

Title (en)  
Ultraviolet ray-shielding agent and tube.

Title (de)  
Ultraviolettstrahlenschutz und Rohr.

Title (fr)  
Agent et tube de protection contre les rayons ultraviolets.

Publication  
**EP 0389717 A2 19901003 (EN)**

Application  
**EP 89312420 A 19891129**

Priority  
JP 7387489 A 19890328

Abstract (en)  
Disclosed is an ultraviolet ray-shielding agent for selectively shielding ultraviolet rays while allowing a transmission of visible rays therethrough, comprising a visible ray-transmitting binder and extremely fine zinc oxide particles having an average size of 0.1  $\mu\text{m}$  or less in a mixing ratio of the zinc oxide particles to the binder of 1/10 to 10/1, and an ultraviolet ray-shielding tube for visible ray-irradiation luminescent lamps comprising a transparent substrate tube for sealing a light emission source therein, and a coating formed on a surface of the substrate tube and comprising the above-mentioned ultraviolet ray-shielding agent.

IPC 1-7  
**C03C 17/25; H01J 61/35; H01J 61/40**

IPC 8 full level  
**H01J 9/20** (2006.01); **H01J 61/35** (2006.01); **H01J 61/40** (2006.01); **H01K 1/32** (2006.01); **H01K 3/00** (2006.01)

CPC (source: EP)  
**H01J 61/40** (2013.01)

Cited by  
NL9301024A; DE4137819A1; EP0758141A3; EP0662704A1; DE4432770A1; DE4432770C2; US5464462A; US5572091A; CN110349833A; WO9923687A1

Designated contracting state (EPC)  
DE GB NL

DOCDB simple family (publication)  
**EP 0389717 A2 19901003; EP 0389717 A3 19910424; EP 0389717 B1 19960911**; DE 68927166 D1 19961017; DE 68927166 T2 19970220; HK 1000298 A1 19980220; JP H02253554 A 19901012

DOCDB simple family (application)  
**EP 89312420 A 19891129**; DE 68927166 T 19891129; HK 97101855 A 19970926; JP 7387489 A 19890328