



(19) **United States**

(12) **Patent Application Publication** (10) **Pub. No.: US 2003/0128427 A1**
Kalmanash et al. (43) **Pub. Date: Jul. 10, 2003**

(54) **DUAL PROJECTOR LAMPS**

(57) **ABSTRACT**

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A dual lamp light source utilizes a polarizing beam splitter to provide an output beam from one or the other or both sources. One lamp is positioned adjacent a face whose plane is parallel to the optical axis of the beam splitter and whose output is internally reflected. The other lamp is positioned adjacent a rear face of the beam splitter so that its output is the output of the beam splitter.

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Each of the beams is polarized in a unique orientation. A polarizer is placed in the exit path and is aligned to pass one of the orientations. A polarization rotation device is interposed between the beam splitter and polarizer and, by its orientation, determines which of the lamp inputs is transmitted by the polarizer. The rotation device can be mechanical, including a rotatable half wave plate or electronic, utilizing a liquid crystal retarder device that is controlled by an applied electrical signal.

(21) Appl. No.: **10/175,728**

(22) Filed: **Jun. 20, 2002**

Related U.S. Application Data

(60) Provisional application No. 60/348,023, filed on Jan. 10, 2002.

Publication Classification

(51) **Int. Cl.⁷** **F21V 9/14**
(52) **U.S. Cl.** **359/484; 359/494; 362/19**

The present device can also be used as a "day-night" illumination source if one lamp is a bright day lamp and the other is a less bright night lamp equipped with an IR filter. The lamps are then used alternatively.

