Title: FRONT ILLUMINATION DEVICE COMPRISING A FILM-BASED LIGHTGUIDE

Abstract: A reflective display includes a reflective spatial light modulator and a frontlight. The frontlight includes a lightguide formed from a film. The lightguide includes an array of coupling lightguides continuous with a lightguide region of the lightguide. One or more light sources emit light into the array of coupling lightguides. Light from each coupling lightguide combines and totally internally reflects within the lightguide region. Light extraction features frustrate totally internally reflect light within the lightguide region such that the light exits the lightguide toward the reflective spatial light modulator in a light emitting region of the film. A cladding region is optically coupled to the lightguide so light from the light source propagates into the cladding region. A light extracting region is operatively coupled to the cladding region opposite the lightguide, and light in the cladding region is extracted. A method of producing a display is also disclosed.

Declarations under Rule 4.17:

— as to applicant’s entitlement to apply for and be granted a patent (Rule 4.17(ii))

— as to the applicant’s entitlement to claim the priority of the earlier application (Rule 4.17(iii))

Published:
— with international search report (Art. 21(3))
— before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments (Rule 48.2(h))

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## INTERNATIONAL SEARCH REPORT

**International application No.**
PCT/US2011/032795

### A. CLASSIFICATION OF SUBJECT MATTER
IPC(8) - F21V 7/04 (2011.01)
USPC - 362/607
According to International Patent Classification (IPC) or to both national classification and IPC

### B. FIELDS SEARCHED

<table>
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<td>Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)</td>
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### C. DOCUMENTS CONSIDERED TO BE RELEVANT

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<th>Category*</th>
<th>Citation of document, with indication, where appropriate, of the relevant passages</th>
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Date of the actual completion of the international search: 28 October 2011

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