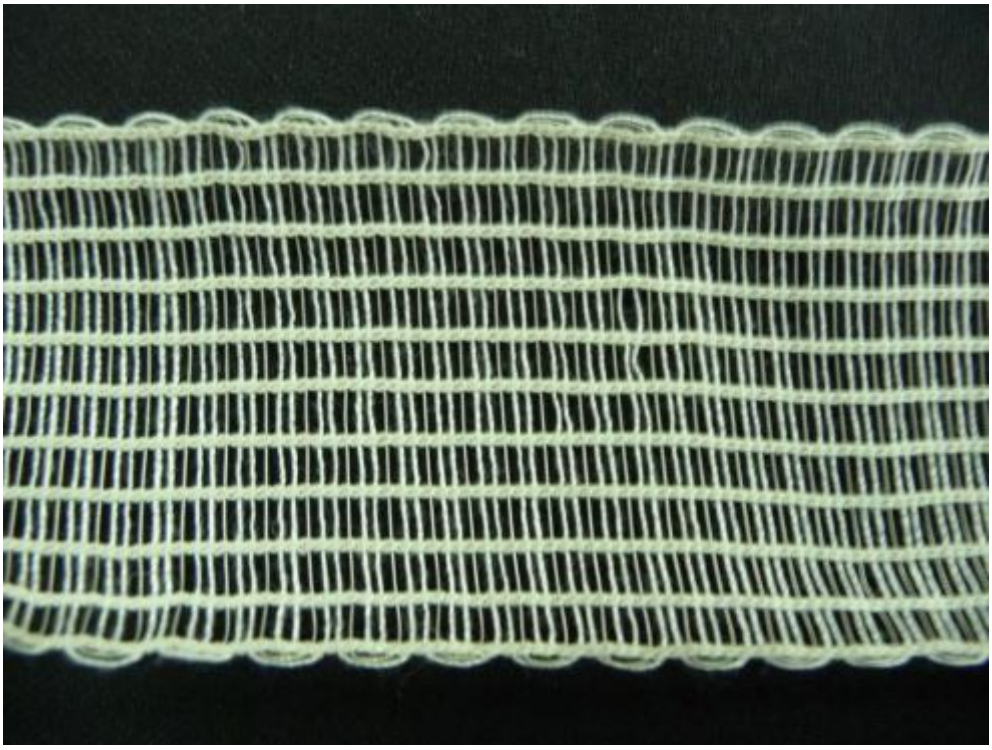
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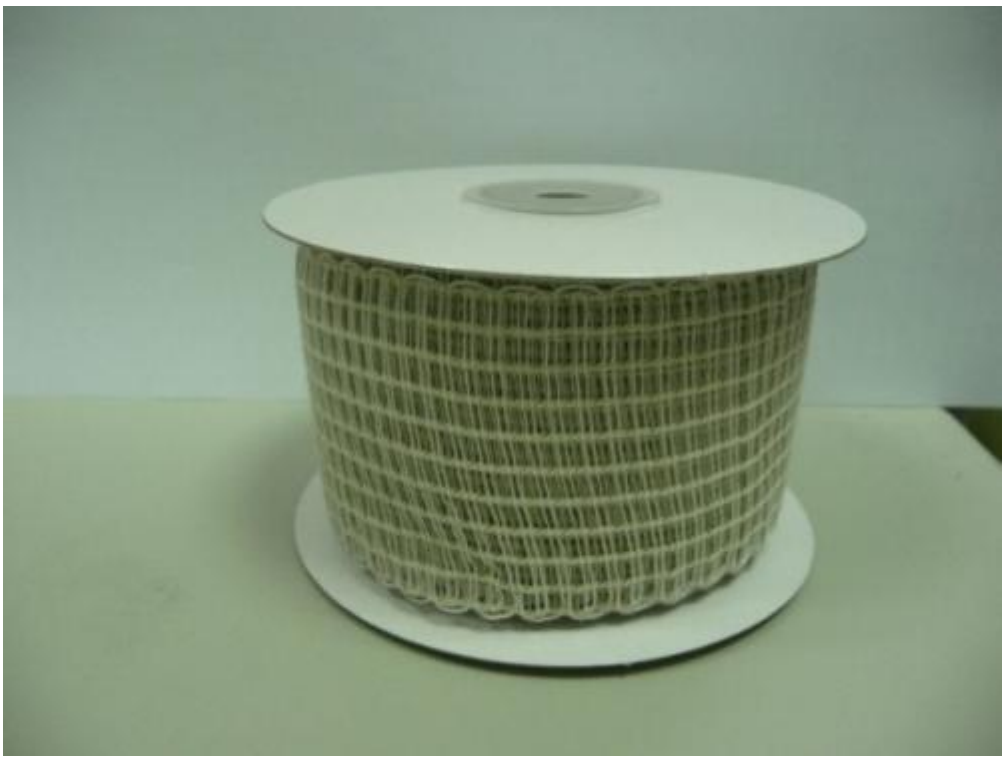
Ultra Heating Fabric

Introduction:

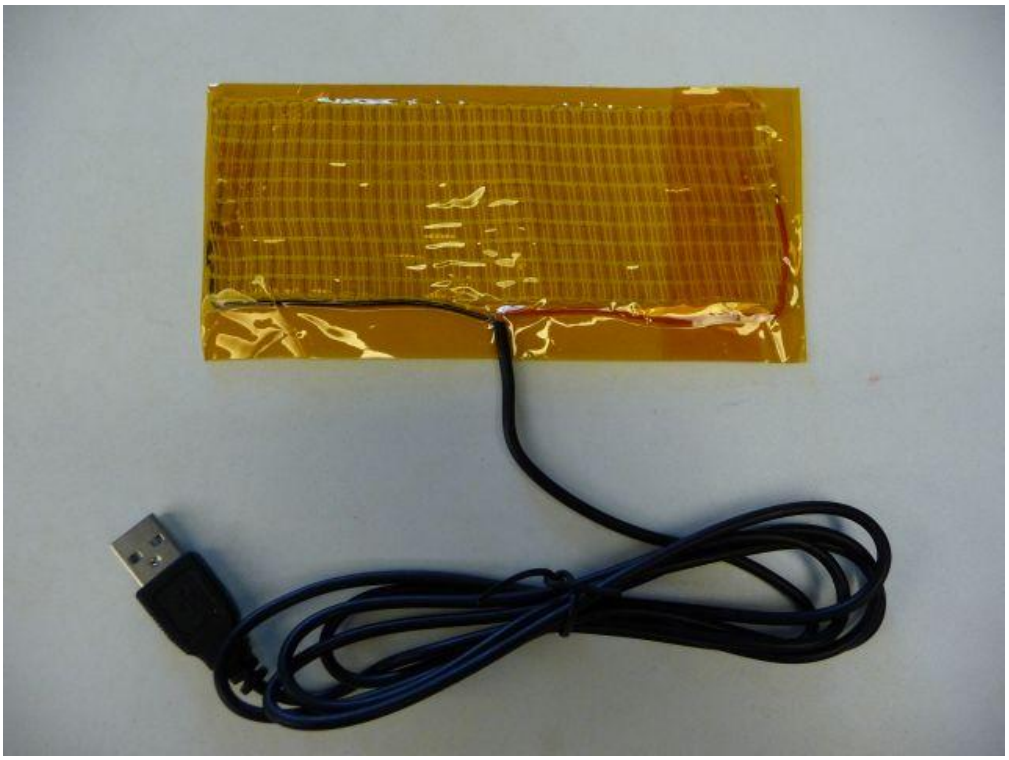
An **Ultra Heating Fabric** is a new generation electrical heating system which is specially designed for mobile heating, energy saving and safety orientated requirements with DC power. The Ultra Heating Fabric adopts an advanced smart textile technology. A patented **metal-polymer fiber composite conductive yarn** is introduced to the Fabric. The conductive yarn is very fine (the most fineness can go to 0.27 mm diameter in present commercial grade) and strong. The conductive yarn can be easily enhanced in conductivity, strength, and thermal resistance in our advanced design system to meet customer requirements. The metal-polymer composite conductive yarn is perfectly integrated with the Fabric by textile processes. Hence, the Ultra Heating Fabric is superior soft, light, thin and strong. The most importance is the Fabric can be connected with connector or cable by traditional electrical skills, and the connection has higher reliability and yield rate than carbon fiber or metal plating polymer yarn which is widely used as the heating element.



The structure of the Ultra Heating Fabric



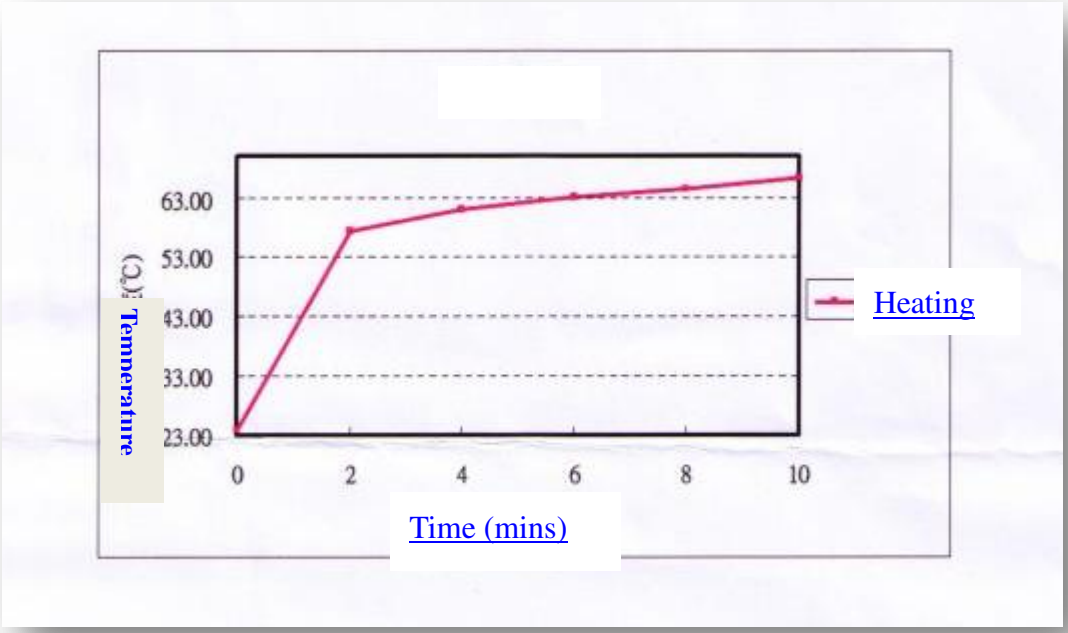
A pack of the Ultra Heating Fabric



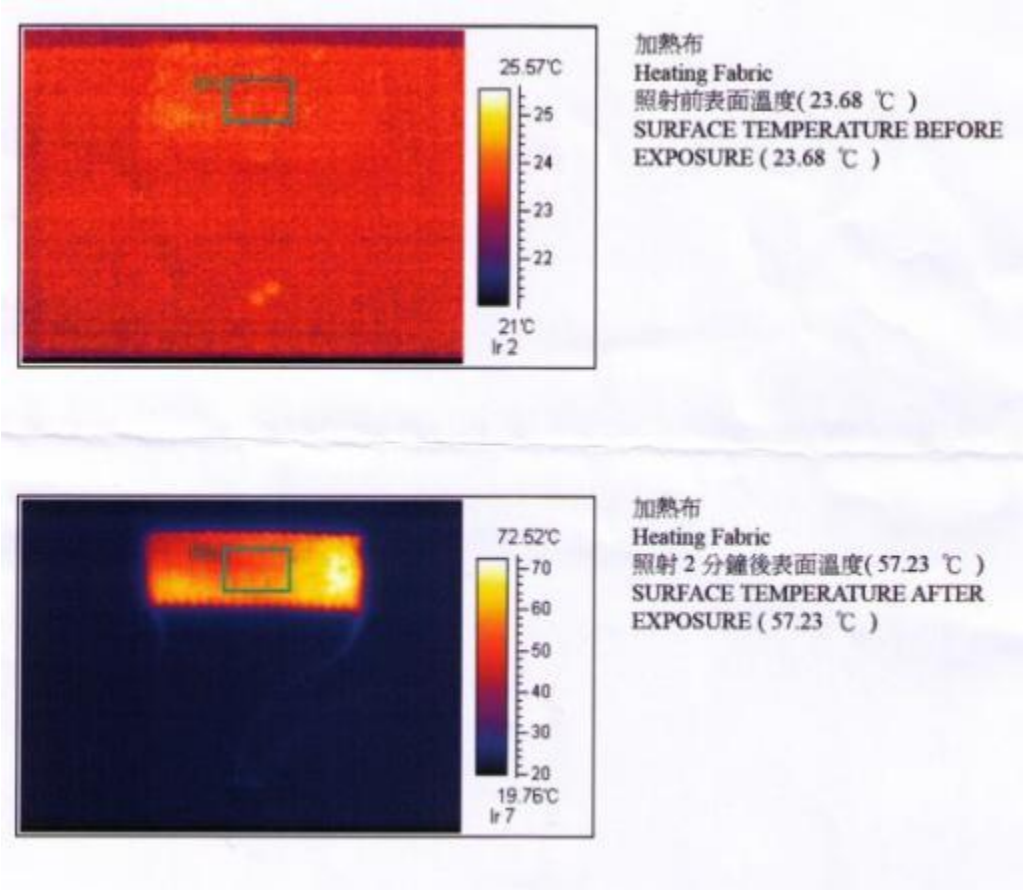
The Ultra Heating Fabric with an USB cable

Key Features:

1. Heating quickly: input voltage is 9 Voltage.



2. Very even 2-dimansion thermal distribution: input voltage is 9 Voltage.



Patents:

1.“CONDUCTIVE YARN CAPABLE OF WITHSTANDING DYEING, FINISHING AND WASHING”
Issued patents:
TW M371733
CN 201485574U

Pending application:
US 12/787,378

2.“FLEXIBLE HEATING ELEMENT”
Pending applications:
TW 099146482
CN 201120008487.x

Design references:

Testing conditions:

(1)The width of the Ultra Heating Fabric is 5 cm

(2)The diameter of metal-polymer composite conductive yarn is about 0.27 mm

(3)The pitch of the conductive yarn in the Fabric is about 5 mm

(4)The input voltage to the Fabric is 5, 7.4, 9, 12 Voltage, respectively.

Table 1

Length of the Fabric	4cm	4.8cm	5.2cm	6.0cm	6.8cm	7.6cm	8.4cm	9.2cm	10.4cm
Input, Voltage	5V	5V	5V	5V	5V	5V	5V	5V	5V
Current, A	1.5	1.3	1.2	1.05	0.95	0.9	0.86	0.80	0.74
Temperature, ℃	130	95	88	80	68	60	52	46	40

Table 2

Length of the Fabric	7.2cm	8cm	8.8cm	9.6cm	10.4cm	11.2cm	12cm	12.8cm
Input	7.4V	7.4V	7.4V	7.4V	7.4V	7.4V	7.4V	7.4V
Current, A	1.3	1.12	1.07	1.05	1.0	0.95	0.9	0.85
Temperature, ℃	115	95	90	84	75	71	65	63

Table 3

Length of the Fabric	8cm	8.8cm	9.6cm	10.4cm	11.2cm	12cm	12.8cm
Input	9V	9V	9V	9V	9V	9V	9V
Current, A	1.3	1.25	1.18	1.1	1.06	1.02	1.0
Temperature, ℃	110	108	100	91	86	82	73

Table 4

Length of the Fabric	9.6cm	10.4cm	11.2cm	12cm	12.8cm	20cm	32cm	40cm
Input	12V	12V	12V	12V	12V	12V	12V	12V
Current, A	1.4	1.33	1.27	1.25	1.22	0.9	0.66	0.52
Temperature, ℃	123	110	106	104	102	80	55	42