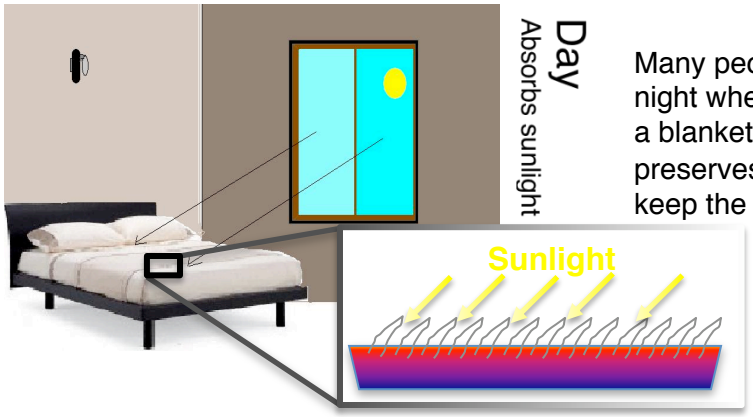
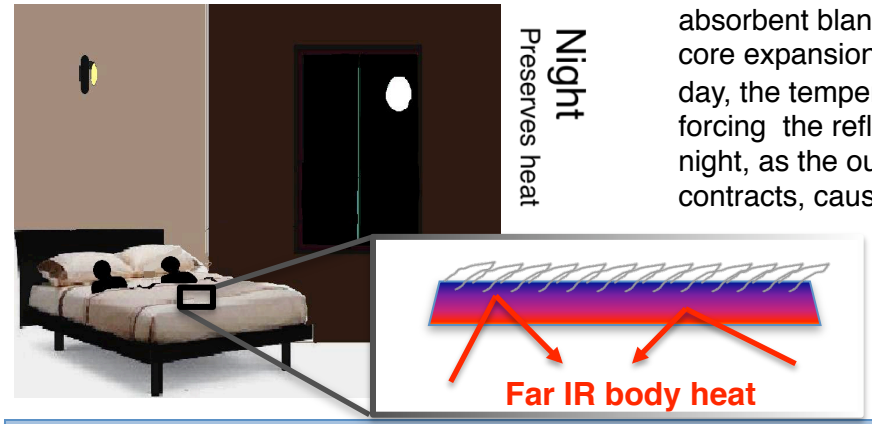
Thermally Absorbent + Radiant Body Heat Blanket



Many people use energy to heat their homes at night when the outside temperature drops. By using a blanket that warms during the day and effectively preserves your body heat at night, homeowners can keep the furnace off.

IR Reflectors stand upright to capture energy
Blanket Core outer layer expands



The blanket consists of two components: clear IR reflectors that simulate fur; and a thermally absorbent blanket core. The reflectors are embedded into the blanket core such that blanket core expansion and contraction causes the reflectors to stand upright or lie down. During the day, the temperature difference across the blanket core causes the outer layer to expand, forcing the reflectors to point outwards and collect visible light and low IR from sunlight. At night, as the outer layer cools below the temperature of the inner layer, the outer layer contracts, causing the fur to lay down and shield any heat from escaping.

IR Reflectors lie down to retain energy
Blanket Core outer layer contracts

Inspired by Polar Bear's natural insulation

Adept at surviving in arctic environments with low energy consumption, Polar bears are master's of retaining heat. Their translucent hair scatters light, but ultimately allows it to be absorbed into their black skin underneath. The hair's emissivity in infrared wavelengths is almost nothing – meaning that it allows the bears to retain their body heat by reflecting the heat back at them. Polar bear hair is therefore a natural wavelength-selective filter: allowing most visible and some infrared light in, but reflecting back the far infrared wavelengths.

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