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Imaging single carbon nanotubes with thermal radiation YUWEI FAN[1], SCOTT SINGER, RAYMOND BERGSTROM, B.C. REGAN, UCLA Department of Physics and Astronomy — We have constructed tiny light bulbs, visible to the naked eye, using individual carbon nanotubes as filaments. A nanotube is suspended over a hole in a solid silicon substrate, and is heated to incandescence with electrical current. Diffraction-limited optical microscopy identifies the nanotube position and orientation, and allows direct comparison with high-resolution transmission electron micrographs of the same nanotube. Our current progress toward quantitative pyrometry will be described.

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