

Title (en)

BACKLIGHT UNIT WITH EMISSION MODIFICATION

Title (de)

RÜCKBELEUCHTUNGSEINHEIT MIT EMISSIONSÄNDERUNG

Title (fr)

UNITÉ DE RÉTROÉCLAIRAGE À MODIFICATION D'ÉMISSION

Publication

EP 4070158 A1 20221012 (EN)

Appication

EP 21857009 A 20210930

Priority

- US 202117177920 A 20210217
- US 202117348570 A 20210615
- US 2021052904 W 20210930

Abstract (en)

[origin: WO2022177606A1] A display system and method are disclosed that includes an electronic display device and a backlight comprising a light-emitting array, a reflector adjacent to the light-emitting array, a diffuser opposite the reflector, a first brightness enhancing layer adjacent the diffuser, and an optical film that includes at least one light conversion material or at least one light absorbing material. The light conversion or light absorbing material is structured and configured to reduce hazardous blue light emissions between about 400 nm to about 500 nm. The disclosed display device can include a liquid crystal panel configured to control transmission of light from the backlight to a viewer. The display device also includes one or more optical films that incorporate one or more light conversion or light absorbing materials. The optical films can be positioned between the layers of the disclosed display device and give enhanced blue-light absorption to the display device.

IPC 8 full level

G02F 1/1335 (2006.01); **F21K 9/64** (2016.01); **F21V 9/32** (2018.01); **G02B 5/02** (2006.01); **G02B 5/20** (2006.01)

CPC (source: EP KR)

G02B 5/0242 (2013.01 - EP KR); **G02B 5/0278** (2013.01 - EP KR); **G02B 5/206** (2013.01 - EP KR); **G02F 1/133614** (2021.01 - EP KR); **G02F 1/133617** (2013.01 - KR); **G02F 1/133624** (2021.01 - EP KR); **G02F 1/133617** (2013.01 - EP); **G02F 2201/08** (2013.01 - EP KR); **G02F 2201/50** (2013.01 - EP KR); **G02F 2202/36** (2013.01 - EP KR)

Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)

BA ME

DOCDB simple family (publication)

WO 2022177606 A1 20220825; CN 115226403 A 20221021; EP 4070158 A1 20221012; EP 4070158 A4 20231018; JP 2023519464 A 20230511; KR 20230143917 A 20231013

DOCDB simple family (application)

US 2021052904 W 20210930; CN 202180005599 A 20210930; EP 21857009 A 20210930; JP 2022520547 A 20210930; KR 20227009105 A 20210930