Title (en)

MULTILAYER OPTICAL DIELECTRIC COATING

Publication

EP 0402429 A4 19920108 (EN)

Application

EP 89910726 A 19890905

Priority

- DE 3830217 A 19880905
- US 26042988 A 19881020

Abstract (en)

[origin: WO9002964A1] A highly damage resistant, multilayer, optical reflective coating (20) includes alternating layers (24, 26) of doped and undoped dielectric material. The doping levels are low enough that there are no distinct interfaces between the doped and undoped layers so that the coating has properties nearly identical to the undoped material. The coating is fabricated at high temperature with plasma-assisted chemical vapor deposition techniques to eliminate defects, reduce energy-absorption sites, and maintain proper chemical stoichiometry. A number of differently-doped layer pairs, each layer having a thickness equal to one-quarter of a predetermined wavelength in the material are combined to form a narrowband reflective coating (20) for a predetermined wavelength. Broadband reflectors (55) are made by using a number of narrowband reflectors, each covering a portion of the broadband.

IPC 1-7

G02B 5/26; G02B 5/28

IPC 8 full level

G02B 5/08 (2006.01); **G02B 5/28** (2006.01)

CPC (source: EP)

G02B 5/0833 (2013.01); **G02B 5/0883** (2013.01); **G02B 5/285** (2013.01); **G02B 5/289** (2013.01)

Citation (search report)

- [X] WO 8501115 A1 19850314 - HUGHES AIRCRAFT CO [US]
- [Y] H.A. MacLEOD: "Thin-film optical filters", 2nd edition, 1986, pages 172-179, Adam Hilger, Bristol, GB; "All-dielectric multilayers with extended high-reflectance zones"
- See references of WO 9002964A1

Designated contracting state (EPC)

AT BE CH DE FR GB IT LI LU NL SE

DOCDB simple family (publication)

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