

Scrolling color projection display using surface plasmon tunable filters

Yu Wang

Jet Propulsion Lab.

California Institute of Technology

Surface plasmon tunable filter (SPTF) is a new technology under development at Jet Propulsion Lab. When applying to LCD projectors, SPTF can simplify the system structure, and enhance the efficiency. A scrolling SPTF which consists three SPTFs and can generate scrolling red, green and blue colors, is able to enhance the efficiency of a single panel LCD projector up to the same level as a three panel LCD projector. A scrolling SPTF which consists six SPTFs and can generate two set of scrolling RGB colors, will enable a single panel LCD projector to be 100% more efficiency than the current three panel LCD projector.