**PatBase - Search results** 26 November 2018
**Search query (5):** RF=(NC20180000586)
**Results:** 10

**Search history**

Search 1: FT=(glass and (((suspended 3w particle) 3w device) or SPD)) (Results 4463)

Search 2: FT=(glass and ((((suspended 3w particle) 3w device) or SPD)) or ((((polymer 3w dispersed) 3w liquid) 3w crystal) or PDLC)) (Results 8721)

Search 3: 2 and (windshield or windscreen) (Results 339)

Search 4: 3 and PD<20171210 (Results 280)

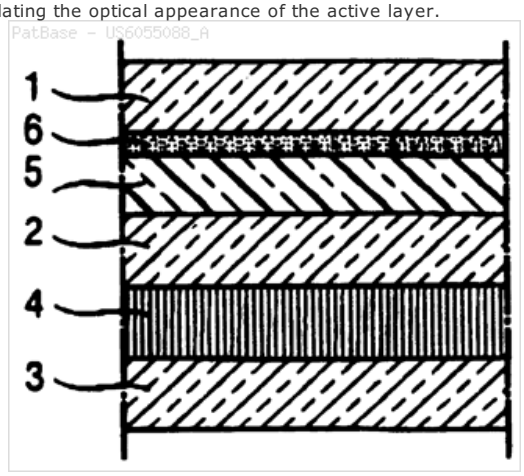
Search 5: RF=(NC20180000586) (Results 10)

**1) Family number: 24013694** (US6055088A)

**Title:** GLAZING WITH VARIABLE OPTICAL AND/OR ENERGETIC PROPERTIES

**Abstract:** A glazing is described, which includes at least one active layer and at least one reflecting coating on the active layer. A pane, partition, mirror, or door is also described that includes the glazing. A method for making is also described. The glazing exhibits superior thermal and radiative durability, and is capable of modulating the optical appearance of the active layer.

**Classifications:**
**International (IPC 8-9):** B32B17/06 B32B17/10 B32B7/02 C03C17/34 C03C17/36 G02F1/157 (Advanced/Invention);
G02F1/1334 G02F1/1335 (Advanced/Non-invention)
**International (IPC 1-7):** B32B17/06 B32B7/02 C03C17/34 C03C17/36 G02F1/13 G02F1/15 G02F1/157 H01J3/00
**CPC:** B32B17/1077 B32B17/10 B32B17/10036 B32B17/10055 B32B17/1011 B32B17/10174 B32B17/10504 B32B17/10513 B32B17/10761 B32B17/10788 B60J3/04 C03C17/3435 C03C17/36 C03C17/3613 C03C17/3618 C03C17/3639 C03C17/3642 C03C17/3644 C03C17/3652 C03C17/366 C03C17/3663 C03C17/3681 C03C2217/78 G02F1/1334 G02F1/133509 G02F1/157 E06B9/24 E06B2009/2411 E06B2009/2464
**European:** B32B17/10 B32B17/10C26 B32B17/10C4 B32B17/10C4B4 B32B17/10E10 B32B17/10E40D62 B32B17/10E40D64 B32B17/10G28 B32B17/10G30 B32B17/10G36 B60J3/04 C03C17/34D4B C03C17/36 C03C17/36B316 C03C17/36B320 C03C17/36B339 C03C17/36B340 C03C17/36B342 C03C17/36B346 C03C17/36B352L C03C17/36B352M C03C17/36B356 G02F1/157 M03C217/780 S02F1/1334 S02F1/1335F
**US:** 349/16 349/195 359/241 359/265 359/267 359/273 359/275




**Family:**

| Publication number | Publication date | Application number | Application date |
|---|---|---|---|
| EP0825478 A1 | 19980225 | EP19970401957 | 19970821 |
| FR2752570 A1 | 19980227 | FR19960010344 | 19960822 |
| FR2752570 B1 | 19981002 | FR19960010344 | 19960822 |
| JP10114007 A2 | 19980506 | JP19970225163 | 19970821 |
| MX9706436 A1 | 19980731 | MX19970006436 | 19970822 |
| US6055088 A | 20000425 | US19970916234 | 19970822 |
| US6466298 BA | 20021015 | US20000534318 | 20000324 |

**Priority:**

FR19960010344 19960822 US19970916234 19970822 US20000534318 20000324

**Probable Assignee:** SAINT GOBAIN GLASS FRANCE

**Assignee(s):** (std)**:** SAINT GOBAIN ; SAINT GOBAIN GLASS FRANCE ; SAINT GOBAIN VITRAGE

**Inventor(s):** (std)**:** FIX RENAUD ; GUISELIN OLIVIER ; LIN XUE YUN ; LIN XUEYUN ; YUN LIN XUC ; RENAUD FIX ; OLIVIER GUISELIN

**Inventor(s):** LIN XUC YUN

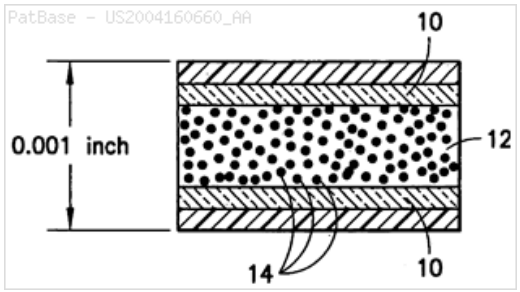
**Designated states:** AT BE CH DE DK ES FR GB IT LI LU NL PT SE

**2) Family number: 30787303** (US2004160660A)

**Title:** METHOD AND DEVICE FOR CONTROLLING VOLTAGE PROVIDED TO A SUSPENDED PARTICLE DEVICE

**Abstract:** A voltage controlling device includes an AC terminal receiving an AC voltage signal, a voltage dividing device adapted to divide the AC voltage signal into a plurality of distinct voltage signals within a predetermined range, a controller adapted to control the voltage dividing device to provide a selected voltage level based on voltage level information and an SPD terminal for providing the selected voltage level to a suspended particle device. Voltage level information may be provided via an input device and/or from a photocell that monitors a light level at the suspended particle device. A separate AC power supply may also be provided. The controller may also monitor an SPD load voltage to control the voltage level provided to the SPD terminal in order to prevent shocking of a user.

**Classifications:**
**International (IPC 8-9):** G02B26/00 G02B26/02 G02F1/167 G02F1/17 H02M5/08 H02M5/12 H02M5/27 (Advanced/Invention); G02B26/00 H02M5/12 H02M5/27 (Advanced/Non-invention); G02B26/00 G02B26/02 G02F1/01 (Core/Invention)
**International (IPC 1-7):** G02B26/00 G02B26/02 H02M H02M1/00 H02M3/07 H02M7/48
**CPC:** G02B26/004 G02F1/172
**European:** G02B26/00L G02F1/17A
**US:** 359/296 359/296P




**Family:**

| Publication number | Publication date | Application number | Application date |
|---|---|---|---|
| AU2004214865 AA | 20040910 | AU20040214865 | 20040209 |
| AU2004214865 BB | 20090226 | AU20040214865 | 20040209 |
| EP1599931 A2 | 20051130 | EP20040737269 | 20040209 |
| EP1599931 A4 | 20101215 | EP20040737269 | 20040209 |
| JP2007525686 T2 | 20070906 | JP20060503423T | 20040209 |
| JP4642013 B2 | 20110302 | JP20060503423T | 20040209 |
| KR101067802 B1 | 20110927 | KR20057014575 | 20050808 |
| KR20050097543 A | 20051007 | KR20057014575 | 20040209 |
| US2004160660 AA | 20040819 | US20040774930 | 20040209 |
| US2004165251 AA | 20040826 | US20030366276 | 20030213 |
| US6804040 BB | 20041012 | US20030366276 | 20030213 |
| US6897997 BB | 20050524 | US20040774930 | 20040209 |
| WO04077649 A2 | 20040910 | WO2004US03712 | 20040209 |
| WO04077649 A3 | 20060720 | WO2004US03712 | 20040209 |

**Priority:**
US20030366276 20030213 US20040774930 20040209 WO2004US03712 20040209

**Probable Assignee:** RESEARCH FRONTIERS INC

**Assignee(s):** (std): HARARY JOSEPH M ; MALVINO ALBERT P ; RESEARCH FRONTIERS INC ; SAXE ROBERT L

**Inventor(s):** (std): ALBERT P MALVINO ; HARARY JOSEPH M ; JOSEPH M HARARY ; MALVINO ALBERT P ; ROBERT L SAXE ; SAXE ROBERT L

**Agent(s):** PHILLIPS ORMONDE FITZPATRICK; OSTROLENK FABER GERB AND SOFFEN LLP

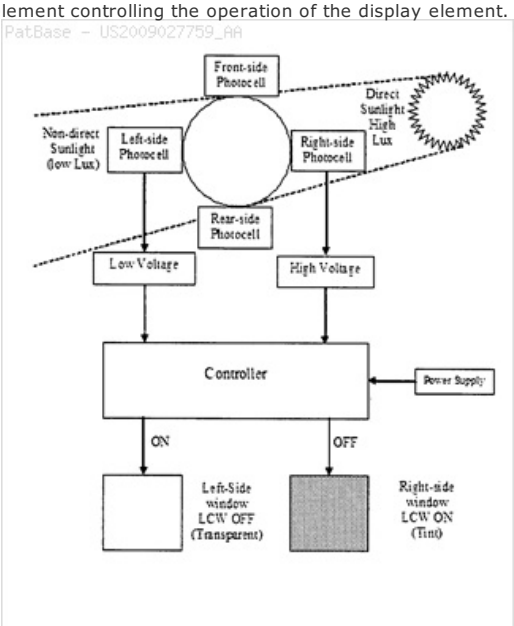
**Designated states:** AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LI LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NA NE NI NL NO NZ OM PG PH PL PT RO RU SC SD SE SG SI SK SL SN SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

**3) Family number: 42870640** (US2009027759A)

**Title:** ELECTRONIC WINDOW SHADING SYSTEM FOR HOUSES, TRANSPORT VEHICLES AND THE LIKE

**Abstract:** There is disclosed an automatic electronic window shading (tinting) system for houses and transport vehicles such as automobiles, RV's, trains, boats and the like, to provide shading for people to protect them from exposure to harmful direct sunlight, by providing the windows of said houses and transport vehicles with display elements and light (photocell/photovoltaic) sensors. The system comprises liquid crystal, electrochromic, suspended particle device (SPD), or NanoChromics display (NCD) element attached to a part of a transparent body (such as the windows) and a liquid crystal, electrochromic, suspended particle device (SPD), or NanoChromics display (NCD) controlling semiconductor element controlling the operation of the display element.

**Classifications:**
**International (IPC 8-9):** G02B27/00 G02B5/20 G02F1/01 G02F1/15 (Advanced/Invention);
G02B27/00 G02B5/20 G02F1/01 (Core/Invention)
**CPC:** B32B17/10036 B32B17/10513 E06B9/24 B60J3/04 E06B2009/2464 E06B2009/6827 G02F1/13318 G02F1/163 Y02B80/50 Y02A30/257
**European:** B60J3/04 E06B9/24 P06B9/24F P06B9/68C2B S02F1/133D2 S02F1/163 Y02B80/50
**US:** 359/265 359/277 359/277P 359/361 359/361S 359/601 359/601S




**Family:**

| Publication number | Publication date | Application number | Application date |
|---|---|---|---|
| US2009027759 AA | 20090129 | US20070781932 | 20070723 |
| US8102586 BB | 20120124 | US20070781932 | 20070723 |

**Priority:**
US20070781932 20070723

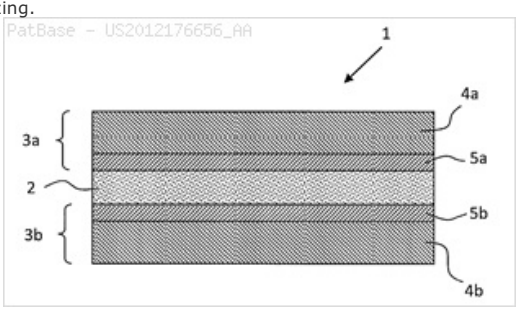
**Probable Assignee:** KUWAIT UNIV
**Assignee(s):** (std): ALBAHRI TAREQ ABDULJALIL ; KUWAIT UNIV ; KUWAIT UNIVERSITY ; UNIV KUWAIT
**Assignee(s):** UNIVERSITY OF KUWAIT ; OF KUWAIT UNIV
**Inventor(s):** (std): ALBAHRI TAREQ ABDULJALIL
**Agent(s):** FURR LAW FIRM; RICHARD C

**4) Family number: 44024784** (US2012176656A)

**Title:** LAMINATED GLAZING

**Abstract:** A laminated glazing comprising an SPD ply comprising a suspended particle device having a low light transmission off-state and a high light transmission on-state, at least one interlayer ply comprising an interlayer material, and at least one glazing ply is disclosed. The interlayer material has been dried to a predetermined moisture content to increase the time over which the suspended particle device is switchable between the low light transmission off-state and the high light transmission on-state. Use of a dried interlayer to increase the time over which an SPD film is switchable between a low light transmission off-state and a high light transmission on-state is also disclosed. Additionally a process for producing the aforementioned laminated glazing is disclosed. It has been found that the moisture content of the interlayer material is a factor in determining the switching characteristics over time of an SPD film incorporated into a laminated glazing.

**Classifications:**
**International (IPC 8-9):** B32B17/10 C03C27/12 G02F1/01 G02F1/015 (Advanced/Invention); G02F1/17 (Advanced/Non-invention)
**CPC:** B32B17/10036 B32B17/10 B32B17/10174 B32B17/10532 B32B17/10761 B32B17/1077 G02F1/172 B32B2367/00
**European:** B32B17/10 B32B17/10C4 B32B17/10E10 B32B17/10E40D68 B32B17/10G28 B32B17/10G30 S02F1/17A
**US:** 1/1 156/106 156/106S 359/240 359/240P




**Family:**

| Publication number | Publication date | Application number | Application date |
|---|---|---|---|
| CN102630200 A | 20120808 | CN201080048126 | 20100917 |
| CN102630200 B | 20150401 | CN201080048126 | 20100917 |
| DE602010014259 D1 | 20140424 | DE201060014259T | 20100917 |
| EP2477810 A1 | 20120725 | EP20100757821 | 20100917 |
| EP2477810 B1 | 20140312 | EP20100757821 | 20100917 |
| GB200916379 A0 | 20091028 | GB20090016379 | 20090918 |
| JP2013505188 T2 | 20130214 | JP20120529344T | 20100917 |
| JP5636429 B2 | 20141203 | JP20120529344T | 20100917 |
| US2012176656 AA | 20120712 | US20100496691 | 20100917 |
| US9193135 BB | 20151124 | US20100496691 | 20100917 |
| WO11033313 A1 | 20110324 | WO2010GB51566 | 20100917 |

**Priority:**
GB20090016379 20090918 EP20100757821 20100917 WO2010GB51566 20100917

**Probable Assignee:** PILKINGTON GROUP LTD

**Assignee(s):** (std): BOOTE JOSEPH JEREMY ; BUTCHER REBECCA ; PILKINGTON GROUP LTD

**Assignee(s):** PILKINGTON GROUP LTD ST HELENS ; PILKINGTON GROUP LIMITED

**Inventor(s):** (std): BOOTE JOSEPH JEREMY ; BUTCHER REBECCA ; JEREMY BOOTE JOSEPH ; REBECCA BUTCHER

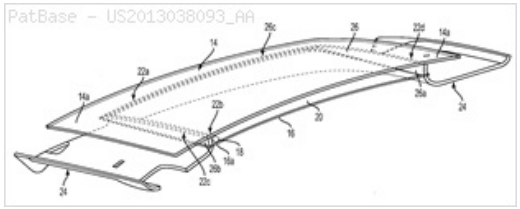
**Agent(s):** STANLEY ANDREW THOMAS; BUCHANAN INGERSOLL AND ROONEY PC

**Designated states:** AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PE PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

**5) Family number: 49824173** (US2013038093A)

**Title:** VEHICLE WINDOW WITH SHADE

**Abstract:** A window assembly for a vehicle includes outer and inner window panels and a spacer element disposed therebetween to establish an interpane cavity between the inner and outer window panels. At least one of (a) the outer window panel has a larger cross dimension relative to the inner window panel to provide overhang regions, and (b) the inner window panel has a different contour or curvature than that of the outer window panel so that the interpane cavity varies in gap distance across the window assembly. A roller shade is disposed in the cavity and is electrically deployable to coil and uncoil between a coiled light transmitting condition, where the roller shade functions to substantially allow light transmission through the window assembly, and an at least partially uncoiled light attenuating condition, where the roller shade functions to at least partially attenuate light transmission through the window assembly.




**Classifications:**
**International** (IPC 8-9): B60J1/00 B60J1/20 B60J3/00 B60J3/02 B60J3/06 B60J7/00 B60J7/043 B60J7/06 B60R13/07
B62D25/06 (Advanced/Invention);
B60J3/02 B62D25/06 (Advanced/Non-invention)
**CPC:** B60J7/0015 B62D25/06 B60J1/2013 B60J1/001 B60J7/043 G02B27/01 B60J3/0286 B60J1/2019
**European:** B60J7/00B1 B62D25/06
**US:** 160/370.22 160/89 296/152 296/215 296/219 296/97.5 296/97.8

**Family:**

| Publication number | Publication date | Application number | Application date |
|---|---|---|---|
| CN102947133 A | 20130227 | CN201180030437 | 20110422 |
| CN103781645 A | 20140507 | CN201280040739 | 20120622 |
| CN104661843 A | 20150527 | CN201380047945 | 20130626 |
| EP2560840 A1 | 20130227 | EP20110772744 | 20110422 |
| EP2560840 A4 | 20171129 | EP20110772744 | 20110422 |
| EP2723590 A1 | 20140430 | EP20120802328 | 20120622 |
| EP2723590 A4 | 20150715 | EP20120802328 | 20120622 |
| EP2872345 A1 | 20150520 | EP20130816223 | 20130626 |
| EP2872345 A4 | 20160511 | EP20130816223 | 20130626 |
| KR20130091661 A | 20130819 | KR20127030586 | 20110422 |
| KR20140041782 A | 20140404 | KR20147001646 | 20120622 |
| KR20150038039 A | 20150408 | KR20157003557 | 20130626 |
| US2013038093 AA | 20130214 | US20110642908 | 20110422 |
| US2014097636 AA | 20140410 | US20120125403 | 20120622 |
| US2015224856 AA | 20150813 | US20130414148 | 20130626 |
| US8827347 BB | 20140909 | US20110642908 | 20110422 |
| US9539883 BB | 20170110 | US20130414148 | 20130626 |
| WO11133830 A1 | 20111027 | WO2011US33515 | 20110422 |
| WO12177995 A1 | 20121227 | WO2012US43729 | 20120622 |
| WO14011395 A1 | 20140116 | WO2013US47873 | 20130626 |

**Priority:**

US20100327181P 20100423 US20110447994P 20110301 US20110642908 20110422
WO2011US33515 20110422 US20110500899P 20110624 US20110554016P 20111101
US20120593963P 20120202 US20120614881P 20120323 US20120643573P 20120507
US20120646556P 20120514 US20120653100P 20120530 US20120658126P 20120611
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US20120676404P 20120727 US20120697037P 20120905 US20120642908 20121023
US20120725216P 20121112 US20130760368P 20130204 US20130772017P 20130304
US20130805319P 20130326 US20130823645P 20130515 WO2013US47873 20130626
US20130414148 20130626 US20130125403 20131211

**Probable Assignee:** MAGNA MIRRORS OF AMERICA INC

**Assignee(s):** (std): MAGNA MIRRORS OF AMERICA INC ; SNIDER DARIN J ; WARREN NORMAN B

**Inventor(s):** (std): SNIDER DARIN J ; WARREN NORMAN B

**Agent(s):** Coyle Philip Aidan; COYLE PHILIP AIDAN; GARDNER LINN BURKHART AND FLORY LLP; FLORY TIMOTHY A; GARDNER LINN ET AL; GARDNER LINN BURKHART AND FLORY LLP AND ITS INDIVIDUAL ATTORNEYS NAMELY TIMOTHY A FLORY

**Designated states:** AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

**6) Family number: 52427739** (WO14015742A1)

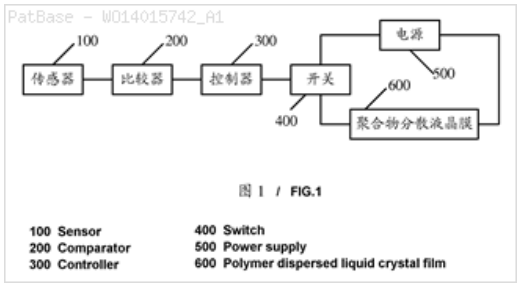
**Title:** VEHICLE SAFETY REMINDING DEVICE AND VEHICLE SAFETY REMINDING METHOD

**Abstract:** Disclosed are a vehicle safety reminding device and a vehicle safety reminding method. The device is provided on a vehicle and comprises: a sensor (100) for acquiring current state information of the vehicle; a comparator (200) connected to the sensor (100) and for comparing to determine whether or not the current state information of the vehicle meets a corresponding safety condition; a polymer dispersed liquid crystal film (600) provided on part of a windshield in front of the position of a driver of the vehicle; a power supply (500) connected to the polymer dispersed liquid crystal film (600); a switch (400) connected to the power supply (500) and the polymer dispersed liquid crystal film (600) such that the power supply (500) is switched between a state in which it supplies power to the polymer dispersed liquid crystal film (600) and another state in which it stops supplying power to the polymer dispersed liquid crystal film (600); a controller (300) connected to the switch (400) and the comparator (200), wherein when the safety condition is met, the controller (300) controls the switch (400) such that the power supply (500) supplies power to the polymer dispersed liquid crystal film (600), and otherwise, the controller (300) controls the switch (400) such that the power supply (500) stops supplying power to the polymer dispersed liquid crystal film (600). When encountering a problem in terms of vehicle safety, the device is able to timely remind a user to take measures to ensure safety during driving of the vehicle.

**Classifications:**

**International** (IPC 8-9): B60C23/02 B60J1/00 B60J1/02 B60J1/20 B60K37/06 B60Q5/00 B60R16/02 B60W50/14 G02F1/13 G02F1/1333 G02F1/1334 (Advanced/Invention)

**CPC:** G02F1/1334 B60J3/04 B60K37/06 B60J1/20 B60R16/03 B60Y2400/30 B60Y2400/3019 B60Y2400/303 B60W50/14 B60W2050/146 B60W2520/10 B60W2530/20 B60W2050/143 B60W2560/00




**Family:**

| Publication number | Publication date | Application number | Application date |
|---|---|---|---|
| CN102785538 A | 20121121 | CN201210262157 | 20120726 |
| EP2878469 A1 | 20150603 | EP20130823601 | 20130705 |
| EP2878469 A4 | 20170419 | EP20130823601 | 20130705 |
| JP2015516919 T2 | 20150618 | JP20150509295T | 20130705 |
| KR20140140564 A | 20141209 | KR20147027149 | 20130705 |
| WO14015742 A1 | 20140130 | WO2013CN078874 | 20130705 |

**Priority:**

CN201210262157 20120726 WO2013CN078874 20130705

**Probable Assignee:** FRANCE SAINT GOBAIN GLASS S A

**Assignee(s):** (std): FRANCE SAINT GOBAIN GLASS S A ; LI CHANGLE ; SAINT GOBAIN ; SAINT GOBAIN GLASS FRANCE ; SAINT GOBAIN SA

**Inventor(s):** (std): LI CHANGLE ; CHANGLE LI

**Agent(s):** RIBEAUDEAU MARION CHRISTINE; UNITALEN ATTORNEYS AT LAW

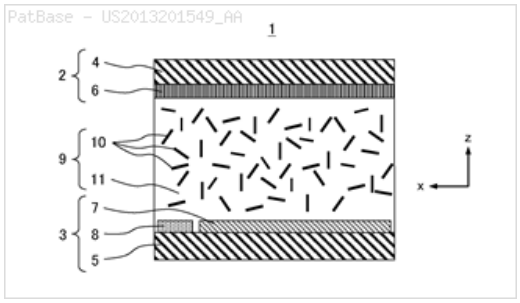
**Designated states:** AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

**7) Family number: 54513602** (US2013201549A)

**Title:** SUSPENDED PARTICLE DEVICE, LIGHT CONTROL DEVICE USING THE SAME, AND DRIVING METHOD

**Abstract:** A suspended particle device includes a first substrate; a second substrate; a first electrode that can be controlled for a potential; a second electrode that can be controlled for a potential different from that of the first electrode; an electrified body; and a liquid suspension containing charged light control particles and a dispersion medium, in which the first electrode, the second electrode and the electrified body are disposed between the first substrate and the second substrate, and the liquid suspension is sealed between the first substrate and the second substrate, and the light control particles are capable of being accumulated to a periphery of the electrified body. Thus, it is possible to ensure uniformity of transmission light as well as to hold a light transmittance state in a state where the power supply is stopped.

**Classifications:**
**International** (IPC 8-9): G02B26/00 G02B26/02 G02F1/167 G02F1/17 G09G3/34 (Advanced/Invention);
G02F1/00 G02F1/1333 H01G7/02 (Advanced/Non-invention)
**CPC:** G02F1/167 G02F1/172 G02B26/026 G02F1/0018 G02F1/0027 G02F1/133348 G02F2203/24 G09G3/3406 G09G3/3433 G09G3/344 G09G3/3453 H01G7/02 G02F2001/1676 G02F2202/07
**US:** 204/450 204/490 359/228 359/245 359/296




**Family:**

| Publication number | Publication date | Application number | Application date |
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| DE602013003616 D1 | 20151210 | DE201360003616T | 20130207 |
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| JP2013160967 A2 | 20130819 | JP20120023698 | 20120207 |
| JP5516616 B2 | 20140611 | JP20120023698 | 20120207 |
| US2013201549 AA | 20130808 | US20130761670 | 20130207 |
| US8995046 BB | 20150331 | US20130761670 | 20130207 |

**Priority:**
JP20120023698 20120207 EP20130154437 20130207

**Probable Assignee:** HITACHI CHEMICAL CO LTD

**Assignee(s):** (std): HITACHI CHEMICAL CO LTD

**Inventor(s):** (std): AKABOSHI HARUO ; AKAHOSHI HARUO ; KANEKO HIROKI ; KANEKO HIRONORI ; MORI SHUNSUKE

**Agent(s):** BEETZ AND PARTNER MBB PATENTANWAELTE; BEETZ AND PARTNER MBB PATENT U RECHTSANWAELTE; BEETZ AND PARTNER MBB; VOLPE AND KOENIG PC

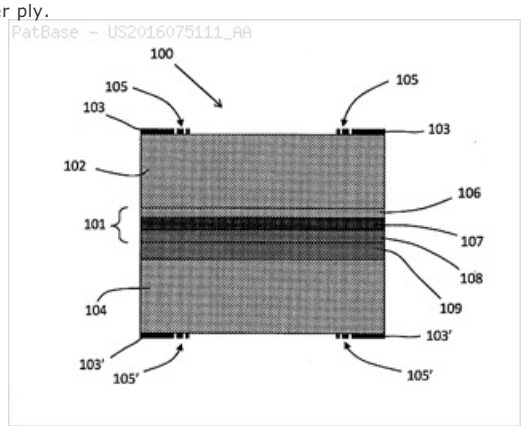
**Designated states:** AL AT BA BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC ME MK MT NL NO PL PT RO RS SE SI SK SM TR

**8) Family number: 54254833** (US2016075111A)

**Title:** LAMINATED GLAZING

**Abstract:** A laminated glazing is described comprising a first pane of glazing material having a first major surface and an opposing second major surface, there being an obscuration band on the second major surface extending around a portion of the periphery of the first pane such that the second major surface is not smooth. A first adhesive layer having a thickness of between 6 micro m and 100 micro m contacts a portion of the second major surface of the first pane of glazing material and a portion of the obscuration band. The laminated glazing also has a carrier ply carrying an infra red reflecting coating wherein the first adhesive layer is between the first pane of glazing material and the carrier ply.

**Classifications:**
**International** (IPC 8-9): B32B15/08 B32B17/10 B32B27/30 B32B3/10 B32B37/12 B32B7/12 B60J1/00 B60J1/02 B60J3/02 C03C27/12 (Advanced/Invention)
**CPC:** B32B7/12 B32B17/1077 B32B37/12 B32B2605/08 B32B2605/006 B32B2307/202 B32B17/10174 B32B17/10036 B32B17/10348 B32B17/10761 B32B17/10532 B32B17/10 B32B2367/00 B32B17/10266
**US:** 156/109 428/172 428/192




**Family:**

| Publication number | Publication date | Application number | Application date |
|---|---|---|---|
| CN105263706 A | 20160120 | CN201480031402 | 20140425 |
| EP2988930 A1 | 20160302 | EP20140719844 | 20140425 |
| GB201307495 A0 | 20130612 | GB20130007495 | 20130425 |
| JP2016525951 T2 | 20160901 | JP20160509552T | 20140425 |
| US2016075111 AA | 20160317 | US20140786863 | 20140425 |
| US9895864 BB | 20180220 | US20140786863 | 20140425 |
| WO14174308 A1 | 20141030 | WO2014GB51296 | 20140425 |

**Priority:**
GB20130007495 20130425 WO2014GB51296 20140425

**Probable Assignee:** PILKINGTON GROUP LTD
**Assignee(s):** (std): PILKINGTON GROUP LTD
**Inventor(s):** (std): DIXON JONATHAN BARCLAY
**Agent(s):** STANLEY ANDREW THOMAS; BUCHANAN INGERSOLL AND ROONEY PC; STANLEY ANDREW THOMAS ET AL
**Designated states:** AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

**9) Family number: 60160361** (US2017050415A)

**Title:** LAMINATED GLASS

**Abstract:** A laminated glass according to the present invention includes an outer glass sheet, an inner glass sheet that is arranged opposite to the outer glass sheet and has a smaller thickness than that of the outer glass sheet, and an interlayer sandwiched between the outer glass sheet and the inner glass sheet. A transmittance with respect to light having a wavelength of 850 to 950 nm is 30 to 80 percent. The outer glass sheet has a thickness of 1.8 to 2.3 mm. The inner glass sheet has a thickness of 0.6 to 2.0 mm. The interlayer includes a plurality of layers including at least a core layer. The core layer has a Young's modulus of 1 to 20 MPa at a frequency of 100 Hz and a temperature of 20 degrees centigrade, the Young's modulus being lower than the Young's modulus of the other layer.

**Classifications:**
**International** (IPC 8-9): B32B17/06 B32B17/10 B32B7/02 B60J1/00 B60J1/02 B60S1/58 C03C27/12 E06B3/66 (Advanced/Invention)
**CPC:** B60J1/008 C03C27/10 B32B17/06 B32B2307/412 B32B2309/02 B60J1/001 B60J1/02 B32B17/10036 B32B17/10633 B32B17/10761 B32B2307/56 B32B2250/03 B32B2307/102
**US:** 428/215


**Family:**

| Publication number | Publication date | Application number | Application date |
|---|---|---|---|
| CN105980325 A | 20160928 | CN201580008414 | 20150213 |
| CN105980325 B | 20180525 | CN201580008414 | 20150213 |
| EP3106443 A1 | 20161221 | EP20150749265 | 20150213 |
| EP3106443 A4 | 20170830 | EP20150749265 | 20150213 |
| JP2015151308 A2 | 20150824 | JP20140027049 | 20140214 |
| JP2015151309 A2 | 20150824 | JP20140027050 | 20140214 |
| JP2015160779 A2 | 20150907 | JP20140037626 | 20140227 |
| JP2015168584 A2 | 20150928 | JP20140042214 | 20140304 |
| JP2015168585 A2 | 20150928 | JP20140042215 | 20140304 |
| JP2015168586 A2 | 20150928 | JP20140042217 | 20140304 |
| JP2015168592 A2 | 20150928 | JP20140043802 | 20140306 |
| JP2015168598 A2 | 20150928 | JP20140044445 | 20140306 |
| JP2015168599 A2 | 20150928 | JP20140044705 | 20140307 |
| JP6178738 B2 | 20170809 | JP20140037626 | 20140227 |
| JP6193777 B2 | 20170906 | JP20140027049 | 20140214 |
| JP6267006 B2 | 20180124 | JP20140042214 | 20140304 |
| JP6267007 B2 | 20180124 | JP20140042215 | 20140304 |
| JP6267008 B2 | 20180124 | JP20140042217 | 20140304 |
| JP6295096 B2 | 20180314 | JP20140027050 | 20140214 |
| JP6295104 B2 | 20180314 | JP20140043802 | 20140306 |
| US2017050415 AA | 20170223 | US20150118735 | 20150213 |
| WO15122507 A1 | 20150820 | WO2015JP54044 | 20150213 |

**Priority:**

JP20140027049 20140214 JP20140027050 20140214 JP20140037626 20140227
JP20140042214 20140304 JP20140042215 20140304 JP20140042217 20140304
JP20140043802 20140306 JP20140044445 20140306 JP20140044705 20140307
WO2015JP54044 20150213

**Probable Assignee:** NIPPON SHEET GLASS CO LTD

**Assignee(s):** (std): NIPPON SHEET GLASS CO LTD

**Assignee(s):** NIPPON SHEET GLASS CO

**Inventor(s):** (std): OGAWA HISASHI ; OGAWA NAGAFUMI ; KANKI SATOSHI ; ASAOKA HISASHI ; ASAI TAKAHIRO ; KAMIYOSHI SATORU

**Agent(s):** WEBSTER JEREMY MARK; TACHIBANA KENJI; TANAKA JUNYA; YAMADA IICHIRO ET AL

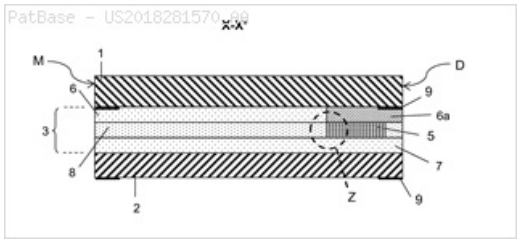
**Designated states:** AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

**10) Family number: 67013760** (US2018281570A)

**Title:** WINDSHIELD WITH ELECTRICALLY CONTROLLABLE SUN VISOR

**Abstract:** A windshield with an electrically controllable sun visor is described. The windshield includes an outer pane and an inner pane that are bonded to one another via an intermediate layer. According to one aspect, a functional element with electrically controllable optical properties is incorporated into the intermediate layer and above a central field of vision. The functional element is connected to the outer pane via a region of a first thermoplastic layer, and is connected to the inner pane via a region of a second thermoplastic layer. According to another aspect, the region of the first thermoplastic layer and/or the region of the second thermoplastic layer is tinted or colored.

**Classifications:**
**International (IPC 8-9):** B32B17/10 B60J3/04 (Advanced/Invention)
**International (IPC 1-7):** B60J3/04
**CPC:** B32B17/10348 B32B17/10761 B32B17/10871 B32B17/10302 B32B17/1088 B32B2307/412 B32B2605/006 B60J3/04 B32B17/10036 B32B17/10339 B32B17/10504 B32B17/1077 B32B17/10788 B32B2250/40




**Family:**

| Publication number | Publication date | Application number | Application date |
|---|---|---|---|
| BR112018006898 A2 | 20181016 | BR20181106898 | 20170222 |
| CA3009447 AA | 20180621 | CA20173009447 | 20170222 |
| CN107614302 A | 20180119 | CN201780000610 | 20170222 |
| IN201817015981 A | 20181012 | IN201817015981 | 20180427 |
| KR20180059531 A | 20180604 | KR20187012073 | 20170222 |
| US2018281570 AA | 20181004 | US20170772036 | 20170222 |
| WO17157626 A1 | 20170921 | WO2017EP54001 | 20170222 |

**Priority:**
EP20160160838 20160317 WO2017EP54001 20170222

**Probable Assignee:** SAINT GOBAIN GLASS FRANCE

**Assignee(s):** (std): SAINT GOBAIN ; SAINT GOBAIN GLASS FRANCE ; SAINT GOBAIN SA

**Assignee(s):** LABROT MICHAEL ; LINNHOFER DIETER

**Inventor(s):** (std): DIETER LINNHOEFER ; LABROT MICHAEL ; LINNHOEFER DIETER ; MICHAEL LABROT ; LINNHOFER DIETER

**Inventor(s):** LINNHFER DIETER

**Agent(s):** GOUDREAU GAGE DUBUC; LAVERY DE BILLY LLP; FEIST FLORIAN ARNO

**Designated states:** AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DJ DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KH KM KN KP KR KW KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW