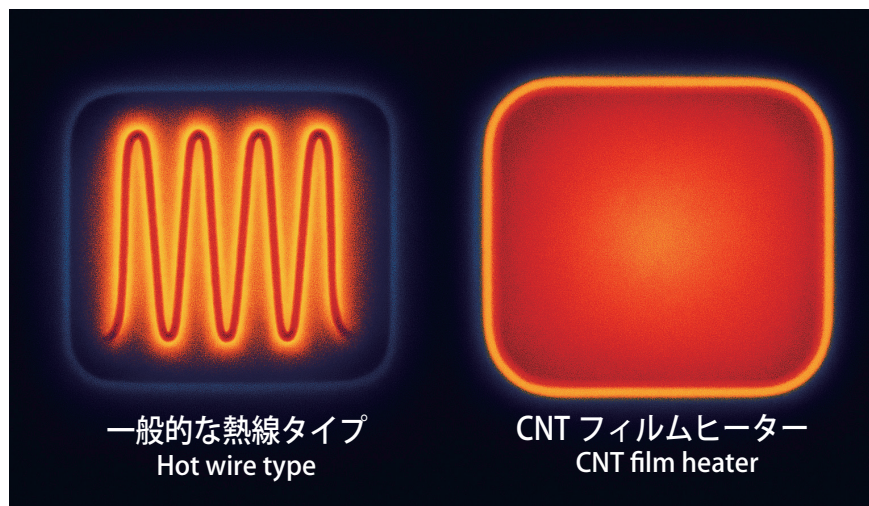


# FLEXIBLE SURFACE HEATER

## CNT ヒーターの特長 Features of CNT heaters

フィルム状のCNTは通電加熱することでヒーターとして使うことができる。厚み100 $\mu$ m以下で薄くて柔らかいフレキシブルヒーターで、一般的な金属線ヒーターで起きがちな金属疲労による断線がない。また、熱容量が小さく、1秒程度で瞬間的に100℃近くまで温度が上がり、電源を切ると急速に冷えるため温度追従性に優れている。

Film-like CNTs can be used as a heater by applying electricity to it. It is a thin, soft, flexible heater with a thickness of less than 100 $\mu$ m, and does not break due to metal fatigue, which is common with general metal wire heaters. In addition, it has a small heat capacity, and its temperature rises to nearly 100° C in about 1 second, and it cools down rapidly when the power is turned off, so it has excellent temperature tracking.



CNT100%フィルムで均一な発熱を確認。

Uniform heat generation confirmed with the 100% CNT film.

CNTフィルムはサイズ、抵抗値ともに調整可能。CNTフィルムの層数や積層構造も設計可能。

Both the size and resistance of the CNT film can be adjusted. The CNT film's number of layers and lamination structure can be designed as needed.

フレキシブルなため立体面にも設置可能。

It is flexible and can be installed on three-dimensional.

### Applications



衣服  
clothing



暖房便座  
heated toilet seat