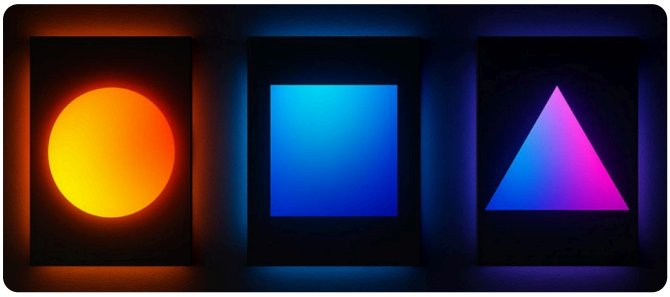
LICHTRAUM LRM

Illuminated or self-luminous – illuminating.



PRODUCT INFORMATION · LED PRODUCTS

LED light panel FRAMELESS

Frameless luminous surfaces – made to your specifications, accurate to the millimetre.









THE PRODUCT

Light right up to the edge.

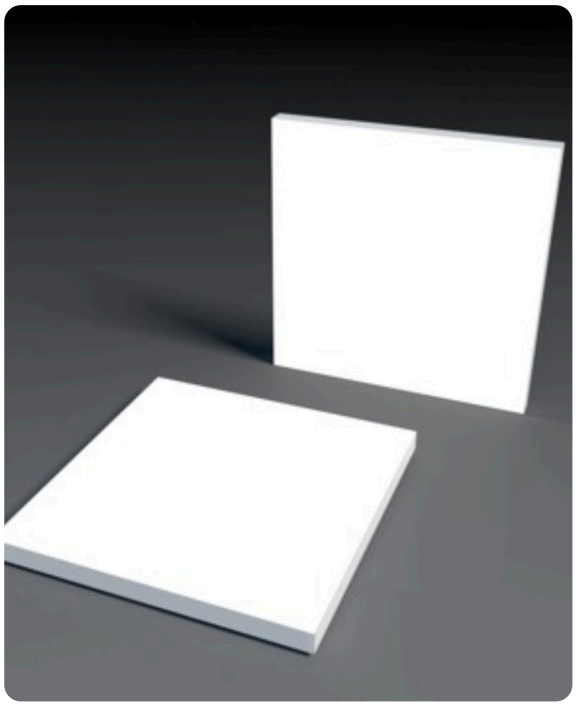
The FRAMELESS LED light panel is a flat luminaire with a depth of only 21 mm. Its special feature: even light right up to the edge – with no frame at all.

The light of the LEDs is fed in from the side into an 8 mm light-guiding acrylic panel. A white reflector panel on the back directs it forwards, and a satin diffuser spreads it evenly. The surface glows homogeneously and without glare; no light points or hotspots are visible.

Every FRAMELESS light panel is custom-made to fit exactly. You specify:

— length and width
— geometric shape
— light colour or colour temperature (kelvin)
— length of the connecting cable

Power is supplied by an external power supply unit.



Key features at a glance

Made to measure
Accurate to the millimetre, to your specifications

Frameless glow
Homogeneous surface without a frame

Low consumption
approx. 25 W per m² of luminous surface

Applications and properties

- Made to fit exactly
- Flush integration into walls and furniture
- Contract, furniture and interior fit-out
- Glare-free lighting design
- Architectural lighting
- Backlighting of glass, solid surface, textiles
- Direct film application possible (light pictures)
- Geometric wall luminaire (rectangle, square)

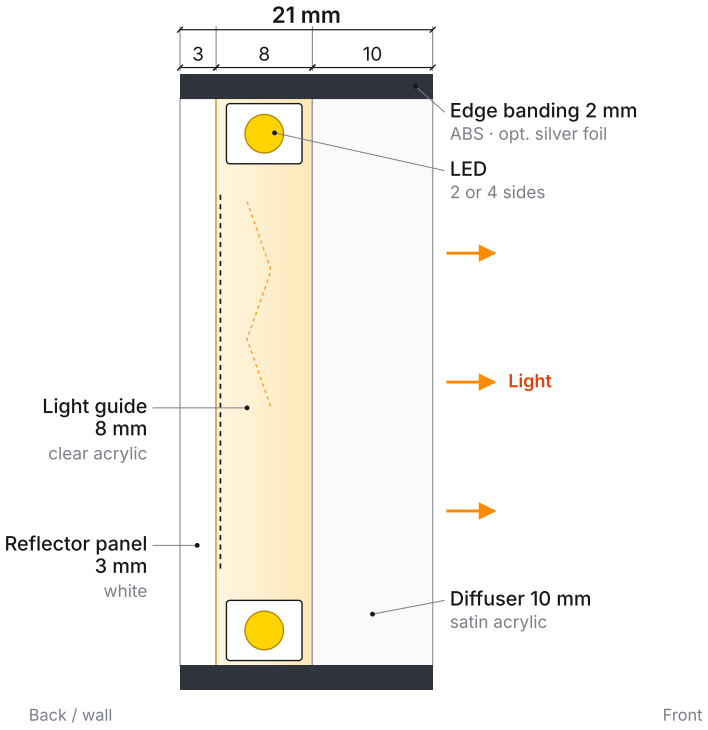
Dimensions

MINIMUM	MAX. HEIGHT*	MAX. WIDTH	MAX. AREA
150 × 150 mm	1,000 mm	3,040 mm	2.0 m²

Any size in between is available to the millimetre. * Height measured between the LED sides.

CONSTRUCTION

Three panels, 21 millimetres.



Section, layers to scale, height shortened.

3 mm — **Reflector panel**
White acrylic on the back, directs the light forwards.

8 mm — **Light guide**
Clear acrylic into which the LEDs feed light from the side – on two or four sides.

10 mm — **Diffuser**
Satin acrylic, spreads the light homogeneously and glare-free right up to the edge.

2 mm — **Edge banding**
ABS, all round – optionally silver foil.

21 mm — **Total depth**
Tolerance ± 2.0 mm

Light colours

2700 K | 3000 K | 4000 K | 5000 K | 6500 K

Optional: coloured LEDs · RGB · CCT

Warm white 2700–3000 K, neutral white 4000–5000 K, daylight white 6500 K. Brightness and colour temperature dimmable via radio control.



Colour temperatures compared

TECHNICAL DATA

Key figures at a glance.

ELECTRICS AND LIGHT

LED circuit	parallel connection
Operating voltage	12 V
Power	13.2 W/m per LED side (length of one LED side; approx. 25 W/m²)
Light colours (white)	2700 K, 3000 K, 4000 K, 5000 K, 6500 K
Optional	coloured LEDs, RGB, CCT (adjustable colour temperature)
LED spacing	12 mm
PCB grid	36 mm
Residual luminous flux	> 70 % after 50,000 operating hours

OPERATING CONDITIONS

Protection rating / class	IP 50 / III
Ambient temperature	+5 °C to +35 °C
Conformity	CE, RoHS

DIMENSIONS

Minimum size	150 × 150 mm
Maximum width	3,040 mm
Maximum height	1,000 mm (between the LEDs)
Maximum area	2.0 m²
Depth	21 mm (± 2.0 mm)
Weight	25 kg/m²

MATERIAL

Material	PMMA (acrylic), cast
Layers	reflector panel 3 mm · light guide 8 mm · diffuser 10 mm
Linear expansion	0.07 mm/(m·K) (DIN 53752-A)
Fire behaviour	building material class B2 (DIN 4102)
Flammability	HB (UL 94)

All data refer to an ambient temperature of +25 °C. Photometric data (luminance) to follow.

EDGE FINISH

Two edges – two installation situations.

STANDARD

ABS edge banding, 2 mm

All-round edge protection and a clean finish for free-hanging and visible panels. Available in white or black.



Corner with edge banding, black







OPTIONAL

Silver foil (polyester tape)

Reflective edge finish for direct, frameless installation – for example flush in a wall or furniture where no visible edge protection is needed.





CONNECTION

Cable outlet and strain relief.

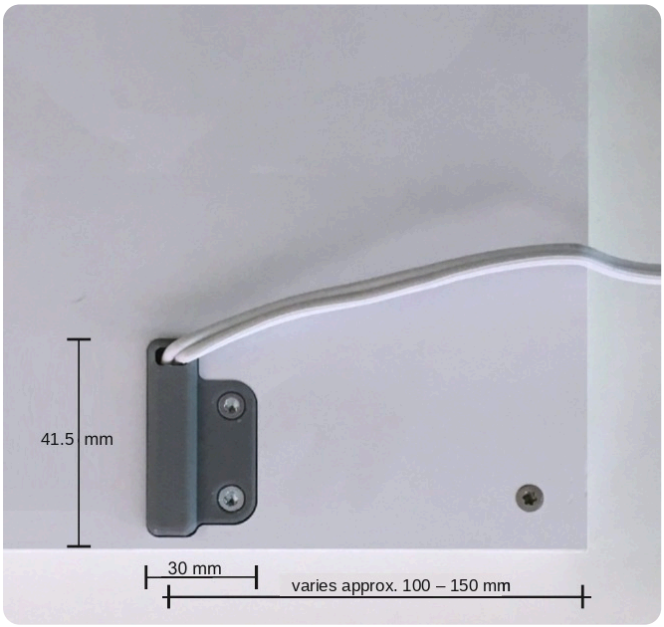
The cable outlet with strain relief is located on the back of the light panel. When installing or laying the panel, e.g. on display cabinet shelves, allow for a height difference of approx. 3 mm.



Strain relief
Rear cable outlet with screwed strain relief.



End cap
Cable routing from the end cap, detail view.



Position of the cable outlet

- Height of strain relief: **41.5 mm**
- Width of strain relief: **30 mm**
- Distance from edge: **approx. 100–150 mm** (varies)
- Build-up height on the back: **approx. 3 mm**

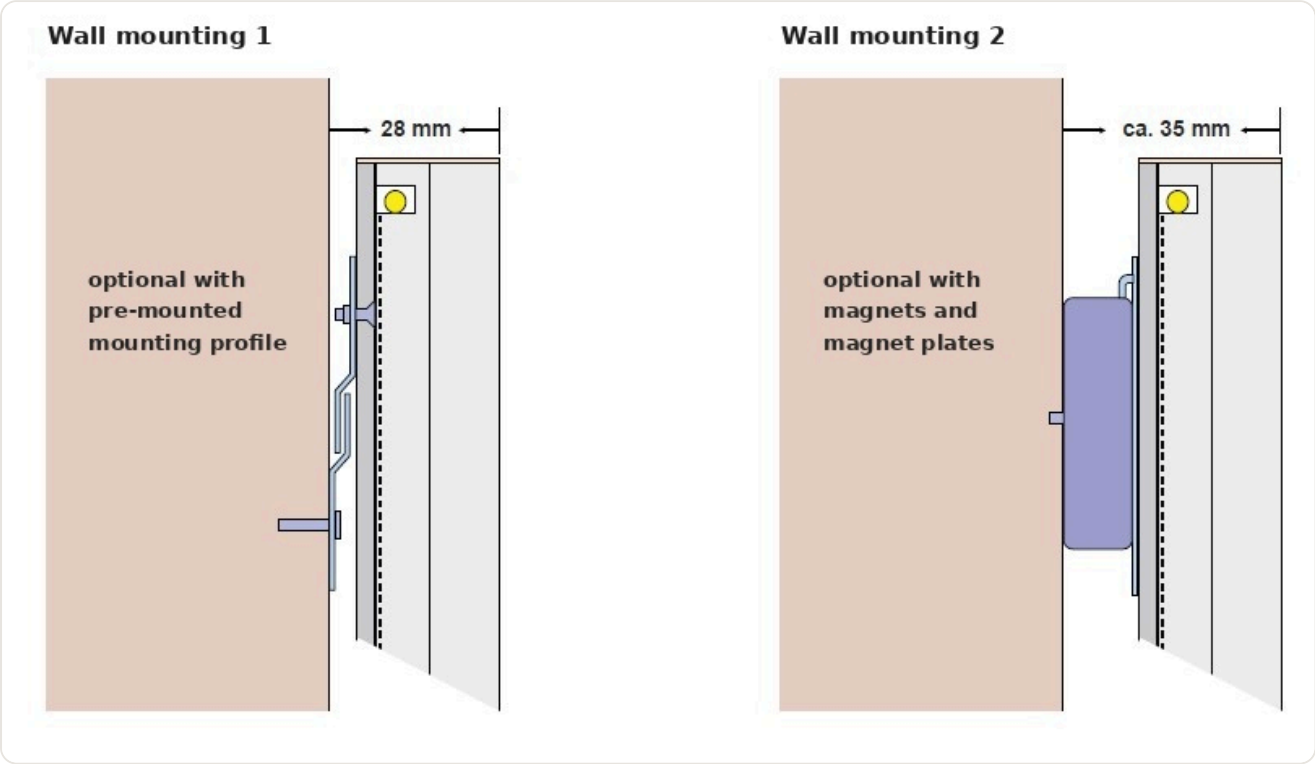
The position of the end cap varies along one axis depending on the size of the light panel, as it always sits at the connection pad of the PCB.

> Strain relief positions always refer to the front view, long side at the bottom (feed side). The illustration shows the feed at the bottom left (mirrored).

INSTALLATION

Wall mounting.

Two systems are available for wall mounting. Both are concealed behind the luminous surface and can be supplied pre-mounted on request.



OPTION 1

Mounting profile

The mounting profile is pre-mounted on the back and hooks into the counter-profile screwed to the wall.

OPTION 2

Magnets and magnet plates

Magnets on the back hold onto screwed magnet plates. The light panel can be removed without tools.

Legend

- Wall
- Mounting profile and screws
- Magnet with magnet plate
- LED feed
- Light panel FRAMELESS (layers)

APPLICATION EXAMPLES

Interior architecture and fit-out.





Wall design with light pictures
FRAMELESS light panels with photo motifs applied directly as film.

Light columns
Flush transition from the FRAMELESS LED light panel to the wood panelling.

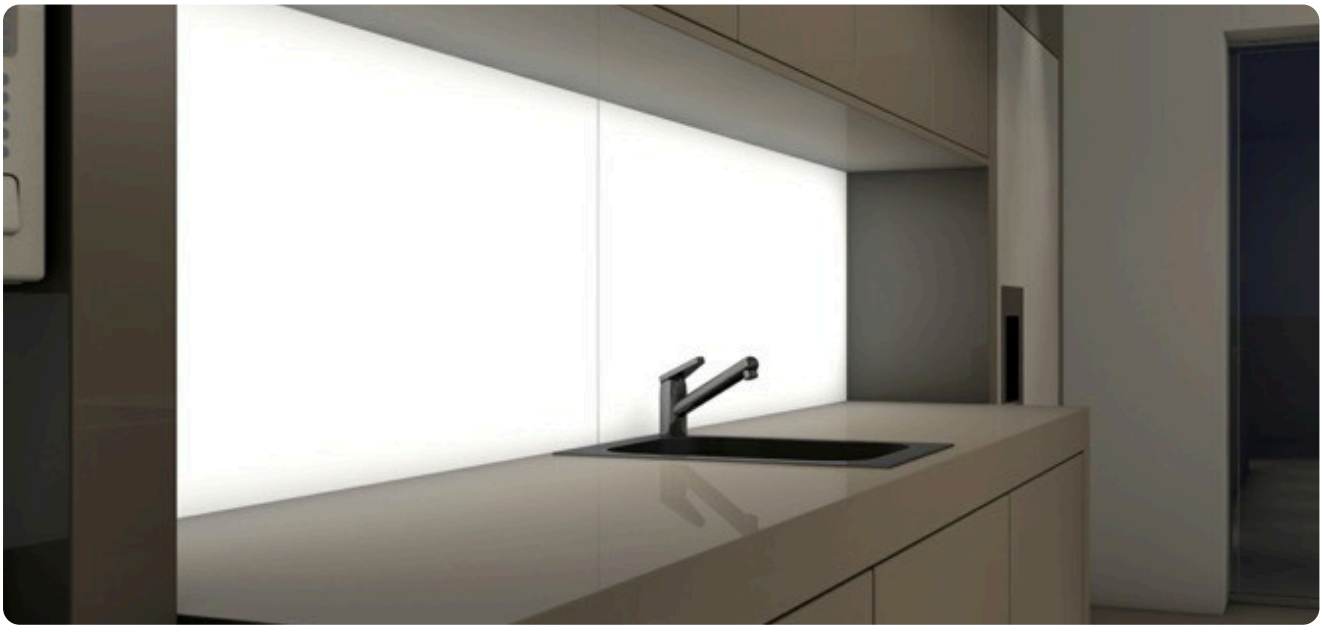
APPLICATION EXAMPLES

Kitchen design and furniture making.



Kitchen splashback and cooking island

Splashback with 2 × FRAMELESS LED light panel 1400 × 600 mm; front of the cooking island with BASIC LED light panel.



Kitchen splashback

Evenly lit surface along the entire worktop.

APPLICATION EXAMPLES

Glass display cabinets and furniture making.



Cabinet shelves and back panels
Luminous shelves and back panels show off exhibits evenly and with few shadows.



Furniture integration
Light fields set flush into a table top.



Display cabinet
Self-luminous base shelf.

REFERENCES

Light picture walls.



Kreissparkasse Horb am Neckar
Light picture wall made of FRAMELESS light panels, picture size 5025 × 3020 mm, divided into 10 segments.



DHM Berlin
Light picture



Light picture wall
Picture size 3300 × 2400 mm, divided into 6 segments.



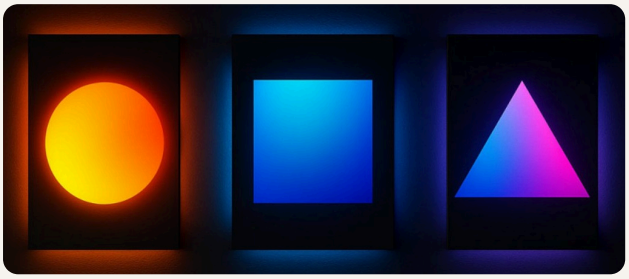
Detail
Segment joints



FRAMELESS wall and ceiling luminaire
Size 590 × 590 mm.

LICHTRAUM LRM

Illuminated or self-luminous – illuminating.



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