CLAIMS

1. A wavelength-converting resin composition for a photovoltaic cell, comprising: a fluorescent substance having a maximum absorption wavelength in an absorbance spectrum of $\lambda_{max}$ (nm); resin particles; and a dispersion medium resin,

wherein a value of $A_1$ ($\lambda$), which is represented by the following Equation 1, at the maximum absorption wavelength $\lambda_{max}$ (nm) is $3.0\times10^{-4}$ (O. D. /μm) or less in a case in which:

an intensity of transmitted light that is obtained as a result of incident light having a light intensity of $I_0$ ($\lambda$) at a wavelength $\lambda$ (nm) having passed through a resin film in a thickness direction of the resin film, the resin film being formed from the resin composition and having a thickness of t (μm), is defined as I ($\lambda$); and

an intensity of transmitted light that is obtained as a result of the incident light having passed through a reference resin film in a thickness direction of the reference resin film, the reference resin film being formed from a reference resin composition obtained by excluding the fluorescent substance and the resin particles from the resin composition, and having a thickness of $t_{ref}$ (μm), is defined as $I_{ref}$ ($\lambda$):

Equation 1: $A_1(\lambda) = \{\log(I_0(\lambda)/I(\lambda))\}/t - \log\{(I_0(\lambda)/I_{ref}(\lambda))\}/t_{ref}$.

2. The wavelength-converting resin composition for a photovoltaic cell of claim 1, wherein the fluorescent substance is encapsulated in the resin particles.

3. The wavelength-converting resin composition for a photovoltaic cell of claim 1 or claim 2, wherein the fluorescent substance is a rare earth complex comprising an organic ligand.

4. A photovoltaic cell module, comprising a light transmitting layer including the wavelength-converting resin composition for a photovoltaic cell of any one of claims 1 to 3.

5. A method for evaluating a wavelength-converting resin composition for a photovoltaic

cell, the method comprising evaluating a wavelength conversion efficiency based on a value of $A_1$ ($\lambda$), which is represented by the following Equation 1, at a maximum absorption wavelength $\lambda_{max}$ (nm), in a case in which:

an intensity of transmitted light that is obtained as a result of incident light having a light intensity of $I_0$ ($\lambda$) at a wavelength $\lambda$ (nm) having passed through a resin film in a thickness direction of the resin film, the resin film being formed from the resin composition and having a thickness of t (μm), is defined as I ($\lambda$); and

an intensity of transmitted light that is obtained as a result of the incident light having passed through a reference resin film in the thickness direction of the reference resin film, the reference resin film being formed from a reference resin composition obtained by excluding the fluorescent substance and the resin particles from the resin composition, and having a thickness of $t_{ref}$ (μm), is defined as $I_{ref}$ ($\lambda$):

Equation 1: $$A_1(\lambda) = \{\log(I_0(\lambda)/I(\lambda))\}/t - \log\{(I_0(\lambda)/I_{ref}(\lambda))\}/t_{ref}.$$

CLAIMS

1. A wavelength-converting resin composition for a photovoltaic cell, comprising: a fluorescent substance having a maximum absorption wavelength in an absorbance spectrum of $\lambda_{max}$ (nm); resin particles; and a dispersion medium resin,

wherein a value of $A_1(\lambda)$, which is represented by the following Equation 1, at the maximum absorption wavelength $\lambda_{max}$ (nm) is $3.0\times10^{-4}$ (O.D./μm) or less in a case in which:

an intensity of transmitted light that is obtained as a result of incident light having a light intensity of $I_0(\lambda)$ at a wavelength $\lambda$ (nm) having passed through a resin film in a thickness direction of the resin film, the resin film being formed from the resin composition and having a thickness of t (μm), is defined as I (λ); and

an intensity of transmitted light that is obtained as a result of the incident light having passed through a reference resin film in a thickness direction of the reference resin film, the reference resin film being formed from a reference resin composition obtained by excluding the fluorescent substance and the resin particles from the resin composition, and having a thickness of $t_{ref}$ (μm), is defined as $I_{ref}(\lambda)$:

Equation 1: $A_1(\lambda) = \{\log(I_0(\lambda)/I(\lambda))\}/t - \log\{(I_0(\lambda)/I_{ref}(\lambda))\}/t_{ref}$.

2. The wavelength-converting resin composition for a photovoltaic cell of claim 1, wherein the fluorescent substance is encapsulated in the resin particles.

3. The wavelength-converting resin composition for a photovoltaic cell of claim 1, wherein the fluorescent substance is a rare earth complex comprising an organic ligand.

4. The wavelength-converting resin composition for a photovoltaic cell of claim 2, wherein the fluorescent substance is a rare earth complex comprising an organic ligand.

5. A photovoltaic cell module, comprising a light transmitting layer including the wavelength-converting resin composition for a photovoltaic cell of any one of claims 1 to 4.

6. A method for evaluating a wavelength-converting resin composition for a photovoltaic cell, the method comprising evaluating a wavelength conversion efficiency based on a value of $A_1(\lambda)$, which is represented by the following Equation 1, at a maximum absorption wavelength $\lambda_{max}$ (nm), in a case in which:

an intensity of transmitted light that is obtained as a result of incident light having a light intensity of $I_0(\lambda)$ at a wavelength $\lambda$ (nm) having passed through a resin film in a thickness direction of the resin film, the resin film being formed from the resin composition and having a thickness of t (μm), is defined as I (λ); and

an intensity of transmitted light that is obtained as a result of the incident light having passed through a reference resin film in the thickness direction of the reference resin film, the reference resin film being formed from a reference resin composition obtained by excluding the fluorescent substance and the resin particles from the resin composition, and having a thickness of $t_{ref}$ (μm), is defined as $I_{ref}(\lambda)$:

Equation 1: $A_1(\lambda) = \{\log(I_0(\lambda)/I(\lambda))\}/t - \log\{(I_0(\lambda)/I_{ref}(\lambda))\}/t_{ref}$.