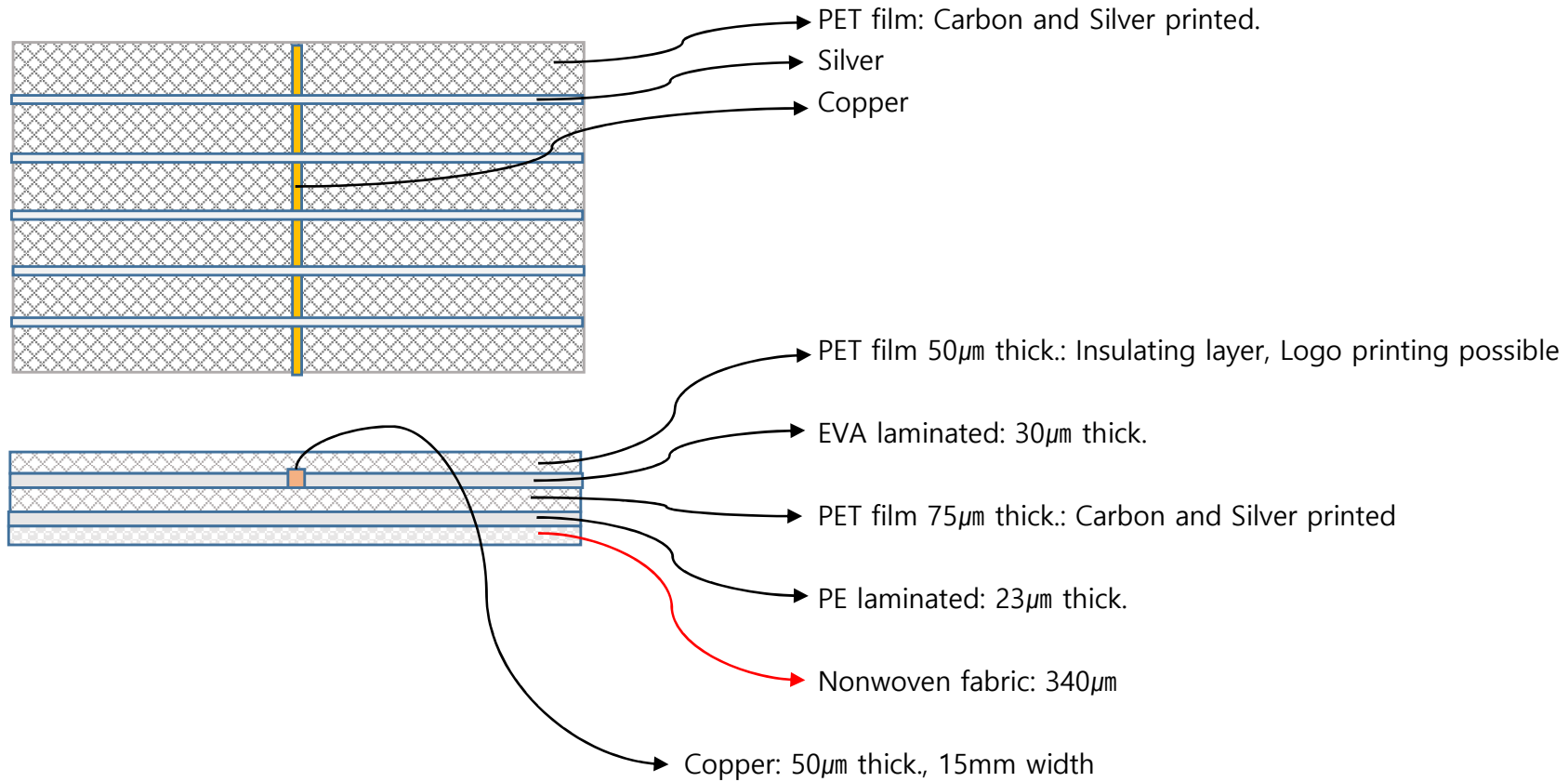


Newly developed grounding film material

1. Dimension and Structure



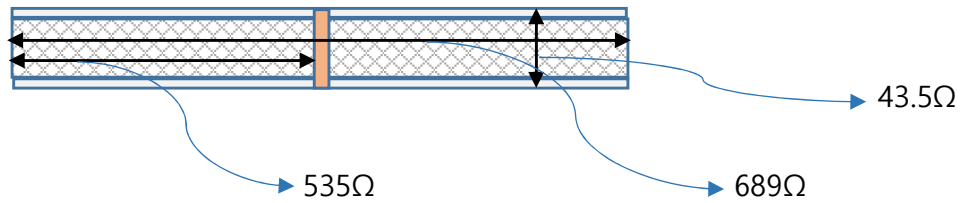
1) Width of product: (1) Regular: 1m

(2) Other width: 20cm to 120cm can be produced as required by order.

2) Thickness: 518 μm (0.52mm)

3) Weight: 357g/m²

4) Resistance:



2. Function

- 1) Remove 99% of the electric field.
- 2) Ground 90% of the capacitive current detected by the circuit breaker as leakage current.
- 3) No the circuit breaker tripped.

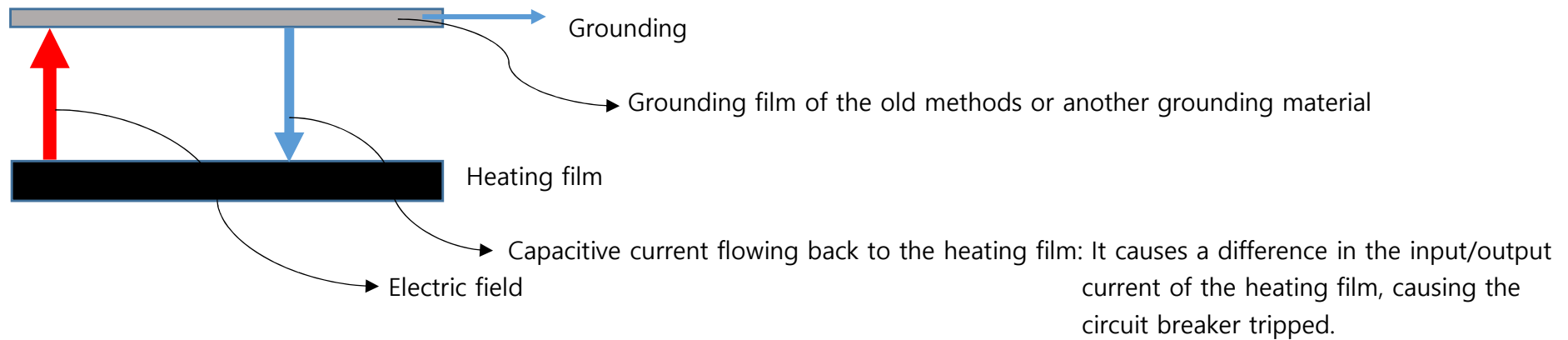
3. Area where can be installable without circuit breaker trip

- 1) Guarantee: 30m²
- 2) ~ 50m²: The removal ratio of the electric field and the grounding ratio of the capacitive current will be slightly lowered, but the circuit breaker will not trip.
- 3) Precondition: The place where the heating film is installed must be grounded.

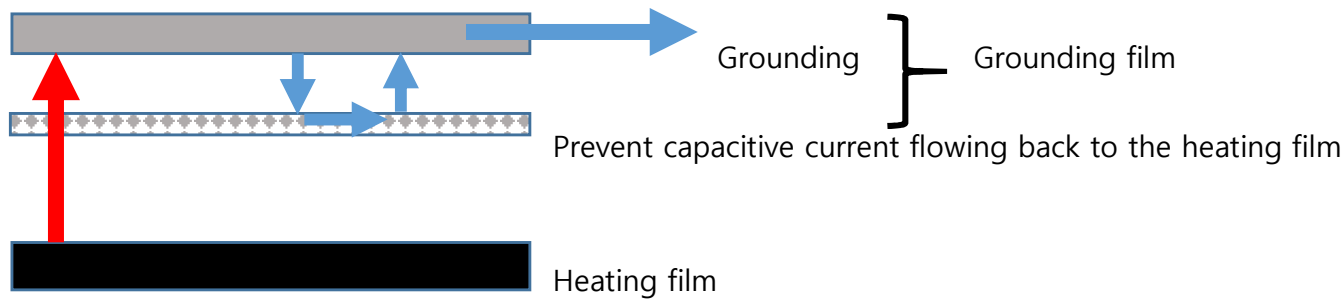
4. Patent point

- 1) There is a need for a space that allows that capacitive current to be temporarily remained between the grounding film and the heating film.
This means that a space is needed to prevent the capacitive current generated by the grounding film from instantaneously flowing back to the heating film layer.

(1) Previous methods



(2) Grounding film we developed



2) Similar patent: (1) Patent number: 10-2374783

(2) Rights holder: Towtech

(3) Valid country: Korea

3) We are working on registering the grounding film we developed this time as a new patent with the concept of an improved patent that significantly improves the contents of similar patent.

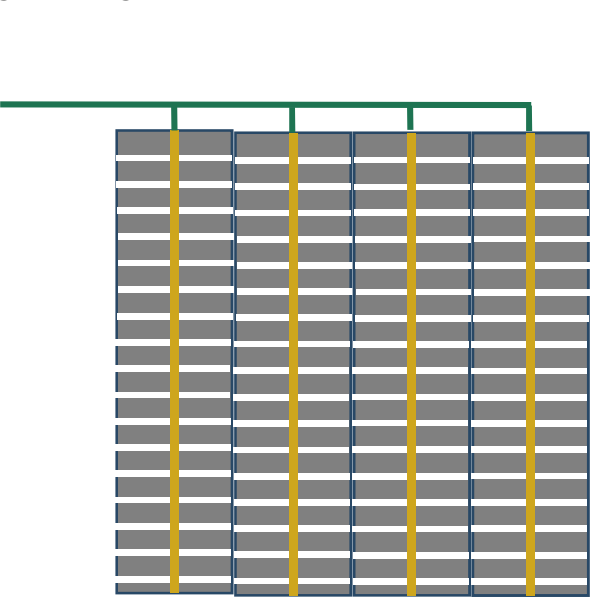
For Nordic countries, we hope that Varmecomfort(RS HANDEL AS) will apply for a patent for this product.

5. Grounding film Installation

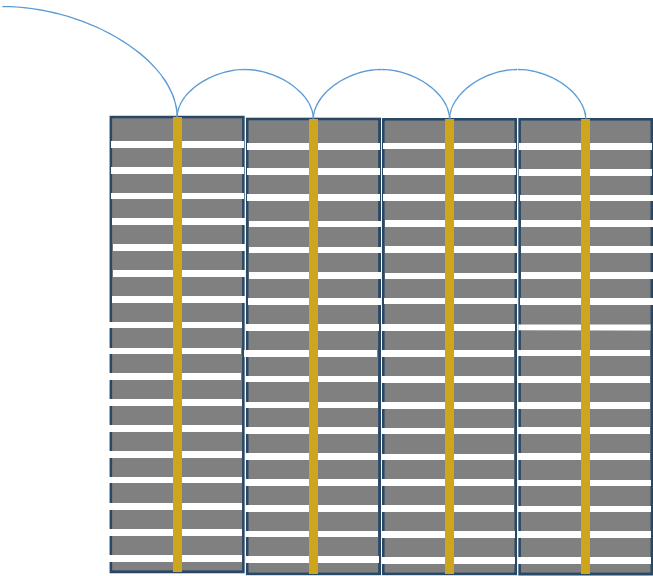
-  Flooring material
-  Grounding film
-  Heating film
-  Insulation material
-  Bottom

*** Wool paper does not need to be installed on the heating film.

(Wiring grounding film)



(O)



(O)

6. Data

1) Function test

	Before installing the grounding film	After installing the grounding film
Electric field	1,070 v/m	6 v/m (99% removed)
Capacitive current (Leakage current)	27 mA	2.8 mA (90% grounded without circuit breaker trip)

2) Reliability test

	First test	Second test
Period	Sep. 1st ~ 8th (For 192 hours in a row)	Oct. 20th ~ Nov. 2nd (For 336 hours in a row)
Result	Stable operation without circuit breaker trip	
	The test was conducted by applying a weight of 27kg/m ² (810kg in total) on the grounding film.	

3) Heat block level of grounding film: Initially, it blocks 2~3% but does not block the heat of the heating film after a few hours.

-- End --