

ELIAH

LED ceiling light with integrated heating



 Instructions

Operating manual | en

Foreword

Thank you for choosing a high-quality product made in Germany. It is essential that you read all of the points in this operating manual carefully.

If, for any reason, you are not satisfied, please contact our support team: service@liquidbeam.de

We hope you enjoy using ELIAH. Your Liquidbeam team.

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1 Notes on the operating manual



WARNING

Warning of electrical voltage

This symbol indicates that there is a danger to life and health of persons due to electrical voltage.



WARNING

Warning of hot surfaces

This symbol indicates that there is a danger to life and health of persons due to hot surfaces.



WARNING

Warning of hand injuries

This symbol indicates that there is a risk of hand injuries.



WARNING

This signal word indicates a hazard with a medium degree of risk which, if not avoided, could result in death or serious injury.



ATTENTION

This signal word indicates a hazard with a low degree of risk which, if not avoided, could result in a minor or moderate injury.



NOTE

This signal word indicates important information (e.g. about damage to property), but does not indicate a hazard.

2 Safety

Please read these instructions carefully before commissioning/using the unit and always keep the instructions in the immediate vicinity of the installation site!

2.1 Intended use

The unit is suitable for the lighting and customised heating of rooms in private homes. The unit must be installed horizontally on a non-flammable ceiling and must be connected to a suitable electrical installation.



WARNING

Warning of electrical voltage

Never insert metal objects into the unit. Never touch the unit with damp or wet hands.



WARNING

Never touch the unit around the air outlet or air inlet when it is in operation. There is a burn risk in the vicinity of the air outlet.



ATTENTION

ELIAH may only be used if at least 4 A, 6 A or 10 A current can be drawn from the lighting installation at 230 V. Otherwise, there will not be sufficient power to supply the unit's heating function and the fuse will blow. Use the unit on a secured circuit only.

**WARNING**

The unit consists of high-quality plastics, most of which comply with the highest fire protection class. The unit must not be installed or operated directly on or near highly flammable surfaces. A horizontal distance of at least 100 cm must therefore be maintained from highly flammable materials (e.g. curtains). The unit must not be operated underneath highly flammable materials. The unit may only be operated if it is mounted horizontally.

**ATTENTION**

The unit is controlled by a microprocessor, which monitors compliance with the functional parameters. If, however, a defect occurs that cannot be remedied by restarting the unit, shut down the unit immediately. In the case of smoke emissions or likewise, shut down the unit immediately.

**WARNING**

Strong magnetic forces are at play when the unit is inserted into the mounting tray. Hold the unit in such a way that you do not pinch your fingers.

**WARNING**

In heating mode the air outlet gets hot. Do not touch the unit during or after operation. Make sure the installation height is at least 1.8 metres above the floor.

3 Unit information and maintenance

3.1 Unit description

ELIAH is a clever, energy-saving solution when heating is required in addition to lighting. Ideal for rooms that are used infrequently and have limited heating requirements.

Bathrooms, children's rooms, kitchens, cellars, hobby rooms, attics, guest rooms, guest toilets, rehearsal rooms, garages, garden sheds, conservatories, holiday apartments, clubhouses and more.

This product is not suitable as a main heating unit.

3.2 Diagram of unit

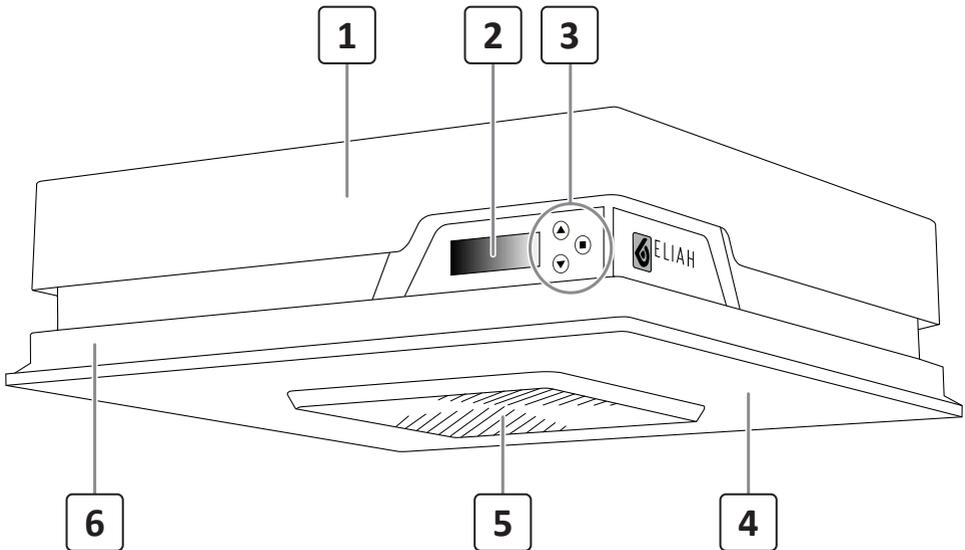


Fig.1: ELIAH - View of the housing

- | | | | |
|---|---------------|---|------------------------|
| 1 | Mounting tray | 4 | Light emitting surface |
| 2 | Display | 5 | Air outlet |
| 3 | Switch | 6 | Housing |

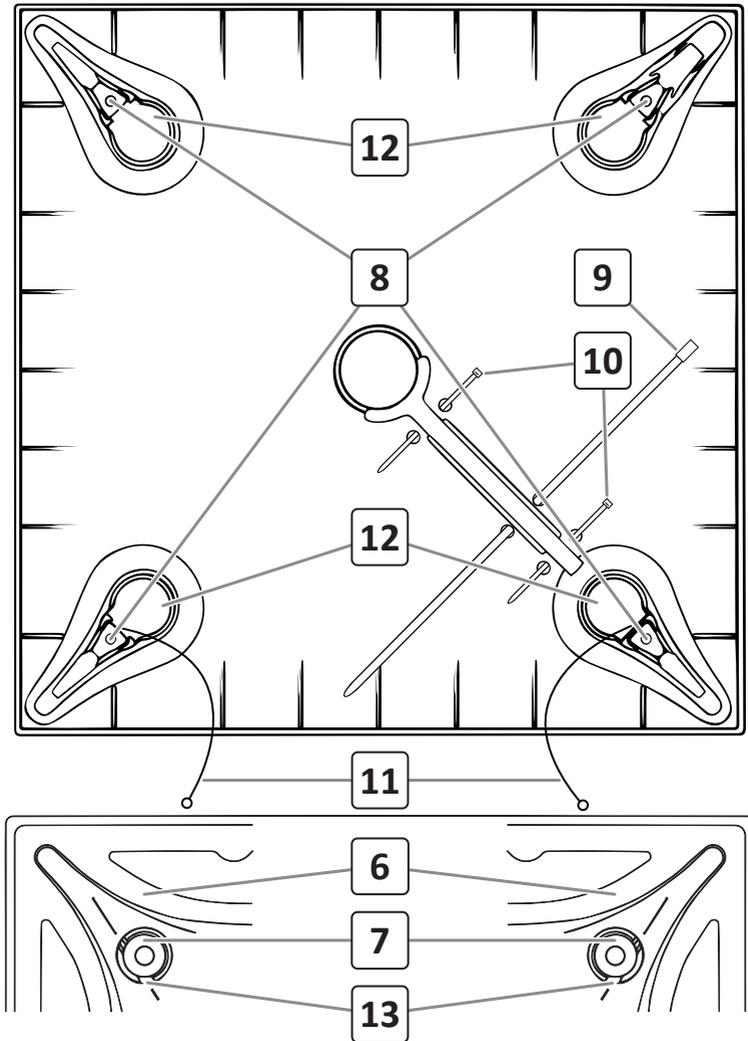


Fig.2: ELIAH - View of mounting tray and rear section of housing

- | | |
|--|---|
| 6 Housing | 10 Cable ties |
| 7 Magnets | 11 Installation cords |
| 8 Fixing holes for mounting | 12 Magnet supports |
| 9 Fall protection
(stainless steel cable ties) | 13 Marking for installation cord |

3.3 Care instructions

3.3.1 Plastic housing

For maintenance, use a soft, lightly dampened cloth only. Do not use any other cleaning agents or detergents. This will prevent discolouration of the housing material.

3.3.2 Heating unit

The unit is equipped with a durable fan and a high-quality resistance heater. Small dust deposits may form in particularly dusty environments. Only clean the unit if you notice unpleasant odours.



WARNING

Warning of electrical voltage

Before cleaning, disconnect the unit from the power supply at the fuse box. Switching off the unit at the light switch will not suffice.

Carefully vacuum the air inlet and the air outlet with the vacuum cleaner. Never use metal objects and never touch the fan wheel or the resistance heater with the vacuum cleaner attachment. If necessary, compressed air can also be used. Ensure that the unit is cooled down before using flammable compressed air sprays and then ventilate the unit sufficiently before putting it back into operation.

4 Assembly and installation

4.1 Scope of delivery

- 1 x ELIAH
- 1 x instructions
- 1 x mounting kit

4.2 Unpacking

1. Place the box on a stable surface.
2. Open the box carefully. Do not use a knife to cut the tape. Instead, use a short blade with a maximum depth of 6 mm to avoid damaging the unit housing.
3. Remove the operating manual and mounting accessories.



NOTE

The enclosed screws and rawlplugs are suitable for concrete ceilings. For other types of ceiling, use appropriate mounting material.

4. Carefully lift the unit out of the packaging and place it onto a stable table. Carefully remove the transport film from the unit.
5. Remove the mounting tray from the unit by lifting the tray up on one side and supporting the bottom of the unit at the corners. Remove the foam transport securing device located above the fan motor.



ATTENTION

Do not use the light emitting surface (4) to support the underside of the unit as it is glued to the housing.

4.3 Installation



ATTENTION

Installation may only be carried out by persons with appropriate expertise in electrical installation. The unit may only be installed on horizontal ceilings and not near – and under no circumstances above – highly flammable materials. The unit must be installed at least 1.8 metres above the floor.

1. Before installation, disconnect the cables from the power supply and, using a suitable measuring device, check that there is no voltage present before starting installation.
 2. Use the mounting tray to mark the drill holes, if necessary. Do not use the mounting tray itself as a drilling template and make sure that the electrical installation is positioned in the middle above the middle opening.
-



NOTE

When installing the mounting tray, make sure that the display (identifiable by the tray's bevelled corner) is visible from where the light switch is located. This will ensure optimum operability of the unit. Install the mounting tray on the ceiling with the power supply disconnected. The installation must be level.

3. Using a 6 mm drill bit, drill the holes precisely and to the correct depth at the marked mounting holes. Carefully tap in the rawlplugs.
4. Prepare the fall protection and cable guide. To do this, insert a plastic cable tie through each of the outer pairs of holes, so that you can close it from below later. Insert a stainless steel cable tie through the middle pair of holes so that you can close it from below later.
5. Install the mounting tray and tighten the 4 screws by hand. Tighten the screws until the corresponding corner of the mounting tray rests firmly on the ceiling.

**ATTENTION**

Never use countersunk screws. These can cause the mounting tray to break.

6. Hook the unit into the two installation cords (11). Insert the thin part of the mounting aid from the outside under the magnets (7) marked with lines. Carefully pull the mounting aids upwards. Make sure that the pegs are no longer visible. This is the only way to secure the unit properly.
7. With the unit hanging securely on the mounting tray, use the terminals to connect ELIAH to the electrical installation. To do this, connect the blue neutral conductor, the brown conductor and the yellow-green protective conductor to the corresponding conductors of the installation. According to the standard, it must also be possible to disconnect all poles of the unit from the mains supply on the installation side.
8. Then stow the installation so that it is firmly attached to the mounting tray. Use the mounting tray's mechanical fixtures as well as cable ties. The 3 terminals can be stowed away in the middle of the mounting tray. The cables are stowed in the slot of the mounting tray. Secure the installation into position with the two outer cable ties. Make absolutely sure that there are no cables or terminals protruding from the middle of the mounting tray. If the cables of the ceiling installation are very long, stow the terminals in the slot of the mounting tray.

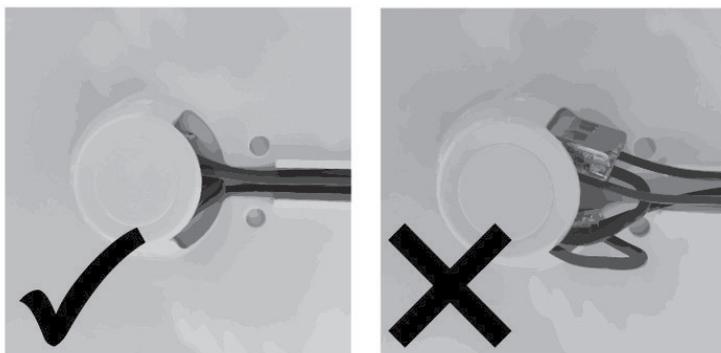


Fig.3: ELIAH - correct storage of the electrical installation

**WARNING**

Make absolutely sure that the protective conductor (PE) is properly connected. The unit must not be used if no protective conductor exists. The unit must also be installed in such a way that all poles can be disconnected from the mains voltage.

9. Close the stainless steel cable ties as fall protection. The cable tie must be inserted through the middle pair of holes in the mounting tray as well as through the tab of the stainless steel plate on the top of the housing. The end of the cable tie must protrude at least 50 mm from the terminal area.

**WARNING**

The fall protection must be closed.

10. Carefully insert the unit into the mounting tray. Make sure that both safety cords disappear into the mounting tray. Check the magnets fit correctly by checking the existing joint between the housing and the mounting tray in the 3 visible corners and by pulling vertically on the housing. The gap at (14) must not be larger than 1 mm at any of the visible corners.

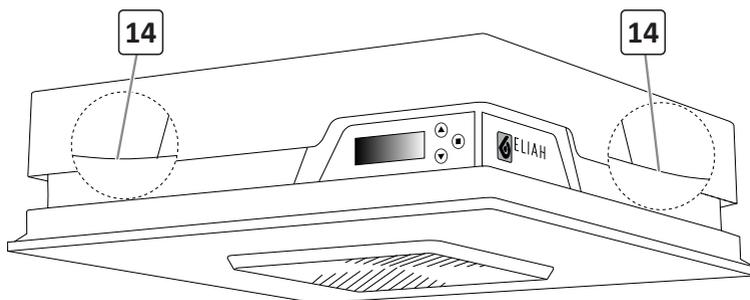


Fig.4: ELIAH - Checking that the housing is seated in the mounting tray correctly

**ATTENTION**

Please check that there are no electrical installations in the area of the motor bracket (see fig. 3). Otherwise, the motor bracket may become damaged or destroyed when the unit is inserted into the mounting tray.

5 Operation

5.1 Switching on the unit for the first time

When the unit is switched on for the first time, the maximum power consumption must be set to match the electrical installation.



NOTE

The maximum power consumption can be adjusted via the global settings (see page 15).

5.2 Operating the unit via the light switch

The unit is operated based on individual programme selection using the light switch. To do this, the unit is switched on at the light switch like any ceiling light. After switching on, the display briefly shows the current programme. If you want to switch to a different programme, switch the light off briefly and then on again within five seconds. The unit then switches to the next programme. When the maximum number of programmes has been reached, you will return to the first programme.

You can adjust the number of programmes used and their settings using the programme settings (see page 15).

5.3 Configuring the unit and menus

The unit has various settings which can be adjusted as required using the input keys on the ready-to-operate unit.

In the three menus, use the arrow keys   to select an option and confirm the selection with .

If values can be edited, they will flash. When you finish editing the value, reconfirm with .

You can then continue to navigate in the menu. You can leave the current menu level by selecting the abbreviation for EXIT . Alternatively, you can wait until the menu closes automatically after 120 seconds without input.



NOTE

The values are only saved when the menu is closed manually or automatically. The display then shows **End**.

5.3.1 Programme settings

Open the first menu by pressing the  button.

The first menu allows you to adjust the available programmes and decide how many programmes you want to use. You can also set a temporary temperature offset. Here you will also find the settings for the two additional programmes, hair dryer and temperature monitor (see page 16).

Programme default values

	Brightness in %	Target temperature	Heating function duration
Programme 1	70	-	-
Programme 2	70	23°C	120 min
Programme 3	20	-	-

5.3.2 Global settings

Open the second menu by pressing the  button. The second menu allows you to edit the **global settings** (see page 18).

5.3.3 Timer settings

Open the third menu by pressing the  button. To do this, the unit must be connected via a button (normally closed) and the button type must be selected in the global settings.

The third menu allows you to set the **real-time clock** and to programme the **weekly timer** (see page 20). For this application, it is absolutely essential to connect the unit via a button (normally closed), otherwise the set time of the real-time clock will be lost. Please consult an electrician about this.

Programme settings menu ▲	
no	Number of standard programmes Number of programmes that can be selected via the light switch.
F	Focus 50 - 100: Prioritising between fast heating “100” and low volume “50” influences the maximum heat output accordingly. Once the target temperature has been reached, the volume automatically drops.
EO	Temperature compensation The temperature directly under the ceiling is a few degrees Celsius higher than the temperature in the room during heating. This menu value can be used to set the compensation in degrees Celsius. The default is 3 degrees.
OP	Duration of temperature compensation If ELIAH heats the room over a long period of time, the temperature compensation is no longer important because the resulting temperature distribution is more homogeneous. The compensation can therefore only be used to a limited extent. If the value is 0, the temperature compensation from the previous menu item is applied permanently; if the value is greater than 0, it is only applied for the set period duration in minutes. The default is 10 minutes.
Pr	Programmes 1 to 8 Submenu for programmes 1-8
→ L	LED brightness for the respective programme with preview
→ E	Temperature and/or target temperature of the room in degrees Celsius
→ P	Duration of heating function After this time the heating function switches off. Adjustable from 5 minutes to 540 minutes (9 hrs).
→ C	Recirculation If a value greater than zero is selected here, the unit will not heat the room, but will operate in recirculation mode only. This is ideal for rooms with high ceilings, for example, to circulate the air during the heating period.

Programme settings menu ▲	
HAI r	Hair dryer programme submenu
→ H	on/off When “on”, the hair dryer can be accessed via the light switch.
→ P	Period Duration of hair dryer function
→ i	Intensity of the programme
→ L	Brightness of the light for the hair dryer programme
Grd	Temperature monitor submenu
→ G	on /off When “on”, the temperature monitor can also be actively selected as a programme. This setting does not activate the temperature monitor function.
→ t	Target temperature of the temperature monitor. The temperature monitor is active as soon as a value greater than “0” is set here. It then starts at the end of a programme period or after it is actively selected via the light switch.
→ P	Maximum period of temperature monitoring. This value determines the measuring interval. For large or poorly insulated rooms, we recommend a small measuring interval of less than 40 minutes. The interval duration halves when the monitor reaches its target temperature.
→ i	Intensity 70 / 80 / 90 / 100 Intensity of temperature monitor.
→ L	Brightness of light for the temperature monitor programme. Determines the brightness of the light while the unit is operating as a temperature monitor. If the light timer is activated in the global settings, the brightness for the standard programme can be set here for 10 minutes after the heating function has expired.

Global settings menu

P	<p>Maximum power consumption</p> <p>The maximum power consumption of the unit is set in per cent. Operation at 100% is highly recommended for heating the room quickly. Reducing the heat output at this stage does not affect the noise emissions.</p> <ul style="list-style-type: none"> ▪ “0” = 0% heat output ▪ “40” = 40% heat output < 4 amperes ▪ “60” = 60% heat output < 6 amperes ▪ “100” = 100% heat output < 10 amperes.
St	<p>Switch or button selection</p> <p>Use this setting to indicate if you are using the unit with a button (normally closed). This corresponds to the number “1”. The operating mode changes accordingly, with the programme increasing only if you press the button again within 5 seconds of switching on. If you press the button after 5 seconds, the unit switches to standby mode. When using the unit with a light switch, this menu item remains at “0”.</p>
Of	<p>Start selection</p> <p>Select whether the unit should start with the first programme “Otof” or with the last selected programme “Oton”.</p>
Lt	<p>Light timer</p> <p>This function enables the light to be automatically switched off or dimmed (“Lton”) after a pre-set time. To do this, the light timer pairs the light to the timers of the individual programmes (see page 16: Duration of heating function) so that 10 minutes after the timer has expired, the light assumes the brightness level which has been set under the temperature monitor. For example, this may be no light or a dimmed light.</p>

Global settings menu **Ed****Sensitivity of open window detection**

Use this setting to set the sensitivity of open window detection. If the room temperature drops during the heating phase, the unit assumes a window is open and deactivates the heating function. The unit's display then shows "OPEN". The heating function must then be restarted manually. The higher this value is, the less sensitive the unit is to falling temperatures.

di**Slow increase in the lighting**

Because of the high illuminance of the unit, the rate of increase of the lighting can be specified here in seconds.

ES**Advanced switching**

To switch between the individual programmes, ten-fold switching is required for "on". This setting is suitable for the hotel and restaurant industry, especially when combined with the start selection and the last selected programme.

Lo**Menu lock**

After entering a 10-digit code, the menu lock can be activated ("Loon"). Subsequent changes to the configuration cannot be made without a code. This setting is suitable for the hotel and restaurant industry. The code is available from the manufacturer.

Menu timer settings 	
SET	Setting day of week / time of day Set the current day of the week ("d1" to "d7"), i.e. Mon to Sun, and the current time in 24-hour format XX - - for the hours and - - XX for the minutes. The time is then displayed.
F	Focus 50 - 100 Timer off or prioritising to low volume ("50") or fast heating ("100") influences the maximum heat output accordingly. Once the target temperature has been reached, the volume automatically drops with each possible prioritisation. This setting is also limited by the maximum allowed power consumption.
ALL	All timers off/on Separate submenu. Set whether you want to use the timer functionality ("on") or not ("off").
DEL	Delete all timers Separate submenu. For "yes", press twice until "yes" stops flashing.
	Set the timer from here
EASY	Easy timer
d 1-5	The first five days of the week (group programming)
d6-7	Weekend (group programming)
d 1-7	Every day of the week (group programming)
d 1	Monday
d2	Tuesday
d3	Wednesday
d4	Thursday
d5	Friday
d6	Saturday
d7	Sunday

Menu timer settings 	
	First submenu Timer selection, every day of the week according to the selection of the day(s) of the week.
→ <input type="text" value="E 1"/>	First timer option
→ <input type="text" value="E 2"/>	Second timer option
→ <input type="text" value="E 3"/>	Third timer option
	Second submenu Timer settings for every day of the week and associated timers
→ <input type="text" value="t"/>	Time at which the room is to be heated up. The self-learning algorithm selects the start of the heating function itself depending on the temperature difference and the room volume. First set the hours and then the minutes. (Cannot be adjusted for Easy timer)
→ <input type="text" value="t"/>	Temperature - Target temperature (Target temperature to be reached)
→ <input type="text" value="P"/>	Periods - Duration of heating function after reaching target temperature. Adjustable from 0 min to 540 min

3 timers are available for each day of the week. The brightness, target temperature and duration of the heating function can be set for each timer. The self-learning algorithm ensures the room is warm at the desired time. An additional overrun can be set with the period.

The **Easy Timer** allows only one programme per day and for all days of the week, but can be programmed via the light switch once activated in the menu.

To do this, go to the Timer menu and then select EASY. Set the “E” to “on” and set the temperature “t” and the duration of the heating function “P”. At the desired time, scroll through the programmes at the light switch until “E of” appears. Now wait 5 seconds until the display changes to “E on”. The timer now ensures that the unit has already warmed up the room at this time on all subsequent days. If you want to deactivate the Easy Timer, select “E on” via the light switch and wait until “E of” appears after 5 seconds. When using the Easy Timer, it is not necessary to set the real-time clock.

6 Errors and faults



WARNING

Warning of electrical voltage

Actions that require the housing to be opened may only be carried out by authorised specialists.

The unit was tested during production to ensure perfect functioning. However, should a malfunction occur, please check the unit according to the following list.

Error	Troubleshooting or remedial action
The unit is not working	<ul style="list-style-type: none"> ▪ Check the power supply. ▪ Check the mains connection is suitable for the required power consumption. ▪ Check the on-site mains fuse. ▪ Check the light switch.
The light is not working	<ul style="list-style-type: none"> ▪ Check whether the light is activated in the selected programme.
The unit is switched on, the fan is blowing, but the unit is not heating.	<ul style="list-style-type: none"> ▪ Check whether the recirculation function is activated in the selected programme. ▪ Check whether the target temperature in the selected programme is below room temperature.
The fan is not working	<ul style="list-style-type: none"> ▪ Check whether the transport securing device has been removed; this is a piece of foam above the fan motor. ▪ Check that the heating function is activated in the selected programme, as well as the period duration. The heating duration may have already expired.

Error	Troubleshooting or remedial action
The air flow is reduced	<ul style="list-style-type: none"> ▪ The air flow is automatically reduced when the target temperature is first reached. ▪ Check that you have left sufficient space around the unit for the air intake and that no other objects are able to interfere with the air intake. ▪ Check the set focus value
The heating coils are visibly glowing or there is a distinct burning smell coming from the unit.	<ul style="list-style-type: none"> ▪ Shut down the unit immediately and disconnect all poles from the mains supply.
Is your unit still not working properly after carrying out all the checks?	<ul style="list-style-type: none"> ▪ Contact customer service or take the unit to an authorised electrician or to Liquidbeam for repair. ▪ To do so, please contact us by email at: service@liquidbeam.de ▪ For further contact details and information on our services, please visit our website: www.liquidbeam.de

7 Technical data

Technical description	Value and unit, if applicable
Conforms to RoHS and REACH	yes
Power supply	
Supply network	220-240 V AC, 50-60 Hz
Max. current consumption at 230 V	4 A, 6 A, 10 A, adjustable
Max. power consumption at 230 V	2244 W
Materials and technology	
accuracy, temperature measurement	± 1°C
Max. target temperature of heating	35°C
Annual room heating efficiency	> 38.8%
Technology of fan motor	Brushless DC motor
Outer housing material	Polycarbonate
Housing colour	White, RAL 9003
Lamps	LEDs, replaceable by manufacturer
Temperature monitoring	LEDs and control
Service life of LEDs	> 50 000 h
Colour temperature, according to Index ELIAH-SQ370-AA-XX-XX	= 100 * AA Kelvin
Switching cycles	> 25 000
Start-up/warm-up time of lighting	Instant full luminous flux
Configurable luminous flux	1% to 100%
Energy efficiency	A+ or better
Beam angle	110 degrees
Light switch	> 10 A, no dimmer
Colour rendering Ra	> 90 (typ. 92)
Power factor	> 0.9
Accent lighting	Unsuitable
Colour consistency	<6 SDCM
Unit emissions	
Average noise emission	< 50 dBA
Maximum noise emission	< 60 dBA

Technical description	Value and unit, if applicable
Maximum heat output	approx. 2000 W
Maximum air flow rate	approx. 230 m ³ /h.
Maximum useful luminous flux	> 3400 lm
Physical values of the unit	
Unit dimensions HxWxD	115 x 370 x 370 [mm]
Cardboard box dimensions	420 x 400 x 150 [mm]
Unit weight	4.1 kg
Total shipping weight	5.2 kg
Conditions of use	
Housing protection class for ceiling mounting	IP21
Storage temperature	-20°C to 45°C
Operating temperature	-20°C to 45°C
Humidity	95% relative, non-condensing
Sprinkling from above	not permitted!
Minimum distance to walls	600 mm
Horizontal distance to highly flammable materials	1 m
Vertical distance to highly flammable materials	not permitted!

Required information regarding electrical single room heaters

Parameters	Value / specification
Model	ELIAH –SQ-370-XX-XX-00
Heat output	
Nominal heat output P _{nom}	approx. 2 kW
Minimum heat output (reference point) P _{min}	approx. 0.2 kW
Maximum continuous heat output P _{max,c}	approx. 2 kW

Auxiliary power consumption	
For nominal heat output $e_{l_{max}}$	✗
For minimum heat output $e_{l_{min}}$	✗
In standby mode $e_{l_{sb}}$	≤0.9 W
Type of heat supply control	
Manual control of heat supply with integrated thermostat	✗
Manual control of heat supply with room and/or outside temperature feedback	✗
Electronic control of heat supply with room and/or outside temperature feedback	✓
Heat dissipation with fan assistance	✓
Type of heat output/room temperature control	
Single-level heat output, no room temperature control	✗
Two or more manually adjustable levels, no room temperature control	✗
Room temperature control with mechanical thermostat	✗
Electronic room temperature control	✗
Electronic room temperature control and time of day control	✗
Electronic room temperature control and day of week control	✓
Other control options	
Room temperature control with presence detection	✗
Room temperature control with open window detection	✓
Remote control option	✗
Adaptive control for start of heating	✓
Operating time limit	✓
Black bulb sensor	✗

- ✓ present / adjustable
✗ not present / not adjustable

Contact details:

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8 Disposal



The crossed-out dustbin symbol on waste electrical and electronic equipment (WEEE) indicates that the equipment must not be disposed of with household waste at the end of its service life. Collection points for returning WEEE free of charge are available in your neighbourhood. You can obtain the addresses from your city council or local authority.

By collecting WEEE separately, the aim is to enable the re-use, recycling or other forms of recovery of WEEE and to prevent negative effects on the environment and human health from the disposal of hazardous substances which may be present in the equipment.



ATTENTION - Plastic bags can be hazardous. To avoid the risk of suffocation, please keep the packaging bags out of reach of babies and children.



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