

INSTRUCTION MANUAL

line condensing halogen line heater Series

Model:LHW- 55/f25/L280/H18/200V-5kW

Thank you very much for purchasing our company's Power Supply for Halogen Spot Heater.
Please be sure to read this manual prior to the usage in order to use this product safely.

· Halogen line heater specifications	P1
· Safety and usage precautions	P2
· Halogen lamp replacement procedure	P3 ~ P4
· Halogen line heater product drawing	P5

FINTECH Co., Ltd.

1-7-2 Fujimigaoka Nishi-ku, Kobe-shi, Hyogo

651-2214 Japan

TEL +81-78-202-5708

FAX +81-50-3156-7599

URL <http://www.fintech.co.jp>

Prepared in June, 2005

Halogen line heater unit specifications

1 . Introduction

Thank you for choosing a halogen line heater unit.
Please read and observe the following items carefully to ensure safe use.

2 . Model LHW-55/f 25/L280/H18/200V-5kW

3 . Specifications Line heater unit specifications

full length	Mirror length	Mirror width	Irradiation distance	Irradiation width	cooling method	Cooling water flow rate	Body material	mass
367mm	280mm	55mm	25mm	8 ~ 9mm	water cooling and air cooling	2.5 ~ 5L/min(Indication)	Aluminum	2.4kg

Mass excludes mirror protection glass and bracket weight.

Halogen lamp specifications

ating and capacity	Color temperature	Average life	Power tolerance	Maximum temperature
200V-5000W	3100k	Approximate500h	±8%	1000 ~ 1200

The average life varies depending on the usage conditions.

If the voltage is lowered by 15% or more from the rating, the lamp life will be extended more than twice the indicated average life.

The maximum temperature is measured under our specific conditions.

4 . How to use

Power supply

· Use a power supply with a slow start function.] If an inrush current flows, it may shorten the life.

· Connect the heater lead wire to the power terminal. **(The lamp rating is AC200V)**

· If you have our control power supply HLC-HN / 10, connect it to the M5 output terminal below the AC lamp display on the rear panel.

Installation

· Use a screw hole (4-M6 depth 10) beside the cooling water fitting (Φ6) to position and install it so that it matches the irradiation distance.

Cooling (water cooling of the mirror body and air cooling of the lamp end)

· **Connect a water flow tube to the Φ6 fitting and check that the cooling water is flowing.**

· Use pure water or PH5-8 water for the quality of the cooling water.

· Please use so that the temperature of the cooling water can be maintained between 20 and 23 . (Chiller is recommended for continuous use)

· If you do not use the product for a long time, drain the water from the line heater (it may cause impurities and clog the water).

· There is a joint that allows piping of an outer diameter Φ4 tube beside the hole through which the power line of each terminal box is passed.

Supply 7 to 10 L / min of air here. Confirm these two points before starting to use.

Lamp replacement/⚠ (Note)

· Refer to P3-P4 halogen lamp, replacement procedure.

Lighting / maintenance

· Make sure that the mirror or mirror protection glass is clean before the lamp is lit.

Wipe it off regularly with a soft cloth soaked in water-soluble alcohol.

· Adjust the temperature by adjusting the applied voltage.

· When adjusting the output control, we recommend the continuous control method instead of the ON / OFF control.

· If the voltage exceeds the rated voltage, the lamp life will be shortened. Use below the rated voltage.

Using the lamp with the applied voltage 15% or more lower than the rated value will prolong the lamp life.

5 . Note ⚠

· The halogen line heater unit itself gets hot, so cool it well while it is lit or after it is turned off.

Do not touch the line heater during heating.

· **Make sure that the voltage applied to the power supply is the same as the lamp voltage.**

6 . Warranty

If a defect due to manufacturing occurs within one year after delivery, we will repair or replace it free of charge.

However, products manufactured using line heaters at your company and those caused by the following are excluded.

Failure or damage due to misuse, modification or unauthorized repair

Failure or damage due to moving, dropping, transportation, etc. after installation

Failure or damage due to fire, earthquake, flood, lightning, other natural disasters, pollution, abnormal voltage, or other external factors

Replacement of consumable parts (lamp, mirror protection glass, etc.)

[Safety precautions]

Warning

- Since halogen light is hot, do not irradiate the human body with halogen light. (Cause of burns)
- Do not bring close to or cover flammable materials such as paper or cloth. (Cause of fire)
- Be sure to turn off the power when installing, removing, or cleaning the equipment (lamp house).
(Cause of electric shock)
- The lamp is a glass product, so be careful not to damage it. (Cause of injury)
- Since the pressure inside the lamp is high, do not apply vibration or impact, or apply excessive force.
(Cause of damage or injury)
- Do not touch the glass part of the lamp with bare hands. It may break due to dirt on the grease.
(Damage, cause of injury)
- Do not touch it with bare hands during irradiation or immediately after extinguishing the light.
(Cause of burns)
- Do not change the structure of the device. (Causes of failure, electric shock, smoke, fire, etc.)
- When connecting the wires, make sure that they are not loose or disconnected.
(Causes of electric leakage, electric shock, fire, etc.)
- Be careful not to scratch the wire or insulation processing part with a blade. (Failure, cause of electric shock)

Note

- This device is for indoor use only and cannot be used outdoors. (Causes of electric leakage, electric shock, fire, etc.)
- Do not use in corrosive atmospheres or dusty places. (Cause of performance degradation)
- Do not touch the glass part of the lamp with bare hands. If it is lit while dirty, it may be devitrified.
(Cause of damage and short life)
- Do not use the product where it is exposed to water drops or high humidity. (Cause of damage)
- Do not use in flammable atmospheres such as thinner. (Causes of fire and explosion)
- Do not touch the lamp or light bulb while it is lit or immediately after it is turned off. (Cause of burns)
- Do not stare at the lamp that is lit up for a long time. (Causes of eye pain and visual impairment)
- We recommend that you replace the lamp after the rated life has passed. (Rarely cause of damage)
- Do not use this product on the mirror or lamp that may become dirty during heating.
However, in the case with mirror protection glass, it can be handled by regularly cleaning and replacing the mirror protection glass. (Cause of damage or performance degradation)
- Do not energize when cooling water is not flowing. (Causes of burns, fire and damage due to heat generation)
- Use cables and cables in a slacked state and do not pull them.
(Causes of accidents such as heat generation due to disconnection or poor contact)
- Be careful not to damage the wire with a knife. (Causes of wire breakage)
- If not used for a long time, please energize regularly. (Causes of electrical fire due to poor insulation due to moisture)

[Precautions for use]

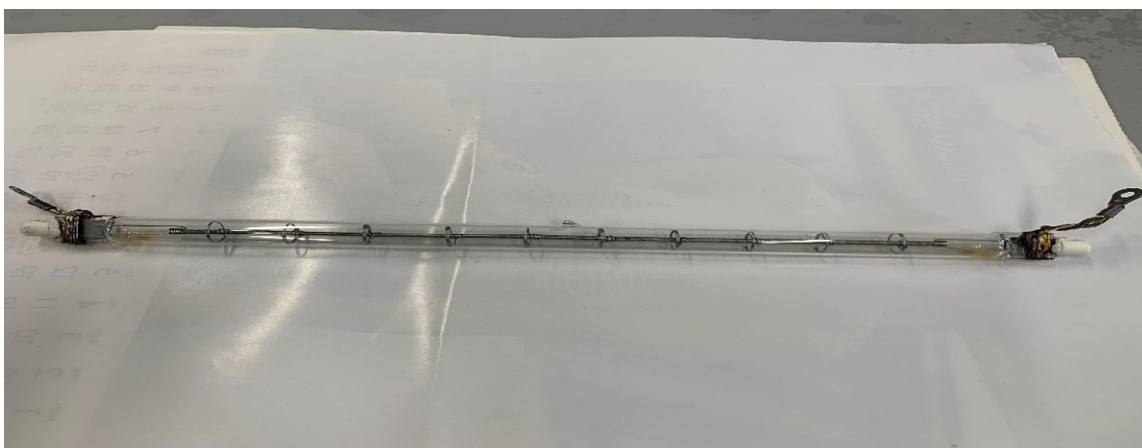
- Use this device in the ambient temperature range of 0 to 40 ° C.
- Do not apply shock or vibration to the lamp, especially during lighting.
- Check the inside of the lamp regularly according to the instruction manual.
- Use at rated voltage or lower.
- Be sure to insert a fuse in the power circuit. When the heater is disconnected, a large current may flow.
- If a heater is installed in a place that is affected by heat, such as radiation, protect it with a shielding plate.

Fintech Co., Ltd.

Halogen lamp replacement procedure

Precautions before replacing the halogen lamp

- Do not hold the lamp glass with bare hands.
- Work with gloves. (Gloves such as cotton smooth are recommended)
- Halogen lamp glass may be damaged if it is touched or scratched.
- When replacing the lamp, be careful not to hit the lamp through hole in the mirror body.
- Immediately after the lamp is turned off, the line heater unit body, halogen lamp and mirror protection glass are hot. Please be sure to replace the mirror unit or halogen lamp after confirming that it is cooled.
- Replaced halogen lamps do not have + or - polarity. (Photo of halogen lamp appearance below)
- When replacing the lamp, place the mirror body on a horizontal base and follow the procedure below.



Halogen lamp replacement procedure

Turn off the power. Stop the cooling water. Remove the line heater unit from the installed device.

Remove the cooling water hose. A suitable amount of air is sent to the $\phi 6$ fitting on the line heater unit.

Remove the water remaining inside. * Be careful not to get the line heater unit wet with water.

Place it on a horizontal table where the lamp will be replaced.

Remove the left and right terminal box covers.

The terminal box is screwed in one place with M4 x 6 screws.

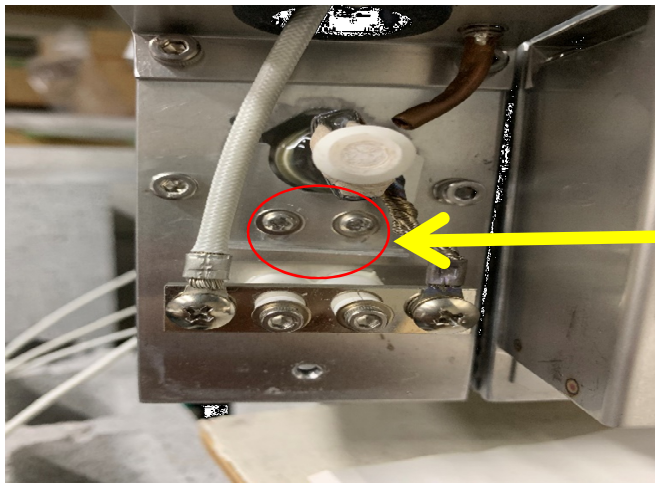


Terminal BOX appearance photo

Fintech Co., Ltd.

The terminal BOX cover is removed as shown in the photo below.

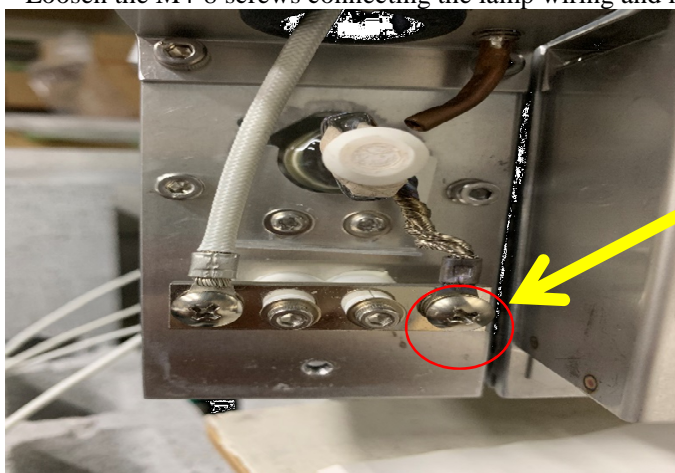
Loosen the fixing plate screws (M3-6x2) that secure the left and right lamps so that the lamps come out.



M3-6, 2 screws

Terminal BOX internal halogen lamp wiring

Loosen the M4-8 screws connecting the lamp wiring and remove the wiring.



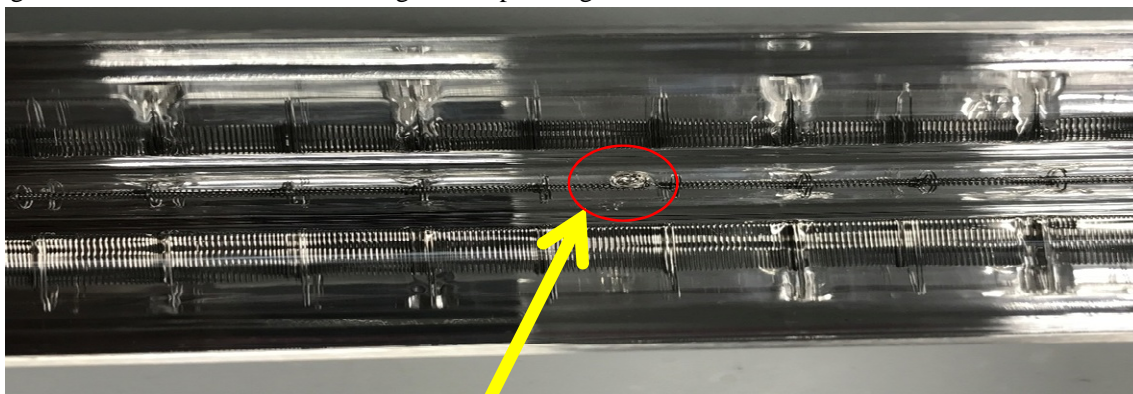
M4-8, 1 screw

Photo of the halogen lamp wiring in the terminal box

When replacing with a used lamp or a new lamp, remove the lamp from the mirror side hole or lamp fixing plate. Please be careful not to hit or scratch it.

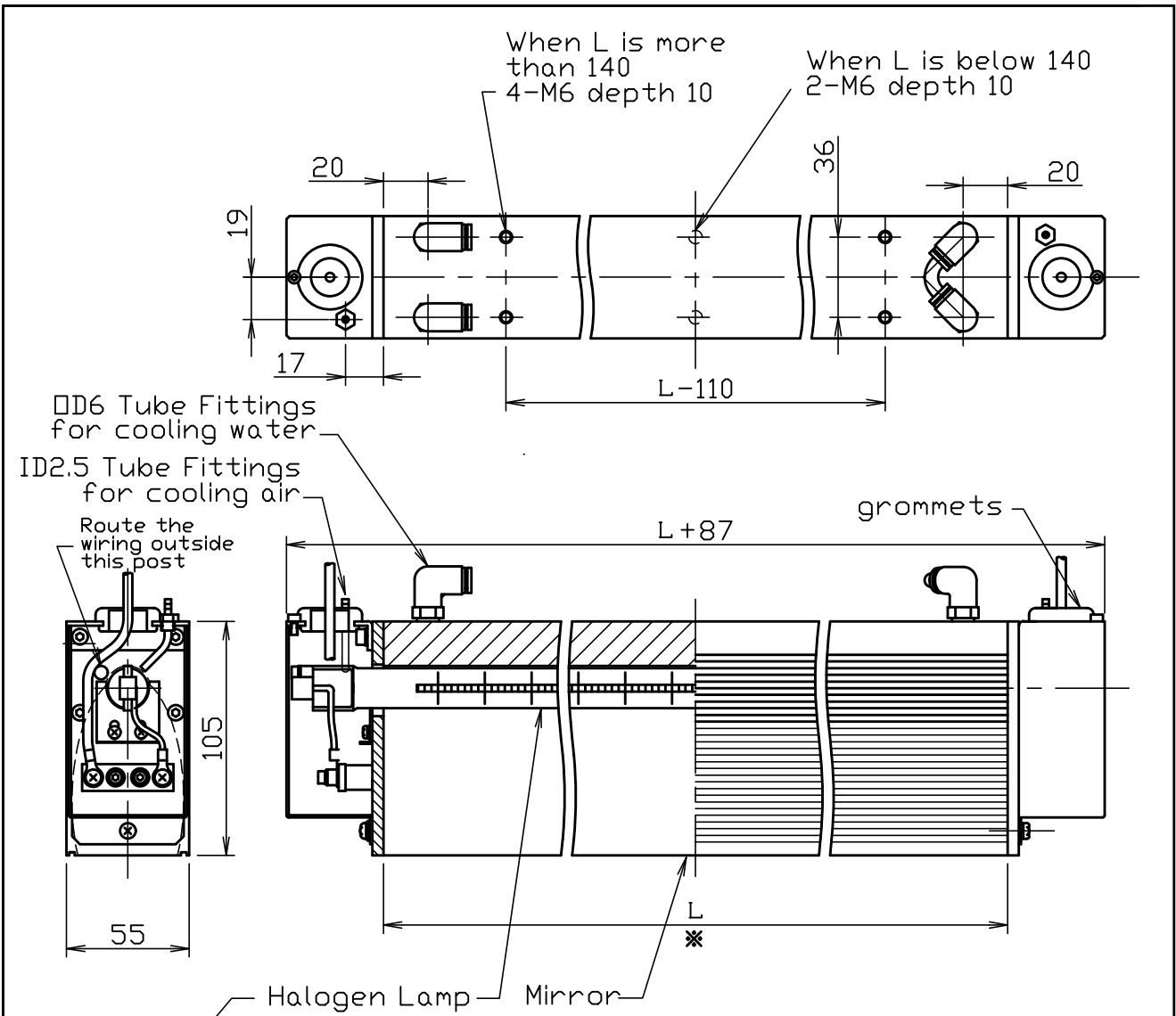
When passing a halogen lamp through the hole in the mirror body, the lead wiring part with a round terminal will be twisted. It is easier to replace if it is straightened so that there is no.

Also, make sure that the protrusion at the center of the lamp glass faces the light irradiation area before screwing the lamp wiring.



Mirror inside halogen lamp glass part protruding part

After inserting the lamp, replace the lamp according to the reverse procedure of Fintech Co., Ltd.



※ L dimension can be manufactured to any value between 100 to 2000.
 Specification method For L 280mm and 200V-5kW heater
 LHW-55/f25/L280/H18/200v-5kw/+option

Specifying options
 Reflective surface gold plated /+GP
 Front protection glass /+FG
 Connector specification /+CN
 The connector will be attached in place of the grommet of the electric wire lead out section
 Can be specified when the maximum current is below 15A

Cooling water
 0.13 gal/min (0.5 L/min) for each kW of lamp
 (Approximately 10° C increase)
 In case of 10 kW and more, the water channels have to be connected in parallel instead of looping

Cooling air
 0.35ft³/min(10L/min) x 2 places

Suitable Lamp	Lamp outer diameter ϕ 18 Max power 2kW for each 100mm of mirror length Max current 30A 6kW at 200V, 12kW at 400V, 18kW at 600V is possible
Model	LHW-55/f25/L/H18/volts-watts/+option
Name	Halogen line heater
F i n t e c h	

N01-K001c_05e

Rev	Date	Descriptions	Checked
	2019/10/04		
Date	2019/10/04	App roved	Che ckd
			Drawn jm