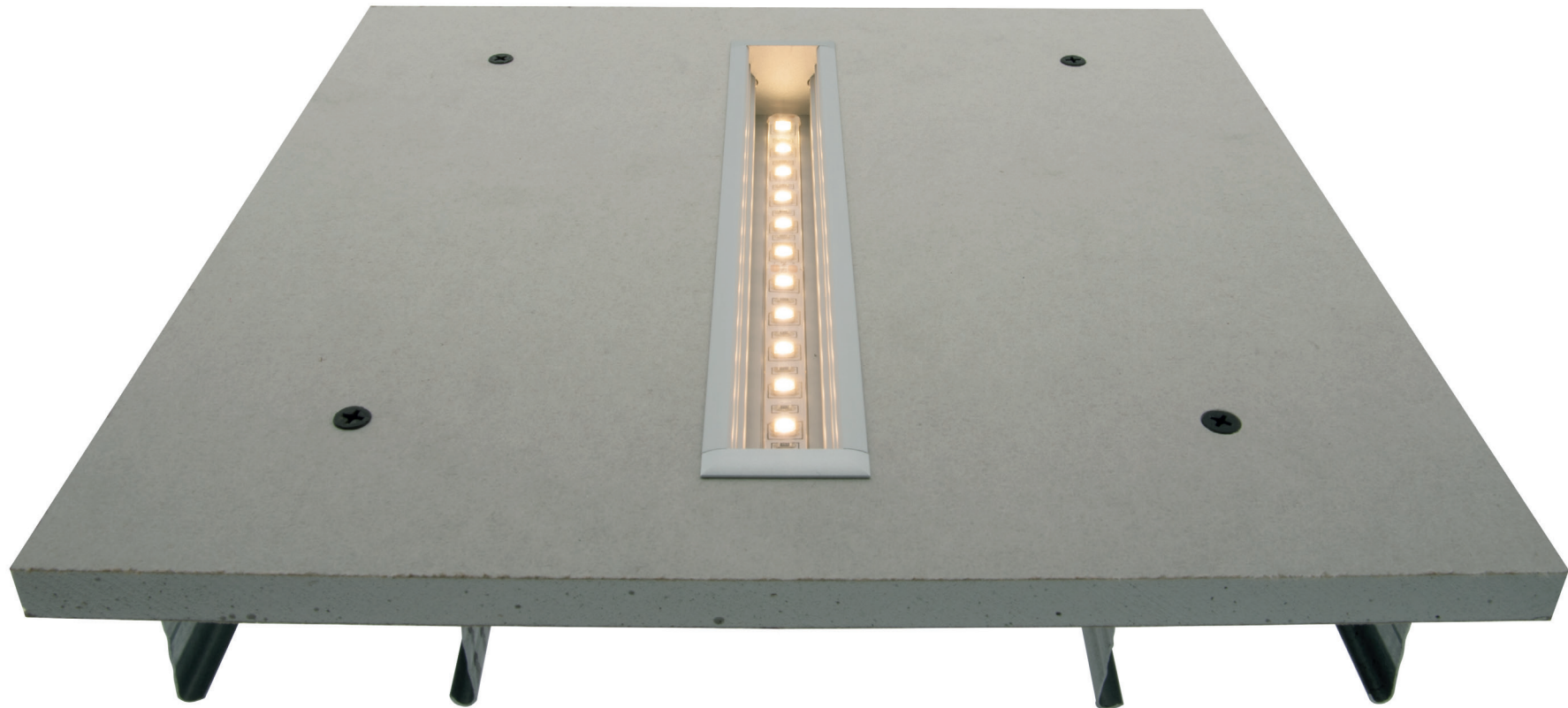Mounting recessed profile with installation bracket in plasterboard or various other boards

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The individual steps using the TBI profile as an example....

1. Cutting the aluminium profile and the PMMA cover to the required length.

Aluminium profile : must always be approx. 15mm longer than the LED Flexstrip (because of the feed
and the sealing at the end of the LED Flexstrip). With end caps 20mm more total length.

PMMA cover: must always be approx. 1mm / metre profile length shorter than the aluminium profile due to thermal expansion.

Furthermore, the different expansion coefficients of aluminium and PMMA must be taken into account. Aluminium expands by 0.25mm per metre per 10°C temperature difference and PMMA by 0.7mm per metre.
If you look at the whole thing using a 10-metre light line and take into account the temperature difference between switched on and switched off, it is between 20°C and 40°C depending on the LED power. Assuming an avarage difference of 30°C, the aluminium would expand by 7.5mm and the PMMA by 21mm. Therefore, sufficient space must be provided for the aluminium profile to allow for the expansion.
In this respect, we do not recommend installing the light lines longer than approx. 10 metres in one continuous length,
as a maximum gap of 4mm can be covered per end cap due to the design. With an end cap at the beginning and at the end of the profile, this results in a total of 8mm that is available for the expansion of the profile.
Due to the expansion in length, noise may be generated because the mounting material can pass on the expansion forces to the substructure.
This is noticeable at the beginning when the light is switched on or at the end when it is switched off in the first 1-2 minutes, as this is when the material expands or contracts the most due to the temperature difference.
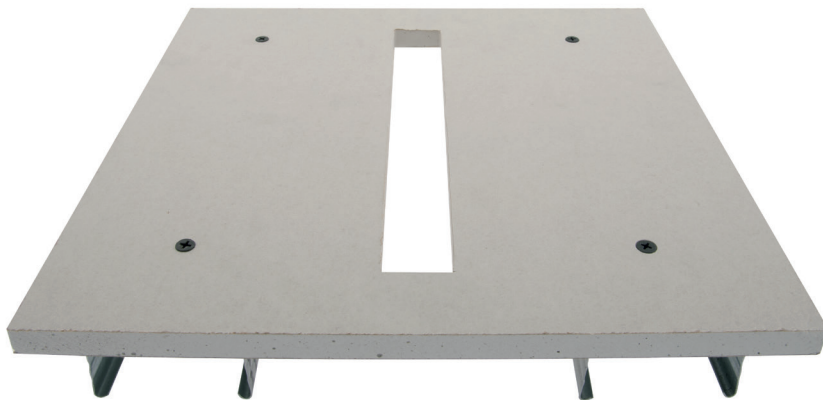
The individual steps using the TBI profile as an example....

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2. Make a cut-out for the LED profile in the plasterboard.

Cutout width: must be 4mm wider than the width of the aluminium profile without sash,
so that the mounting brackets also fit through the opening
e.g. TBI profile 25mm wide + 4mm = 29mm cut-out

Cutout length: LLED flex strip length + 15mm for feed + 2 x 2.5mm per end cap left and right + approx. 4mm cut-out
for a system length of approx. 5 metres
e.g. Flexstrip 5000mm + 15mm + 5mm + 4mm = 5024mm cutout

The plasterboard should be filled and painted before making the cut-out, but at the latest before installing the aluminium profile.
In our example, this was not done for presentation purposes!

The individual steps using the TBI profile as an example....

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3. Drilling the mounting holes in the aluminium profile for the installation brackets

We recommend 3 mounting holes per 2 metre pole. One in the centre of the profile and the other two holes approx. 20 cm from the edge.
The mounting holes must be countersunk and countersunk screws must be used for mounting.
Do not use lens head or other protruding screws, otherwise the LED flex strip may be damaged and the segments may fail.

The individual steps using the TBI profile as an example....

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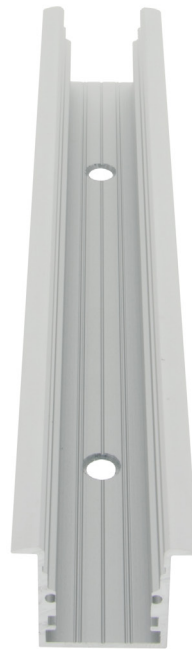
4. Mounting the end caps and the installation brackets

Fit the end caps and place the installation bracket on the back of the aluminium profile.
Fix them lightly with approx. 2-3 turns with the countersunk screws included in the scope of delivery. Rotate the installation bracket with the wings
parallel to the profile so that it can be pushed through the plasterboard opening and is not blocked by the brackets.
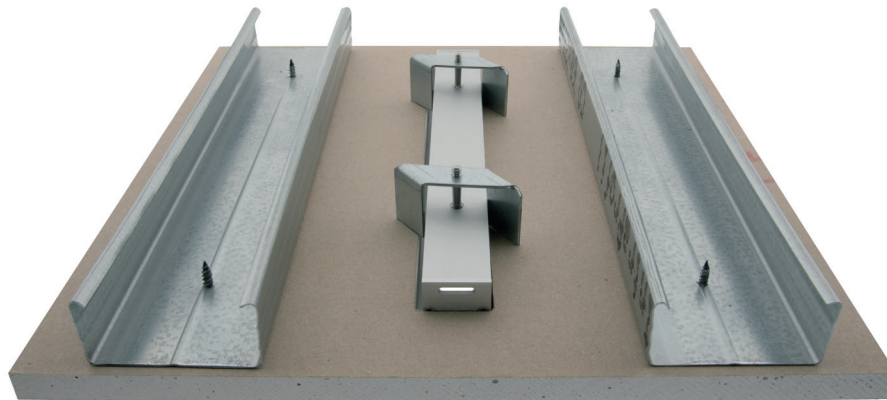
The individual steps using the TBI profile as an example....

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5. Installation of the profile in the plasterboard with installation bracket TB

Insert the prefabricated profile including the installation bracket into the plasterboard cut-out. Press the screws against the profile from be-low so that the angle is above the plasterboard on the inside of the ceiling and then tighten the countersunk screws until the installation angle twists and the profile presses noticeably against the plasterboard. (Please do not overtighten the screws).
The screws should be tightened but not with excessive pressure.
It is essential that there is approx. 3 cm of space to the left and right of the plasterboard cut-out for the installation angle to turn properly.
to the left and right of the plasterboard cut-out so that the wings of the installation bracket can turn.
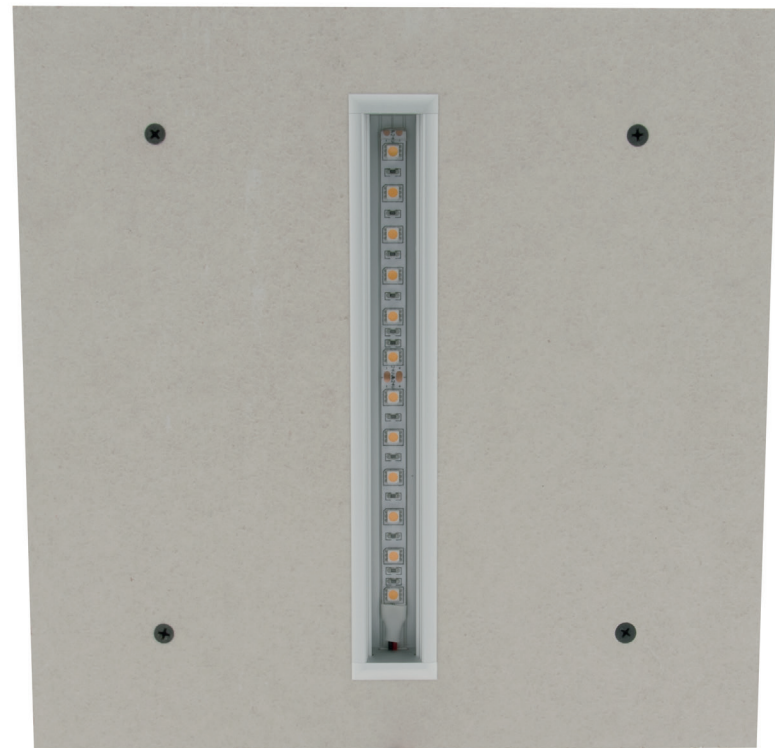
The individual steps using the TBI profile as an example....

AUTLED ····

6. Gluing the flexstrip in place

Before you start gluing in the LED flexstrip, make sure that the profile surface where the LED flexstrip is glued in is free of dust and grease.
If profiles are to be powder-coated, it is imperative that they are masked off at the point where the LED flex strip is to be bonded before coating, as the adhesive tape will not adhere to the surface of the powder coating in the long term.
Guide the the connection cable through the opening of the end cap or, if the profile has been milled out on the back, through the opening of the milling. Now completely remove the red protective film from the back of the LED flex strip. Make sure that no residues of the protective film remain on the LED flex strip. Glue the flex strip in the centre of the profile, using only clean fingers and no pointed or sharp tools that could damage the LEDs.

The individual steps using the TBI profile as an example....

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7. Connecting the LED flex strip to the power supply unit and inserting the various covers

Connect the connection cable of the LED flex strip to the appropriate power supply unit or controller and place the desired cover onto the aluminium profile and press it into the profile until it clicks into place.

Please note that if you use low profiles, such as the LBU profile, the LED flex strip must be positioned exactly in the centre of the profile and there must be enough space for the cover to snap into place, otherwise the cover cannot be inserted properly and it could come loose from the profile.

If the power supply units for larger profiles such as the MFI or SLT profile are installed in the profile and not externally, the profiles must be earthed throughout, as the 230V cable is inserted into the profile and from a legal point of view the anodised layer does not represent sufficient protective insulation.
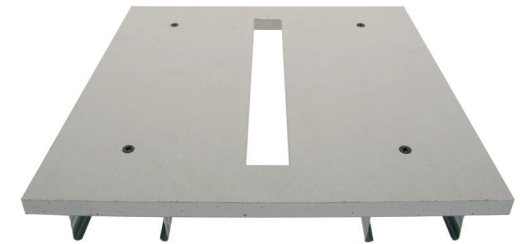
Summary

AUTLED
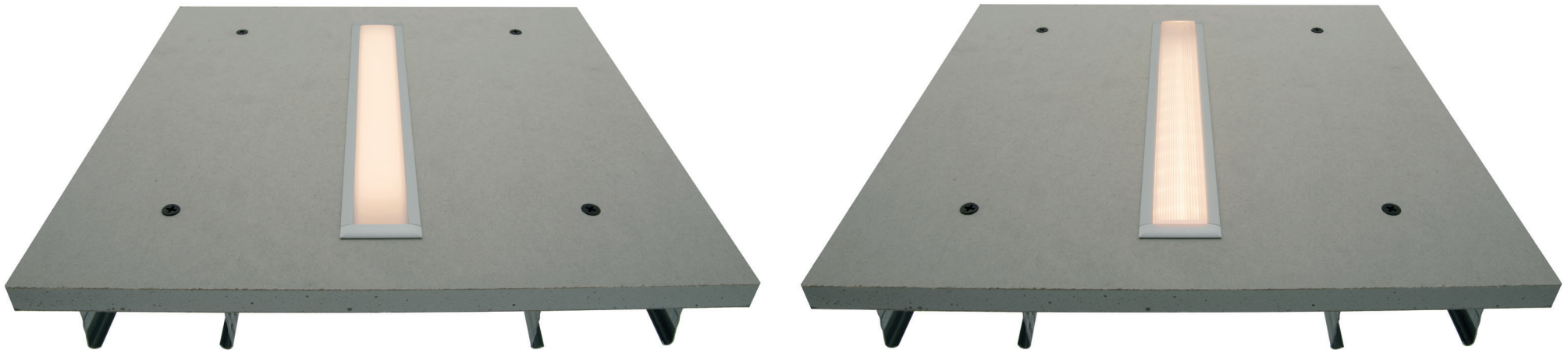
1. Cutting the profile and cover to length

2. Cutting out the plasterboard

2. Cutting out the plasterboard wall
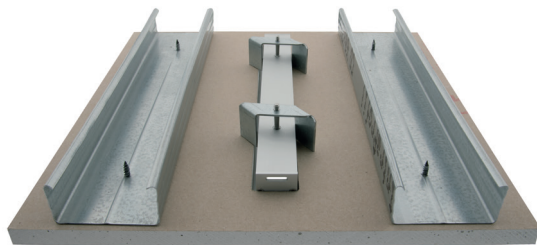

3. Mounting holes (countersunk screws)

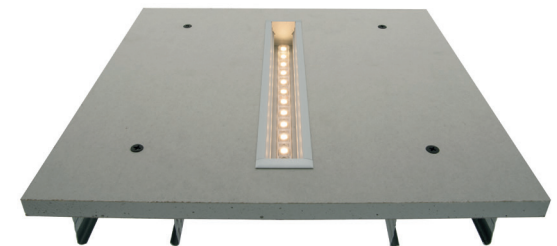**4. Mounting end caps and mounting brackets**

4. Turning the mounting brackets

5. Tightening the mounting bracket

6. Gluing in the flex strip

7. Connection to the power supply unit