

Title (en)

Electrophotographic photosensitive member and electrophotographic apparatus, device unit and facsimile machine using the same.

Title (de)

Elektrofotografisches, lichtempfindliches Element, elektrofotografischer Apparat, Geräteeinheit und Faksimile-Gerät unter Verwendung desselben.

Title (fr)

Élément photosensible électrophotographique, son appareil et machine de fac-similé l'utilisant.

Publication

EP 0504794 A1 19920923 (EN)

Application

EP 92104575 A 19920317

Priority

- JP 7729091 A 19910318
- JP 7729191 A 19910318
- JP 7729291 A 19910318

Abstract (en)

A electrophotographic photosensitive member and an electrophotographic apparatus, a device unit and a facsimile machine using an electrophotographic photosensitive member which comprises a conductive support, a photosensitive layer and a protective layer, the protective layer containing resin formed by hardening a light-setting type acrylic monomer, and the photosensitive layer containing at least one compound selected from the group consisting of (A), (B) and (C) below: (A) styryl compounds having a structure expressed by the following formula (1) and a melting point not higher than 135 DEG C; <CHEM> wherein Ar<1> and Ar<2> are aromatic ring groups, Ar<3> is a bivalent aromatic ring group or a bivalent heterocyclic group, R<1> is an alkyl group or an aromatic ring group, R<2> is a hydrogen atom, an alkyl group or an aromatic ring group, and n1 is 1 or 2, R<1> and R<2> possibly linking to form a ring when n1 = 1: (B) triarylamine compounds having a structure expressed by the following formula (2) and a melting point not higher than 150 DEG C; <CHEM> wherein Ar<4>, Ar<5> and Ar<6> are each an aromatic ring group or a heterocyclic group: (C) hydrazone compounds having a structure expressed by the following formula (3) and a melting point not higher than 155 DEG C; <CHEM> wherein R<3> is a hydrogen atom or an alkyl group, R<4> and R<5> are alkyl groups, aralkyl groups or aromatic ring groups, n2 is 1 or 2, A is an aromatic ring group, a heterocyclic group or -CH=C(R<6>)R<7> (R<6> and R<7> are hydrogen atoms, aromatic ring groups or heterocyclic groups, but will never be hydrogen atoms at the same time). The photosensitive member suppresses the occurrence of cracks during forming of the protective layer, has high durability, and is free from any image defects. <IMAGE>

IPC 1-7

G03G 5/06; G03G 5/147

IPC 8 full level

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CPC (source: EP US)

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Citation (search report)

- [XP] EP 0443626 A2 19910828 - IDEMITSU PETROCHEMICAL CO [JP]
- [XP] EP 0425224 A1 19910502 - FUJI PHOTO FILM CO LTD [JP]
- [XP] EP 0464749 A1 19920108 - CANON KK [JP]
- [XP] EP 0460558 A1 19911211 - CANON KK [JP]
- [Y] DE 2917151 A1 19791108 - CANON KK
- [Y] US 4988565 A 19910129 - DE MUNCK JOHANNES W J [NL], et al
- [A] PATENT ABSTRACTS OF JAPAN vol. 12, no. 161 (P-702)(3008) 17 May 1988 & JP-A-62 275 271 (FUJI XEROX CO LTD) 30 November 1987
- [A] PATENT ABSTRACTS OF JAPAN vol. 8, no. 48 (P-258)(1485) 3 March 1984 & JP-A-58 198 047 (HITACHI) 17 November 1983

Cited by

EP0618507A1; EP0591010A1; US5449580A; EP0810480A3; US5876890A; EP0823668A1; US5837412A; EP0633507A1; US5510218A; EP0823669A1; US5932383A; EP1529779A3; EP0602651A1; US5455135A; EP0631191A1; KR100503067B1; US2014127618A1; CN103809398A; US9023562B2; US10032568B2; US6214503B1; US7387845B2; WO0022483A1; WO0146757A1

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