[0007]

Patent Document 1: JP-A-2012-22028

Patent Document 2: JP-A-2002-348568

Patent Document 3: JP-A-2007-273440

Patent Document 4: JP-A-2002-317175

Patent Document 5: JP-A-2001-164245

Patent Document 6: JP-A-2011-241160

Patent Document 7: JP-A-2014-136771

Patent Document 8: JP-A-2011-149028

SUMMARY

PROBLEM TO BE SOLVED

[0008]

The stabilizer described in Patent Document 8 is effective in enhancing the durability but is not satisfied. Furthermore, such a stabilizer has relatively strong absorption in the visible region and absorbs light emitted by the luminescent material, and thus a problem of reduced efficiency arises. In this way, the technique using an organic luminescent material capable of satisfying both high color purity and high durability, as a component of a color conversion composition, is still insufficient.

[0009]

The problem to be solved by the present disclosure is to achieve both enhanced color reproducibility and durability, particularly, both high-color-purity emission and durability, in a color conversion composition used for a liquid crystal display or LED lighting.

MEANS FOR SOLVING THE PROBLEMS

[0010]

In an aspect, there is provided a color conversion composition for converting

incident light into light having longer wavelength than the incident light, in which the color conversion composition includes the following components (A) to (C):

(A) at least one luminescent material,

(B) a binder resin, and

(C) at least one of a tertiary amine, a catechol derivative and a nickel compound, and

in which the tertiary amine, catechol derivative and nickel compound have a molar extinction coefficient ε of 100 or less in the whole wavelength region from 400 nm to 800 nm.

[0010a]

In another aspect, there is provided a color conversion film comprising a layer obtained by curing the color conversion composition as defined above.

[0010b]

In another aspect, there is provided a light source unit comprising a light source and the color conversion film as defined above.

[0010c]

In another aspect, there is provided a display comprising the light source unit as defined above.

[0010d]

In another aspect, there is provided a lighting comprising the light source unit as defined above.

ADVANTAGE OF THE EMBODIMENTS DISCLOSED HEREIN

[0011]

The color conversion composition of the present disclosure and the color conversion film using the same can achieve both high color purity and durability, so that both color reproducibility and durability can be satisfied.

BRIEFDESCRIPTION OF THE DRAWINGS

[0012]

[Fig. 1] Fig. 1 is a schematic cross-sectional view illustrating one example of the color conversion film of the present invention.

[Fig. 2] Fig. 2 is a schematic cross-sectional view illustrating one example of the color conversion film of the present invention.

[Fig. 3] Fig. 3 is a schematic cross-sectional view illustrating one example of the color conversion film of the present invention.

[Fig. 4] Fig. 4 is an absorption spectrum of the compound of Synthesis Example 1.

[Fig. 5] Fig. 5 is an emission spectrum of the compound of Synthesis Example 1.

[Fig. 6] Fig. 6 is an absorption spectrum of the compound of Synthesis Example