

Title (en)
LIGHT-TRANSMISSIBLE PLATE SHIELDING ELECTROMAGNETIC WAVES

Publication
EP 0200452 A3 19890201 (EN)

Application
EP 86302982 A 19860421

Priority
JP 8466285 A 19850422

Abstract (en)
[origin: EP0200452A2] A light-transmissible plate having the function of shielding electromagnetic waves comprises a transparent plastic base plate (1), a hard coating layer (2, 2 min) on the base plate (1), an electroconductive layer (3) on the hard coating layer (2) and a layer (4) having low refractive index on the electroconductive layer (3). The plate (100) can shield electromagnetic waves, and can have high damage resistance even if the plastic constituting the base plate (1) has low surface hardness. Moreover, it is possible to give the plate (100) the function of preventing reflection. A further anti-reflection film composed of a plurality of layers (21, 22, 23, 24) may be formed on a hard coating layer (2 min) on the surface opposite to the surface on which the electroconductive layer (3) is provided. The film has excellent adhesion, durability, abrasion resistance, wear resistance, shock resistance, chemical resistance, flexibility, heat resistance, light resistance, weather resistance and static charge resistance, and has excellent properties of shielding electromagnetic waves, eliminating static electricity and preventing reflection.

IPC 1-7
G02B 5/20; **G02B 5/28**; **G02B 1/10**; **H01J 29/86**; **H01J 29/89**

IPC 8 full level
C08J 7/04 (2006.01); **G02B 1/10** (2015.01); **G02B 1/116** (2015.01); **G02B 1/14** (2015.01); **G09F 9/00** (2006.01); **H01J 29/86** (2006.01); **H01J 29/89** (2006.01); **H04N 5/65** (2006.01)

CPC (source: EP)
H01J 29/868 (2013.01); **H01J 29/896** (2013.01); **H01J 2229/8918** (2013.01); **H01J 2229/8922** (2013.01)

Citation (search report)
• [A] GB 2121075 A 19831214 - TOYODA CHUO KENKYUSHO KK
• [A] US 3760215 A 19730918 - SACH G
• [A] US 4381421 A 19830426 - COATS WARREN D, et al
• [A] US 4128303 A 19781205 - ONOKI FUMIO, et al
• [A] GB 2042854 A 19800924 - DELTA DATA SYST
• [A] DE 3430406 A1 19850314 - RIKEN EMC CO [JP]
• [A] US 4422721 A 19831227 - HAHN ROBERT E [US], et al
• [A] US 4433247 A 19840221 - TURNER NORMAN L [US]
• [A] US 3984581 A 19761005 - DOBLER HERMANN R, et al
• [A] THIN SOLID FILMS, Band 124, Nr. 3/4, Februar 1985, Seiten 323-333, Lausanne, CH; A.J. PERRY et al.: "Hardness, adhesion and abrasion resistance of TiO2 films on glass"
• [A] PATENT ABSTRACTS OF JAPAN, Band 8, Nr. 97 (P-272)[1534], Mai 1984; & JP-A-59 010 901 (NIHON KOUGAKU KOGYO K.K.) 20-01-1984
• [A] PATENT ABSTRACTS OF JAPAN, Band 8, Nr. 92 (P-271)[1529], 27. April 1984; & JP-A-59 007 902 (SUWA SEIKOSHA K.K.) 17-01-1984
• [A] PATENT ABSTRACTS OF JAPAN, Band 9, Nr. 86 (P-349)[1809], 16. April 1985; JP-A-59 216 101 (TORAY K.K.) 06-12-1984

Cited by
FR2670981A1; FR2690041A1; US6686031B2; DE3935918A1; EP0301118A1; FR2696277A1; EP0841680A1; US6111352A; US6784608B2; EP0372488A3; EP0753762A1; US5874801A; WO8802547A1; WO9832152A1; EP0277818B1

Designated contracting state (EPC)
DE FR GB IT NL

DOCDB simple family (publication)
EP 0200452 A2 19861105; **EP 0200452 A3 19890201**; **EP 0200452 B1 19940727**; DE 3689989 D1 19940901; DE 3689989 T2 19950209; JP H0719551 B2 19950306; JP S61245449 A 19861031

DOCDB simple family (application)
EP 86302982 A 19860421; DE 3689989 T 19860421; JP 8466285 A 19850422