



New connection on: : 17-10-2018 : 07:38:56 - Last disconnection on: : 17-10-2018 : 06:22:05

V 4.0.0.44358(LP,U,linux) (Rev:43856 2017-04-27 09:03:29 +0200#(D201802)) (RPM D201802)

Welcome to EPOQUE Rebuild under the Production Environment

[EPODOC: SS 11] ..fi epodoc



Database: EPODOC

[EPODOC: SS 11] (method or process) and laminat+

Results in EPODOC 267.706

[SS 12] * and (protect+ 3d layer)

Results in EPODOC 6.403

[SS 13] * and (reflective or mirror)

Results in EPODOC 188

[SS 14] 12 and (reflecti+ or mirror)

Results in EPODOC 527

[SS 15] * and (fog+ or frost+)

Results in EPODOC 0

[SS 16] 14 and (wash+ or clean+)

Results in EPODOC 10

[SS 17] ..li



1/10 © EPODOC / EPO

PN - [CN108231917](#) A 20180629

PR - CN201711388394 20171220

AP - CN201711388394 20171220

DT - I

CNOI - [H01L31/02167](#) ; [H01L31/02168](#) ; [H01L31/1804](#)

PA - HENGDIAN GROUP DMEGC MAGNETICS CO LTD

TI - PERC solar cell and preparation **method** thereof

AB - The invention belongs to the technical field of solar cells and discloses a PERC solar cell. The PERC solar cell comprises a silicon wafer, wherein a front anti-**reflection** layer is deposited/grown on the front surface of the silicon wafer, and an AlOx layer and a back passivation layer are deposited on the back surface of the silicon wafer; and the invention also discloses a preparation **method** of the PERC solar cell. Compared with a single SiNx layer, the back SiNx/SiNy periodic **laminated** structure provided by the invention improves bulk passivation, back **reflection**, battery Voc and Isc performance; the post-**cleaning process** provided by the invention is implemented after the back SiNx/SiNy periodic **laminated** structure is deposited, and can effectively etch a front Al2O3 layer without damaging the back **laminated** structure; if the **process** is implemented after laser windowing, the front Al2O3 is etched while residues and impurities caused by the laser windowing are effectively **cleaned**, so that the local back field quality and the battery conversion efficiency are improved; and in a **process** of carrying out back SiNx/SiNy deposition, the front Al2O3 **layer** can effectively **protect** an emitter junction.

2/10 © EPODOC / EPO

PN - [CN207440325U](#) U 20180601

PR - CN201720701057U 20170616

AP - CN201720701057U 20170616

DT - I

PA - SHENZHEN HAICHUANG OPTO ELECTRONICS CO LTD

TI - Polarizing plate

AB - The utility model discloses a polarizing plate, including polarizing layer, printing opacity basic unit and optics adhesive phase, polarizing layer's both ends face is equipped with first **protective layer** and second **protective layer** through optics adhesive **laminating** respectively, printing opacity basic unit locates the outside of first **protective layer** or second **protective layer**, still be equipped with between printing opacity basic unit and first **protective layer** or the second **protective layer** be used for reducing the blue light energy strain blue light particle **protective layer**, in the printing opacity basic unit by outside interior in proper order the **lamination** have the antimony oxide ization of mixing tin layer and printing opacity resin layer, the outside of printing opacity resin layer is equipped with the anti -**reflection** coating layer, the outside of anti -**reflecting** layer is equipped with antifouling layer. The beneficial effects of the utility model are that: effectively prevent the production of glare through the effect of mixing antimony oxide ization tin layer and printing opacity resin layer, prevention visual fatigue is through the effect on antifouling layer for it is **clean** convenient, and have thin thickness and simple structure, simplified manufacturing **process**, reduced manufacturing cost.

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PN - [US2006151004](#) A1 20060713

PNFP - US7846258 B2 20101207

PR - JP20020340935 20021125; JP20020340936 20021125; JP20030018151 20030128; WO2003JP14261 20031110

AP - US20030535842 20031110

DT - *; Rep

CT - || STSE (B2)
[US6277457](#) B1 20010821 [] (ONISHI HIROYUKI [JP], et al)
[US6618890](#) B2 20030916 [] (MUHR-SWEENEY AUDREY [US])
[US2002042962](#) A1 20020418 [] (WILLMAN KENNETH WILLIAM [US], et al)
 - || R141 (A1)
[US2002042962](#) A1 [];
[US6277457](#) B1 [];
[US6618890](#) B2 []

CCI - [B08B1/00](#) ; [B08B3/08](#)

CCA - [G02F2001/1316](#) ; [Y10T428/14](#) ; [Y10T428/28](#)

PA - (B2)
 NITTO DENKO CORP [JP]

TI - (A1)
Cleaning sheet and **method** for **cleaning** substrate processing apparatus
 - (B2)
Cleaning sheet and **method** of **cleaning** substrate processing equipment

AB - (A1)
 An aim of the invention is to provide a **cleaning** member which causes no contamination of a substrate processing equipment by ionic impurities in the removal of foreign matters attached to the interior of the equipment through **cleaning** by the conveyance thereof into the equipment, a **cleaning** member which causes little contamination of a substrate processing equipment by metal impurities attributed to a protective film in the removal of foreign matters attached to the interior of the equipment through **cleaning** by the conveyance thereof into the equipment and a **cleaning** member which causes no contamination of a substrate processing equipment by metal impurities in the removal of foreign matters attached to the interior of the equipment through **cleaning** by the conveyance thereof into the equipment. The means for solving the aims of the invention concerns a **cleaning** sheet comprising a **cleaning** layer provided on one side of a base material, from which **cleaning** layer F<->, Cl<->, Br<->, NO2<->, NO3<->, PO4<3->, SO4<2->, Na<+>, NH4<+> and K<+> are extractable with pure water each in an amount of not greater than 20 ppm (as extracted under boiling at 120 DEG C. for 1 hour), and a pressure-sensitive adhesive layer provided on the other, a carrying material with **cleaning** capacity comprising the aforementioned **cleaning** sheet **laminated** on a carrying material with a pressure-sensitive adhesive layer and a **method** for **cleaning** a substrate processing equipment which comprises conveying the aforementioned carrying material with **cleaning** capacity into the substrate processing equipment; a **cleaning** sheet comprising a releasable protective film **laminated** on a **cleaning layer**, wherein the **protective** film is formed by a material from which metal elements such as Na, K, Ca, Mg, Al, Ti, Cr, Mn, Fe, Co, Ni, Cu and Zn or compounds thereof are transferred to a silicon wafer each in an amount of not greater than 1×10^{12} atoms/cm² as calculated in terms of metal element when the protective film is brought into contact with (the **mirror** surface of) the silicon wafer at

23 DEG C. for 1 minute, a carrying material with **cleaning** capacity comprising the aforementioned **cleaning** sheet **laminated** on a carrying material with a pressure-sensitive adhesive layer and a **method** for **cleaning** a substrate processing equipment which comprises conveying the aforementioned carrying material with **cleaning** capacity into the substrate processing equipment with the releasable protective film peeled off the **cleaning** layer; and a **cleaning** sheet comprising a **cleaning** layer provided on one side of a base material, which **cleaning** layer containing metal elements such as Na, K, Mg, Al, Ca, Ti, Cr, Mn, Fe, Co, Ni, Cu and Zn or compounds thereof each in an amount of not greater than 5 ppm (mg/g) as calculated in terms of metal element, and a pressure-sensitive adhesive layer provided on the other, a carrying material with **cleaning** capacity comprising the aforementioned **cleaning** sheet **laminated** on a carrying material with a pressure-sensitive adhesive layer and a **method** for **cleaning** a substrate processing equipment which comprises conveying the aforementioned carrying material with **cleaning** capacity into the substrate processing equipment.

- (B2)

A **cleaning** sheet comprises a **cleaning** layer provided on one side of a base material, from which **cleaning** layer F-, Cl-, Br-, NO₂-, NO₃-, PO₄³⁻, SO₄²⁻, Na+, NH₄⁺ and K+ are extractable with pure water each in an amount of not greater than 20 ppm, when extracted under boiling at 120 DEG C. for 1 hour, and a pressure-sensitive adhesive layer provided on the other side of the base material, a carrying material with **cleaning** capacity comprising the aforementioned **cleaning** sheet **laminated** on a carrying material with a pressure-sensitive adhesive layer. The present disclosure also relates to a **method** for **cleaning** a substrate processing equipment which comprises conveying the aforementioned carrying material with **cleaning** capacity into the substrate processing equipment.

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PN - [TWI273648B](#) B 20070211

PNFP - TW200415720 A 20040816

PR - JP20020340935 20021125; JP20020340936 20021125; JP20030018151 20030128

AP - TW20030133016 20031125

DT - I

CCI - [B08B1/00](#) ; [B08B3/08](#)

CCA - [G02F2001/1316](#) ; [Y10T428/14](#) ; [Y10T428/28](#)

PA - (A B)

NITTO DENKO CORP [JP]

TI - (A B)

Cleaning sheet and **method** of **cleaning** substrate processing equipment

AB - (A)

An aim of the invention is to provide a **cleaning** member which causes no contamination of a substrate processing equipment by ionic impurities in the removal of foreign matters attached to the interior of the equipment through **cleaning** by the conveyance thereof into the equipment, a **cleaning** member which causes little contamination of a substrate processing equipment by metal impurities attributed to a protective film in the removal of foreign matters attached to the interior of the equipment through **cleaning** by the conveyance thereof into the equipment and a **cleaning** member

which causes no contamination of a substrate processing equipment by metal impurities in the removal of foreign matters attached to the interior of the equipment through **cleaning** by the conveyance thereof into the equipment. The means for solving the aims of the invention concerns a **cleaning** sheet comprising a **cleaning** layer provided on one side of a base material, from which **cleaning** layer F<SP>-</SP>, Cl<SP>-</SP>, Br<SP>-</SP>, NO₂<SP>-</SP>, NO₃<SP>-</SP>, PO₄<SP>³⁻</SP>, SO₄<SP>²⁻</SP>, Na<SP>+</SP>, NH₄<SP>+</SP> and K<SP>+</SP> are extractable with pure water each in an amount of not greater than 20 ppm (as extracted under boiling at 120 DEG C for 1 hour), and a pressure-sensitive adhesive layer provided on the other, a carrying material with **cleaning** capacity comprising the aforementioned **cleaning** sheet **laminated** on a carrying material with a pressure-sensitive adhesive layer and a **method** for **cleaning** a substrate processing equipment which comprises conveying the aforementioned carrying material with **cleaning** capacity into the substrate processing equipment; a **cleaning** sheet comprising a releasable protective film **laminated** on a **cleaning layer**, wherein the **protective** film is formed by a material from which metal elements such as Na, K, Ca, Mg, Al, Ti, Cr, Mn, Fe, Co, Ni, Cu and Zn or compounds thereof are transferred to a silicon wafer each in an amount of not greater than 110<SP>12</SP> atoms/cm<SP>2</SP> as calculated in terms of metal element when the protective film is brought into contact with (the **mirror** surface of) the silicon wafer at 23 DEG C for 1 minute, a carrying material with **cleaning** capacity comprising the aforementioned **cleaning** sheet **laminated** on a carrying material with a pressure-sensitive adhesive layer and a **method** for **cleaning** a substrate processing equipment which comprises conveying the aforementioned carrying material with **cleaning** capacity into the substrate processing equipment with the releasable protective film peeled off the **cleaning** layer; and a **cleaning** sheet comprising a **cleaning** layer provided on one side of a base material, which **cleaning** layer containing metal elements such as Na, K, Mg, Al, Ca, Ti, Cr, Mn, Fe, Co, Ni, Cu and Zn or compounds thereof each in an amount of not greater than 5 ppm ([μ] g/g) as calculated in terms of metal element, and a pressure-sensitive adhesive layer provided on the other, a carrying material with **cleaning** capacity comprising the aforementioned **cleaning** sheet **laminated** on a carrying material with a pressure-sensitive adhesive layer and a **method** for **cleaning** a substrate processing equipment which comprises conveying the aforementioned carrying material with **cleaning** capacity into the substrate processing equipment.

- (B)

An aim of the invention is to provide a **cleaning** member which causes no contamination of a substrate processing equipment by ionic impurities in the removal of foreign matters attached to the interior of the equipment through **cleaning** by the conveyance thereof into the equipment, a **cleaning** member which causes little contamination of a substrate processing equipment by metal impurities attributed to a protective film in the removal of foreign matters attached to the interior of the equipment through **cleaning** by the conveyance thereof into the equipment and a **cleaning** member which causes no contamination of a substrate processing equipment by metal impurities in the removal of foreign matters attached to the interior of the equipment through **cleaning** by the conveyance thereof into the equipment. The means for solving the aims of the invention concerns a **cleaning** sheet comprising a **cleaning** layer provided on one side of a base material, from which **cleaning** layer F⁻, Cl⁻, Br⁻, NO₂⁻, NO₃⁻, PO₄³⁻, SO₄²⁻, Na⁺, NH₄⁺ and K⁺ are extractable with pure water each in an amount of not greater than 20 ppm (as extracted under boiling at 120 DEG C for 1 hour), and a pressure-sensitive adhesive layer provided on the other, a carrying material

with **cleaning** capacity comprising the aforementioned **cleaning** sheet **laminated** on a carrying material with a pressure-sensitive adhesive layer and a **method** for **cleaning** a substrate processing equipment which comprises conveying the aforementioned carrying material with **cleaning** capacity into the substrate processing equipment; a **cleaning** sheet comprising a releasable protective film **laminated** on a **cleaning layer**, wherein the **protective** film is formed by a material from which metal elements such as Na, K, Ca, Mg, Al, Ti, Cr, Mn, Fe, Co, Ni, Cu and Zn or compounds thereof are transferred to a silicon wafer each in an amount of not greater than 1×10^{12} atoms/cm² as calculated in terms of metal element when the protective film is brought into contact with (the **mirror** surface of) the silicon wafer at 23 DEG C for 1 minute, a carrying material with **cleaning** capacity comprising the aforementioned **cleaning** sheet **laminated** on a carrying material with a pressure-sensitive adhesive layer and a **method** for **cleaning** a substrate processing equipment which comprises conveying the aforementioned carrying material with **cleaning** capacity into the substrate processing equipment with the releasable protective film peeled off the **cleaning** layer; and a **cleaning** sheet comprising a **cleaning** layer provided on one side of a base material, which **cleaning** layer containing metal elements such as Na, K, Mg, Al, Ca, Ti, Cr, Mn, Fe, Co, Ni, Cu and Zn or compounds thereof each in an amount of not greater than 5 ppm (mg/g) as calculated in terms of metal element, and a pressure-sensitive adhesive layer provided on the other, a carrying material with **cleaning** capacity comprising the aforementioned **cleaning** sheet **laminated** on a carrying material with a pressure-sensitive adhesive layer and a **method** for **cleaning** a substrate processing equipment which comprises conveying the aforementioned carrying material with **cleaning** capacity into the substrate processing equipment.

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PN - [JP2003227898](#) A 20030815

PR - JP20020025160 20020201

AP - JP20020025160 20020201

DT - I

FI - G02B17/00&Z; G02B5/08&A; G03F7/20&503; G03F7/20&521; G03F7/22&H; G21K1/06&C; G21K5/02&X; H01L21/30&531A

FT - 2H042/DA01; 2H042/DA12; 2H042/DA18; 2H042/DB00; 2H042/DC02; 2H042/DE00; 2H087/KA21; 2H087/NA05; 2H087/TA02; 2H087/UA09; 2H097/AA02; 2H097/AB09; 2H097/BA04; 2H097/BA10; 2H097/CA15; 2H097/EA01; 2H097/GB00; 2H097/LA10; 2H197/AA09; 2H197/AA10; 2H197/CA10; 2H197/FA01; 2H197/GA01; 2H197/GA13; 2H197/GA16; 2H197/GA20; 2H197/GA23; 2H197/GA24; 2H197/HA03; 5F046/GA03; 5F046/GB01; 5F146/GA03; 5F146/GA21; 5F146/GA24; 5F146/GA27; 5F146/GA28; 5F146/GB11; 5F146/GB14

PA - NIKON CORP

TI - MULTI-LAYER FILM **REFLECTING MIRROR**, SOFT X-RAY OPTICAL EQUIPMENT, EXPOSURE DEVICE AND **METHOD** FOR **CLEANING** IT

AB - PROBLEM TO BE SOLVED: To provide a multi-layer film **reflecting mirror** whose surface carbon contamination is restrained, a soft X-ray optical equipment, an exposure device, and a **method** for **cleaning** it.
- SOLUTION: The multi-layer film **reflecting mirror** is formed by alternately **laminating**, on a substrate 4, first layers 3 made of a substance where the difference between the

refractive index in a soft X-ray range and that in a vacuum is great and second layers 2 made of a substance where the difference between the refractive index in the soft X-ray range and that in a vacuum is little and includes a **protective layer** 1 made of a photocatalyst material on the uppermost layer of the multi-layer film. The contamination with carbon on the surface of the film can be removed by the multi-layer film **reflecting mirror** in this invention.

- COPYRIGHT: (C)2003,JPO

6/10 © EPODOC / EPO

PN - [JPH02172414](#) A 19900704
 PR - JP19880327804 19881227
 AP - JP19880327804 19881227
 DT - I
 FI - A41H5/00&A; A47G25/14; C04B41/81&Z
 FT - 3K099/AA03; 3K099/BA06; 3K099/BA19; 3K099/CA03; 3K099/CA54; 3K099/DA01; 3K099/DA05; 3K099/DA17; 3K099/DA23; 3K099/DA27
 PA - KARANTE KK
 TI - FAR INFRARED RAY RADIATION MATERIAL
 AB - PURPOSE:To perform effective transpiration of a residual solvent through irradiation of cloth and fibres after completion of **washing** with far infrared rays by a **method** wherein the surface and the back of a ceramics sheet n which a vent hole is formed are covered with a **protection layer** or a **reflection** sheet in the same shape as the ceramics sheet is mounted thereto throughout a surface and the surface is covered with the **protection layer**. CONSTITUTION:A ceramics sheet 3 is formed such that a ceramic material 3' is hardened by using an adhesive. The **lamination** is molded to form it in a curved shape or a substance molded in a fibrous state is molded in a curved shape through the medium of an adhesive. A protection material 2 is served to prevent direct contact of the surface of the ceramic sheet 3 with other member, and cloth and a material, on which a chemical compound is coated, can be selectively employed. A **reflection** material 5 improves the efficiency of far infrared rays, and is served to provide directional property, and a metallic foil, a metallic sheet, or a material, on which metallic powder coating is coated, can be selectively employed. A far infrared ray material is heated by radiating hot air, steam, or permeable heat rays by heat air serving as a heat source to increase the temperature of a solvent for **washing** remaining in a workpiece to promote transpiration.

7/10 © EPODOC / EPO

PN - [JPH09167340](#) A 19970624
 PR - US19950574423 19951215
 AP - JP19960236668 19960906
 DT - I
 FI - B23K26/00&A; G11B5/84&A
 FT - 4E068/AH00; 4E068/CA01; 4E068/CA03; 4E068/CA04; 4E068/CA07; 4E068/CA13; 4E068/DA09; 4E068/DB15; 4E168/AB01; 4E168/CB07; 4E168/DA02; 4E168/DA24; 4E168/DA43; 4E168/JA01; 4E168/JA06; 4E168/JA16; 4E168/JA28; 5D112/AA02;

5D112/AA03; 5D112/AA05; 5D112/AA07; 5D112/AA24; 5D112/BA06; 5D112/BD06;
5D112/GA02; 5D112/GA19; 5D112/GA20

- PA - KOMAG INC
- TI - **METHOD** FOR FORMATION OF UNIFORM-HEIGHT STRUCTURE FEATURE PART ON MAGNETIC RECORDING DISK
- AB - PROBLEM TO BE SOLVED: To form a laser structurally characteristic part within a desired range of height by making a radiation beam incident on a target surface with a selected pulse width and selected spot diameter. SOLUTION: A magnetic recording disk 25 has a substrate provided with a base material layer 42 and a plated under layer 44. A sputtered T layer 46, a magnetic layer 48, a magnetic **layer** 48 and a **protective** film **layer** 50 are **laminated** as additive layers on the substrate layer. The plating under layer 44 is **cleaned** by polishing the surface to a **mirror** finished surface after plating. This magnetic disk 25 is arranged in a disk accepting region. The black point of the laser beam is focused to the spot on the plating lower layer 44 by a converging optical element. The incident laser beam locally melts the target surface. The molten part is rapidly solidified to allow the structurally characteristic part to remain.

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- PN - [JPH04174401](#) A 19920622
- PR - JP19900174581 19900703
- AP - JP19900221041 19900824
- DT - I
- FI - G02B5/08&C
- FT - 2H042/DA01; 2H042/DA02; 2H042/DA10; 2H042/DA15; 2H042/DA18; 2H042/DC02;
2H042/DE04
- PA - RICOH KK
- TI - REFLECTER
- AB - PURPOSE:To improve thermal shock resistance and heat/moisture resistance by providing the **mirror** face of a reflector base body made of brilliant alumi num alloy with a surface **protecting layer** composed of two layers, namely a lower layer formed of silicon dioxide and an upper layer formed of tantalum pentoxide. CONSTITUTION:A reflector base body 1 is formed of brilliant aluminum alloy (A5650) by the rolling **method**. After the base body 1 is precisely **cleaned** and dried sufficiently, it is attached inside a vacuum depositing vessel, and a target formed of silicon dioxide is heated by electron beam to vapor-deposit a lower layer 3a onto the **mirror** face 2 of the base body 1. An upper layer 3b is then vapor-deposited on the lower layer 3a using a target formed of tantalm pentoxide to **laminatedly** form a surface **protecting layer** 3 for producing a reflector A suitable for this invention. A similar effect can be obtained by vapor-depositing a surface **protecting layer** formed of aluminum nitride.

9/10 © EPODOC / EPO

- PN - [JPH0636352](#) A 19940210
- PR - JP19920195520 19920722
- AP - JP19920195520 19920722
- DT - I



FI	- G11B7/24; G11B7/24&534J; G11B7/24&538L; G11B7/254
FT	- 5D029/JB16; 5D029/MA27
PA	- ASAHI CHEMICAL IND
TI	- PHASE TRANSITION TYPE OPTICAL DISK
AB	- PURPOSE:To improve the durability of the recording layer of the phase transition type optical disk to repetition of overwriting by decreasing the thermal damages incurred on the recording layer of the disk. CONSTITUTION:Metallic layers 6 are provided right above or below the recording layer 3 of the phase transition type optical disk or both thereof. A protective layer 2 consisting of a ZnS.SiO ₂ thin film of 200nm thickness, the recording layer 3 consisting of an SbTeGe alloy thin film of 25nm thickness, the metallic layer 6 consisting of Si of 5nm thickness, an interference layer 4 consisting of a ZnS.SiO ₂ thin film of 25nm thickness, and a reflection layer 5 consisting of an Al alloy thin film of 150nm thickness are formed and laminated successively by a sputtering method on a transparent substrate 1 made of clean polycarbonate provided with guide grooves in, for example, Figs.. The heat generated in the recording layer 3 is partly diffused into the metallic layer 6, by which the thermal damages incurred on the recording layer are decreased.

10/10 © EPODOC / EPO

PN	- JP2000280413 A 20001010
PR	- JP19990096190 19990402
AP	- JP19990096190 19990402
DT	- I

FI	- B01J21/06&Z; B01J31/06&Z; B01J35/02&J; B32B15/01&E; B32B27/20&Z; B32B27/36; B32B9/00&A; C08K3/22; C08L83/04
FT	- 4F100/AA17B; 4F100/AA21C; 4F100/AA27B; 4F100/AA28B; 4F100/AB01B; 4F100/AB17B; 4F100/AB24B; 4F100/AB31B; 4F100/AH06C; 4F100/AK01A; 4F100/AR00B; 4F100/AR00D; 4F100/BA03; 4F100/BA04; 4F100/BA07; 4F100/BA10A; 4F100/BA10C; 4F100/BA10D; 4F100/DE01C; 4F100/GB07; 4F100/GB16; 4F100/GB23; 4F100/GB32; 4F100/JB16A; 4F100/JG05B; 4F100/JK14; 4F100/JL08C; 4F100/JL13D; 4F100/JN01A; 4F100/JN01B; 4F100/JN06; 4F100/JN06B; 4F100/JN17B; 4G069/AA03; 4G069/AA08; 4G069/BA02A; 4G069/BA02B; 4G069/BA04A; 4G069/BA04B; 4G069/BA05A; 4G069/BA22A; 4G069/BB04A; 4G069/BB06A; 4G069/BC18A; 4G069/BC22A; 4G069/BC31A; 4G069/BC32A; 4G069/BC33A; 4G069/BC50A; 4G069/BC50B; 4G069/BC51A; 4G069/CA10; 4G069/CA11; 4G069/CA15; 4G069/DA06; 4G069/EA08; 4G069/EB18X; 4G069/EB18Y; 4G069/FB13; 4G069/FB23; 4G069/FB66; 4G169/AA03; 4G169/AA08; 4G169/BA04A; 4G169/BA04B; 4G169/BA05A; 4G169/BA21A; 4G169/BA21B; 4G169/BA21C; 4G169/BA22A; 4G169/BA22B; 4G169/BA48A; 4G169/BB02A; 4G169/BB02B; 4G169/BB04A; 4G169/BC18A; 4G169/BC22A; 4G169/BC31A; 4G169/BC32A; 4G169/BC32B; 4G169/BC33A; 4G169/BE32A; 4G169/BE32B; 4G169/BE32C; 4G169/CD10; 4G169/DA05; 4G169/EA08; 4G169/EB15Y; 4G169/EB18X; 4G169/EB18Y; 4G169/EB19; 4G169/EC22Y; 4G169/EC28; 4G169/ED04; 4G169/FA03; 4G169/FB23; 4G169/HA01; 4G169/HB01; 4G169/HB02; 4G169/HC15; 4G169/HD10; 4G169/HD18; 4G169/HE06; 4J002/CP031; 4J002/DE136; 4J002/GF00
PA	- TEIJIN LTD
TI	- LAMINATED FILM
AB	- PROBLEM TO BE SOLVED: To ensure that the heat ray reflecting function and the anti-scratch properties are outstanding and the performance as a film for indoor window use is long-lasting by laminating a layer which shows a low heat ray absorbing level as a protecting layer for a heat ray reflecting layer and also photocatalytic properties with a self- cleaning capability and further is composed of a specific titanium oxide. SOLUTION: A heat ray reflecting layer is formed on one of a transparent thermoplastic resin film and a photocatalytic functional layer composed of a composition comprising a titanium oxide and the hydrolyzed product of a hydrolyzable silicon compound is formed on the heat ray reflecting layer. A base material film is a heat- resistant thermoplastic film which is transparent and flexible and further, enables a vapor deposited layer to be formed by a sputtering process , a vacuum vapor depositing process or the like on the film. The heat ray reflecting layer is a layer having a heat ray reflecting performance or a heat ray shielding performance and a metal layer and a dielectric layer alternately laminated . On the surface of the reflecting layer, the photocatalytic functional layer is formed which is constituted of the titanium oxide and the hydrolyzable silicon compound showing a catalytic action to the oxidation-reduction of an organic matter by emitting the light having a specified energy.