

AN ALUMINUM NITRIDE FILM AND A SUBSTANCE COATED WITH SAME

[Abstract]

There are provided an aluminum nitride film and a substance coated with such a film; the film is new in that it has a brightness or lightness L^* of 60 or lower; preferably the film has a transmittance of 15% or lower for a visible and near infrared radiation having a wave length of 0.35 - 2.5 micrometers, the combined concentration of metallic elements as impurities but for Al is 50 ppm or smaller, and the film is heat-treated at a temperature of 1050 degrees centigrade or higher but lower than 1400 degrees centigrade, and the film is a product of CVD method; the substance coated with the film is preferably a ceramic material such as a nitride, an oxide, and a carbide or a metal having a low thermal expansion coefficient such as tungsten, molybdenum and tantalum.

Fig. 1