.

The lighting is **dimmable.**

LED circuit board emergency light see page 87.

Example connection diagram LED tiles

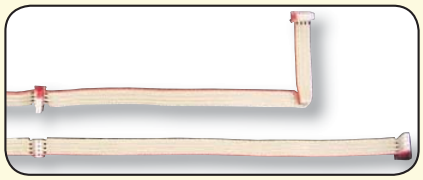


When laying the LED tiles make sure that you start at the left side on the bottom of the ceiling and lay as many 24x24 tiles as possible to the right side. Then lay as many 24x24 tiles as possible from the bottom to the top. A possible remaining space can be filled with 24x12 tiles. In that case, in the right corner at the top a 12x12 tile is placed (see connection diagram).

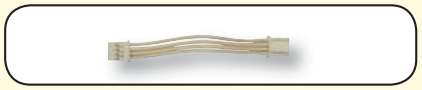
Take care that the connections of the tiles are placed in a way that the connecting lines are long enough and do not have to be guided over the LEDs.
Tiles of the same type have to be laid in the same direction.
Therefor look at the inscription on the tiles.
The flat cable always has to be laid on the same side of the cabin ceiling where the first LED tile 24x24 is placed. At a suitable place provide for a feedthrough of the connecting cable to the power supply unit.

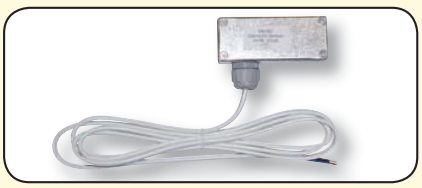
At most 10 LED tiles in a row may be connected to one tap cable.

1x switching power supply 100-240V,
50Hz - Out = 24VDC
1x outgoing line with plug for H-LED-FB
(This cable is guided through the ceiling and connects the switching power supply with the flat cable)



4-pole flat cable with tap plug (every 24cm) pre-assembled. First wire marked with red.





Homogeneous LED tile 24x24cm

Art.no.	Description
20100	H-LED-tile 2424

LED tile 24x24cm with 2.8W with 36 LEDs. Prepared for a homogeneous LED cabin ligthing in combination with a diffusor panel.

Homogeneous LED tile 24x12cm

Art.no.	Description
20101	H-LED-tile 2412

LED tile 24x12cm with 1.4W bei 18 LEDs. Prepared for a homogeneous LED cabin ligthing in combination with a diffusor panel.

Homogeneous LED tile 12x12cm

Art.no.	Description
20102	H-LED-tile 1212

LED tile 12x12cm with 1W with 9 LEDs.
Prepared for a homogeneous LED cabin ligthing in combination with a diffusor panel.

Switching power supply for a homogeneous LED tile-PS 24V

Art.no.	Description
20103	H-LED-PS 24V / 50W
20113	H-LED-PS 24V / 100W
20125	H-LED-PS 24V / 320W

Flat cable for the distribution of the individual tile strands

Art.no.	Description
20114	H-LED-FB- 1A (with 1 tap and connection)
20115	H-LED-FB- 2A (with 2 taps and connection)
20116	H-LED-FB- 3A (with 3 taps and connection)
20117	H-LED-FB- 4A (with 4 taps and connection)
20118	H-LED-FB- 5A (with 5 taps and connection)
20119	H-LED-FB- 6A (with 6 taps and connection)
20120	H-LED-FB- 7A (with 7 taps and connection)
20121	H-LED-FB- 8A (with 8 taps and connection)
20122	H-LED-FB- 9A (with 9 taps and connection)
20123	H-LED-FB-10A (with 10 taps and connection)

Tap cable for LED tiles

Art.no.	Description
20105	H-LED-AL-10cm
20126	H-LED-AL-30cm

Side 1: with a plug for a flat cable, marked with red on one side,
Side 2: plug with protection against reverse polarity for the LED tile

Connecting cable for LED tiles

Art.no.	Description
20106	H-LED-VL- 5cm
20112	H-LED-VL-15cm

Plug with protection against reverse polarity for LED-tile-junction on both sides

Diffusor panel for LED tiles

Art.no.	Description
20107	H-LED-Diffusor*
20124	H-LED-Diffusor panel 140x140mm

*Diffusor panel especially developed for the LED technique.
Cut according to your requirements. Delivered in protective foil.

Dimmer suitable for the connection to the power supply unit Art.no. 20103

Art.no.	Description
20110	H-LED-Dimmer

1x dimmer by pulse width modulation