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INSTALLATION MANUAL

Thermolam Foil Heater Mat.

(Suitable for Laminate & Engineered Wood Floors)

Please read through these instructions carefully before you begin installing & check that you are aware of all the components required.

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SPECIFICATIONS AND DETAILS

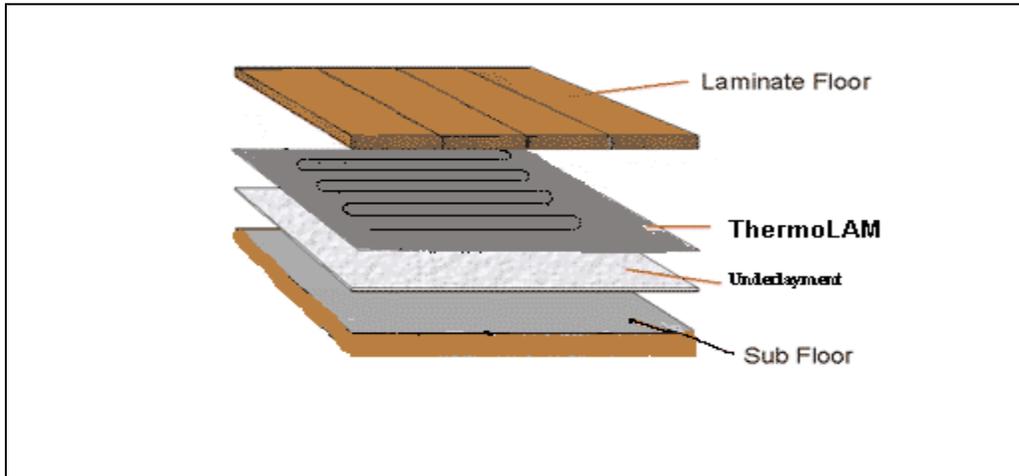
ThermoLAM Floor Heating Mat : - for laminate and engineered wood floors.

ThermoLAM is ultra thin electric radiant floor heating system primarily for use under laminate, engineered wood and glued hardwood.

Advantage of using ThermoLAM is the ease of installation and uniform heating of your laminate flooring. The special materials used makes it free from problems of 'Hot-Spots' or localized heating

CONSTRUCTION

ThermoLAM system is made with fluoropolymer insulated heating cables. These are sandwiched between two layers of specially reinforced aluminium foil. The uniform spacing of the heating elements, further backed by the aluminium foil, ensures even heat distribution. The heating element is connected to a power-supply cable, which exits the laminate mat from one corner. The power lead is a flat thin two core flexible cord, consisting of two insulated conductors with a metal sheath and an outer sheath depending on your heating requirement, ThermoLAM is available in nominal heat outputs of 80 W/m² and 140 W/m² @ 230 V. It is available in predetermined lengths with cold tail – prefabricated & tested in a carefully controlled factory environment.



These are available in a wide range of capacities and lengths to suit your requirements. The product you brought has the following information

Catalogue Reference :
Serial Number:
Mat Size :
Operating Voltage : 230v
Wattage:

PRODUCT RANGE :

Range (80W) /M² @ 230 V

Catalogue Reference No.	Length of the Mat (mtr)	Width of the Mat (mm)	Area Sq M	Resistance in Ohms	Watts (W)
LFM-T-80W/80	2	500	1.0	661	80
LFM-T-80W/120	3	500	1.5	440	120
LFM-T-80W/160	4	500	2.0	330	160
LFM-T-80W/200	5	500	2.5	265	200
LFM-T-80W/240	6	500	3.0	220	240
LFM-T-80W/280	7	500	3.5	189	280
LFM-T-80W/320	8	500	4.0	165	320
LFM-T-80W/360	9	500	4.5	147	360
LFM-T-80W/400	10	500	5.0	132	400
LFM-T-80W/480	12	500	6.0	110	480
LFM-T-80W/560	14	500	7.0	95	560
LFM-T-80W/640	16	500	8.0	83	640
LFM-T-80W/720	18	500	9.0	74	720
LFM-T-80W/800	20	500	10.0	66	800

Range (140W)/ M² @ 230 V

Catalogue Reference No.	Length of the Mat (mtr)	Width of the Mat (mm)	Area Sq M	Resistance in Ohms	Watts (W)
LFM-T-140W/140	2	500	1.0	378	140
LFM-T-140W/210	3	500	1.5	252	210
LFM-T-140W/280	4	500	2.0	189	280
LFM-T-140W/350	5	500	2.5	151	350
LFM-T-140W/420	6	500	3.0	126	420
LFM-T-140W/490	7	500	3.5	108	490
LFM-T-140W/560	8	500	4.0	95	560
LFM-T-140W/630	9	500	4.5	84	630
LFM-T-140W/700	10	500	5.0	76	700
LFM-T-140W/840	12	500	6.0	63	840
LFM-T-140W/980	14	500	7.0	54	980
LFM-T-140W/1120	16	500	8.0	47	1120
LFM-T-140W/1260	18	500	9.0	42	1260
LFM-T-140W/1400	20	500	10.0	38	1400

1. INTRODUCTION:

Thank you for purchasing the ThermoLAM Electric Radiant Floor Heating mat. This manual contains IMPORTANT information regarding the safe use and installation of your ThermoLAM mat, so please read through the entire manual carefully before you install or use your mat.

2. IMPORTANT INFORMATION:

- ThermoLAM mats are designed for installation directly under wood laminate, on top of the insulation / underlay.
- ThermoLAM mats are not designed for installation under ceramic tile, natural stone or similar hard floor coverings; and MUST NOT be installed under nailed hardwood flooring. Other products are available to heat these types of floor – Contact us on info@ambient-ufh.co.uk for more information.
- Certain types and thicknesses of insulation / underlay and wood laminates are NOT compatible with ThermoLAM mats (see page.7).
- We want your installation to be trouble-free. If you are confronted with a problem you cannot solve, please do not hesitate to contact us.
- ThermoLAM mats MUST be connected to the electrical system through an RCD protected circuit and suitably rated fuse. Ensure that the circuits that supply power to your mats are RCD protected, or, if possible, a dedicated RCD is incorporated in each circuit supplying power to your mats. ***This requirement is critical to the safe operation of your ThermoLAM mat.***
- ThermoLAM mats must not be installed under cabinets or other fittings or furniture that will be permanently installed and attached to the floor. Built-in cabinets and other furniture with solid bases must not be placed over the mats.
- ThermoLAM mats must NOT be installed on top of other in floor radiant heating systems (for example hydronic or in-screed systems) UNLESS the other system is permanently disconnected in such a way that it cannot be inadvertently switched on while the ThermoLAM mats are also in use.
- Similarly, ThermoLAM mats must also NOT be installed on floors where radiant ceiling heating mats are used in the room directly below where the ThermoLAM mat is installed.
- ThermoLAM mats must not be installed in thinset cement, or in direct contact with a cement or concrete subfloor or slab. There must always be an insulation / underlay beneath ThermoLAM mats.

3. CONTROLLING YOUR SYSTEM:

Ambient recommends the AUBE TH132 programmable thermostat to control the ThermoLAM heating system. The AUBE TH132 is supplied with 2 x floor sensors (**connect one only probe, the other is a reserve or backup**) that allows you to set your heater to the exact temperature you desire. These sophisticated units also allow you to set the time – for example one may choose to have a warm bedroom floor first thing in the morning upon waking, the floor does not need to remain warm during the day, but can be programmed to come on again for a few hours around bedtime!

Most wood laminate manufacturers specify that their floors should not be subjected to temperatures in excess of 28° C. The only reliable way to achieve this is to install a temperature sensor on top or directly under the ThermoLAM mat, placed under the wood laminate. Check with your laminate manufacturer or Ambient to see what their recommendations are for installing electric radiant heat under their floors.

4. PROFESSIONAL ELECTRIC INSTALLATION:

Caution: Only a qualified person who is familiar with the construction and operation of the apparatus and the hazards involved shall install this product.

The installation of electrical systems presents risks of fire and electrical shock which can result in personal injury. Caution should always be taken to guard against each such risk. Only a qualified electrician should connect ThermoLAM mats to the thermostat and / or to the electrical supply circuit. All such connections MUST be in accordance with the National Electrical Code and all local Codes.

5. ITEMS REQUIRED FOR SYSTEM INSTALLATION:

- Appropriate insulation / underlay
- Digital Ohm Meter (multi-meter)
- Electrical Housing Boxes/Switch Plates
- Electrical Conduit
- Adhesive Tape

6. TESTING

Each and every ThermoLAM mat is carefully tested before it is shipped from the factory, and is packed suitably to avoid damage during transit. However, damage does sometimes occur in storage or transit, and sometimes during installation. We strongly recommend you test your mats:

- After unpacking them but before you install them.
- After you have installed them but before you install the floor covering (i.e. while the mats are still exposed), and
- After installation of the wood laminate but before the thermostats are connected.

A simple test is a visual inspection to make sure there is no visible damage to the heater, and in particular to the cable component in the heater. A simple electrical inspection can be done with an ohms meter to make sure the ohms resistance is what it should be (see page 4). Ohms resistance can vary significantly depending on the ambient temperature and an allowance of -5% to +10% from the nominal value is acceptable.

7. PRE INSTALLATION INSTRUCTIONS

Ensure the sub floor is structurally sound. The sub floor should be clean and dry.

To prevent damage to the mats, special attention should be given to ensure that no nails, screws, staple, tacks and the like are protruding from the sub floor before the underlayment is installed. Beware of automatic staple guns if you use one to secure the cushion / underlayment to the sub floor. A badly installed staple that protrudes from the floor can pierce and destroy the ThermoLAM mat.

Nails, screws or staples should not be installed close to the mats and power supply cables. Permanent fixtures, including built-in furniture, must NEVER be installed on top of the mats.

It is important to keep an accurate record of where the mats are installed, to assist you (and a future owner!) to easily locate them when you undertake remodelling work in the room at some future date. Taking a few photographs during the installation process is a good idea.

8. COMPATIBLE INSULATION / UNDERLAY.

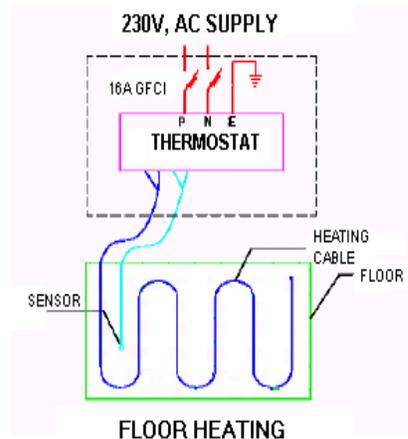
Any type of underlayment / padding can be used as long as it has a density of 6 pounds per cubic foot. Certain underlayments such as 6mm thick cork, or 6mm to 10mm of Expanded Polystyrene (EPS) are recommended for ThermoLAM heating mats. It is also acceptable to place a vapor barrier, such as a plastic sheet, under the insulation. Underlayment papers are not compatible with ThermoLAM mats.

9. COMPATIBLE WOOD LAMINATES / ENGINEERED BOARDS.

Most modern 8 mm thick wood laminate floors are compatible with ThermoLAM mats, but floors that have metallic strips as part of their locking systems are NOT compatible as these metallic strips may damage the ThermoLAM mats. Also laminates that have their pad already attached to the laminate are not compatible with the ThermoLAM mats. Check with your flooring supplier as to suitability for use with underfloor heating. Max floor temp is generally 28°C.

10. INSTALLING THE THERMOSTAT

If you are using a thermostat with a floor sensor, tape the sensor in to channel cut in to the insulation directly beneath the ThermoLAM heating mat, centered between two heater wires, at least 200 mm into the heated area. Run the sensor cable off the heater and back to the thermostat. The “heater wires” within the heater are identified as raised parallel lines. The sensor wire should not cross over the foil heater wires.

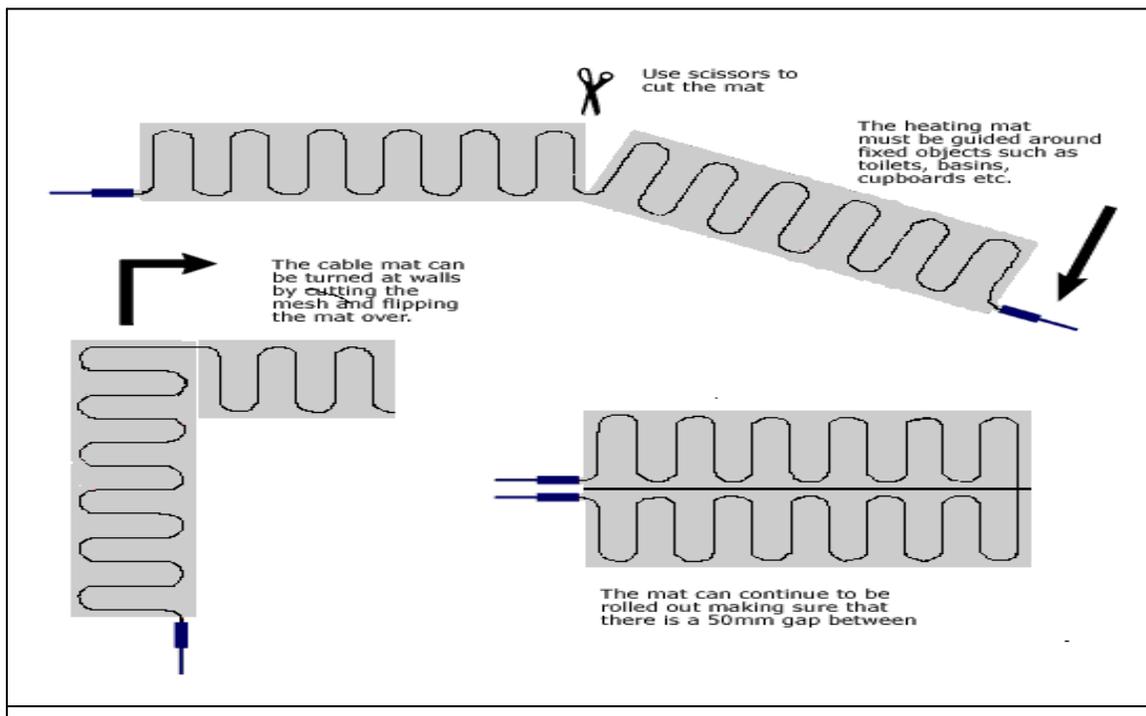


11. INSTALLATION OF ThermoLAM MAT:

Once the insulation has been fitted in the normal manner, remove your ThermoLAM mat from the packaging box, unroll it completely and place it in the required position on top of the underlayment.

When positioning the mat on the insulation, be aware of the following:

- Keep it at least 100 mm from any edge of the area to be Laminated, (to prevent the spikes of the power stretcher damaging the mat when the laminate is being fitted);
- Ensure the power supply cables can reach the thermostat point to which they will be connected;
- Wherever possible, run the power supply cables parallel or at right angles to the walls, and avoid high-traffic areas;
- Wherever possible, keep the corner where the power supply cable enters the mat away from high traffic areas;
- NEVER run the power supply cables under or over the mats;
- When fitting more than one mat in a room, the mats MUST NOT OVERLAP, as overheating will result.
- ThermoLAM mat can be cut and turn at 90° or 180° (as shown in the bottom picture) while laying to cover the total area. (Cable should not be cut)
- **All cut section must be adjoined using the conductive foil strips supplied.**



ThermoLAM MATS MUST NEVER BE CUT OR TRIMMED TO FIT INTO A SPACE THAT IS TOO SMALL!

Smooth out the mat and adhere the mat to the insulation material with adhesive tape.

After deciding the route that your power supply cables will take from the mat to the point of supply, cut a 6 mm wide channel in the insulation along this route and drop the power supply cables into this channel. Similarly you have to cut a small section / channel in insulation or laminate depending on the position of Thermostat sensor. You may also need to remove a small section of insulation from under the mat at the point where the power supply cord enters the mat, to prevent an unsightly lump on the Laminate surface and excessive wear on that part of the mat.

When installing two or more ThermoLAM heating mats next to each other make sure that the heating wires in adjacent mats do not overlap and we recommend the use of adhesive tape to assure that they will not overlap over a period of time.

ThermoLAM mats must be fitted directly on top of the insulation, and directly under the wood laminate flooring.

To avoid damage to your mats during installation, care must be taken so that tools with sharp edges or points are not dropped or used carelessly on top of the mats. Do not walk on the mats more than is absolutely necessary during installation, and do not drop or place heavy articles on the mats.

ThermoLAM mats must not be used folded, and care should be taken not to fold or crease the mats at any time during installation. For this reason ThermoLAM mats are not suitable for use on stairs. Should you wish to move your mat at some later stage, please remember to roll it rather than folding it.

Note : These installation instructions are NOT intended to replace or supersede the installation instructions provided by the manufacturer of the wood laminate, but to supplement them.

BOTH sets of installation instructions should be complied with.

In the event of any apparent contradiction between the ThermoLAM instructions and the wood laminate instructions, kindly contact Ambient for clarification on how to proceed.

WARRANTY

ThermoLAM floor heating mats are covered for a period of 10 years from date of shipment, for the material and workmanship under normal operating conditions.

In case of defective material, Our obligation will be to repair or supply a new material, free of charge to the customer.

The warranty does not cover installations made by unauthorized persons or faults caused by incorrect design by others / misuse / damage caused by others / damage in transit / incorrect installation and any other subsequent damage that may occur. Repair / replacement will be fully chargeable if the damage is because of any of the above reasons.

Ambient is under no circumstances liable for consequential damages or losses including without limitation the loss or profit arising from any cause whatsoever. The guarantee is a material warranty only and does not cover field labour

The warranty is void if there is any payment default and if data is not filled in attached control card.

CONTROL CARD

Cat Ref & SL. No.	Test	Before commencing of Installation	After Installation but before final flooring	After final Flooring
	Continuity			
	Resistance of Cable (Ohms)			
	Insulation Resistance (M Ohms.)			

<p>Address of Installation :</p> <p>Date of Installation :</p> <p>Name & Signature of Qualified Electrician :</p>

Note : Ensure this control card is filled & signed by authorised electrician and safely stored along with your original invoice.

Installation overview.

- Step 1. Ensure work area is clean and free of debris, vacuum floor area thoroughly.
- Step 2. Lay insulation panels to cover the entire floor area, ensure boards are tightly butted together and layed in a staggered fashion (like brickwork), use tape provided to hold boards in place as required.
- Step 3. Lay heating mats at start position, this will normally be adjacent to or close the point where cables will go up the wall to the thermostat position.
NOTE: ThermoLAM mats must be laid flat foil side up.
- Step 3. Cut 6mm wide channels in to the insulation material to accommodate the cold tail(s) from the heating mat(s) back to the thermostat position.
- Step 4. Cut a 6mm wide channel in to the insulation material to accommodate the two floor temperature probes running back to the thermostat position.
NOTE: Probes must be positioned between the heating wires or between two mat runs no further than 20mm from a heating wire.
- Step 5. Roll out heating foil cutting and folding as required to suit the area, use tape provided to hold foil heating mat in place. Use specials silver foil tape strips to interlink cut sections of foil mat, place over interlinking heating cable.
NOTE :This is an important step as this is required to maintain earth continuity across the entire system.
- Step 6. Carry out final resistance test on each mat to ensure continuity.
- Step 7. Make electrical connections at thermostat position, remember to connect one floor probe and leave the other coiled up behind the thermostat as a reserve / backup should the first probe ever fail.
NOTE: Electrical work must be carried out by a “Part P” registered electrician and certificated in accordance with local area building regulations.
- Step 8. The floor temperature default setting is set to 28°C do not exceed this figure without consultation with your laminate or engineered wood supplier.

**IF IN DOUBT AT ANY STAGE OF THE INSTALLATION PLEASE CALL
TECHNICAL SUPPORT ON 01799 524730.**