Claims

1. Cover glass for a photovoltaic module (P), wherein the cover glass comprises at least one colored area (1, 2, 3, 4, 5, 6),
wherein at least two print opacities (D) of the colored area (1, 2, 3, 4, 5, 6) are selected such that a pre-determined relative efficiency (RE) is achieved,
wherein the photovoltaic module's (P) relative efficiency is the relationship between the efficiency of a photovoltaic module provided with a certain colored cover glass and the efficiency of the same photovoltaic module, when provided with a transparent cover glass,
wherein the colored area (1, 2, 3, 4, 5, 6) comprises at least two, more preferably at least three of the primary colors black, white, red, green, blue and/or yellow,
wherein the print opacity (D_{white}) is calculated as a function of the pre-determined relative efficiency (RE) for the primary color white according to the following equation:

$$\boldsymbol{D_{white} = -365,6 + \sqrt{330439,36 - 2000 \times RE},}$$

wherein RE is between 57 and 95 and wherein D_{white} has a tolerance of +/- 10%, preferably +/- 5%, more preferably +/- 3%, with particular advantage +/- 2%.

2. Cover glass according to claim 1, characterized in that the print opacity (D_{biue}) is calculated as a function of the pre-determined relative efficiency (RE) for the primary color blue according to the following equation:

$$\boldsymbol{D_{blue} = -4920 + \sqrt{29284400 - 50000 \times RE},}$$

wherein RE is between 82 and 95 and wherein D_{blue} has a tolerance of +/- 10%, preferably +/- 5%, more preferably +/- 3%, with particular advantage +/- 2%.

3. Cover glass according to claim 1 or claim 2, characterized in that the print opacity (D_{red}) is calculated as a function of the pre-determined relative efficiency (RE) for the primary color red according to the following equation:

$$\boldsymbol{D_{red} = 133,07 - \sqrt{-11594,96 + 294,12 \times RE}},$$

wherein RE is between 43 and 95 and wherein Dred has a tolerance of +/- 10%, preferably +/- 5%, more preferably +/- 3%, with particular advantage +/- 2%.

4. Cover glass according any of the claims 2 to 3, characterized in that the print opacity (D_{green}) is calculated as a function of the pre-determined relative efficiency (RE) for the primary color green according to the following equation:

$$\boldsymbol{D_{green} = 172,23 - \sqrt{-20257,54 + 500 \times RE}},$$

wherein RE is between 53 and 95 and wherein D_{green} has a tolerance of +/- 10%, preferably +/- 5%, more preferably +/- 3%, with particular advantage +/- 2%.

5. Cover glass according to any of the claims 1 to 4, characterized in that the print opacity (D_{yellow}) is calculated as a function of the pre-determined relative efficiency (RE) for the primary color yellow according to the following equation:

$$\boldsymbol{D_{yellow} = -1074,75 + \sqrt{1649907,56 - 5000 \times RE}},$$

wherein RE is between 55 and 95 and wherein D_{yellow} has a tolerance of +/- 10%, preferably +/- 5%, more preferably +/- 3%, with particular advantage +/- 2%.

6. Cover glass according to any of the claims 1 to 5, characterized in that the print opacity (D_{black}) is calculated as a function of the pre-determined relative efficiency (RE) for the primary color black according to the following equation:

$$D_{black} = 171,24 - \sqrt{1096,8 + 277,78 \times RE},$$

wherein RE is between 17 and 95 and wherein D_{black} has a tolerance of +/- 10%, preferably +/- 5%, more preferably +/- 3%, with particular advantage +/- 2%.

7. Cover glass according to any of the preceding claims, characterized in that the cover glass comprises a mixed color, wherein the mixed color comprises at least two primary colors, wherein the mixed color is created on the cover glass by the fact that the at least two primary colors are applied in the form of a pattern (7, 8) onto the cover glass, wherein the respective print opacities of the primary colors are selected such that the pre-determined ~~desired~~ relative efficiency is obtained.

8. Cover glass for a photovoltaic module (P), wherein the cover glass comprises at least one colored area (1, 2, 3, 4, 5, 6),
wherein at least two print opacities (D) of the colored area (1, 2, 3, 4, 5, 6) are selected such that a pre-determined relative efficiency (RE) is achieved,
wherein the photovoltaic module's (P) relative efficiency is the relationship between the efficiency of a photovoltaic module provided with a certain colored cover glass and the efficiency of the same photovoltaic module, when provided with a transparent cover glass,
wherein the colored area (1, 2, 3, 4, 5, 6) comprises at least two, more preferably at least three of the primary colors black, white, red, green, blue and/or yellow,
wherein
the print opacity for the pre-determined relative efficiency (RE) and the respective desired primary color is selected according to the following table:

RE	D_{blue}	D_{white}	D_{yellow}	D_{green}	D_{red}	D_{black}
60%	max (100)	93	87	74	55	38
70%	max (100)	71	65	51	38	28
80%	max (100)	47	43	32	24	19
90%	58	22	21	15	11	10

9. Photovoltaic module (P), comprising a cover glass according to any of the preceding claims.

10. Computer-implemented data structure for determining suitable print opacities for the primary colors blue, green, red, yellow, black and white for achieving a pre-determined relative efficiency of a photovoltaic module, comprising at least data of the form:

RE	**D_{blue}**	**D_{white}**	**D_{yellow}**	**D_{green}**	**D_{red}**	**D_{black}**
60%	max (100)	93	87	74	55	38
70%	max (100)	71	65	51	38	28
80%	max (100)	47	43	32	24	19
90%	58	22	21	15	11	10

11. Storage medium comprising a computer-implemented data structure according to claim 10.

12. Method for producing a cover glass according to any of claims 1 to 8, comprising the steps of:
- selecting at least one color of the primary colors black, white, red, green, blue and/or yellow,
- fixing a pre-determined relative efficiency,
- determining the required print opacity for each of the selected printing colors by means of at least one of the equations of claims 1 to 6,
- printing the cover glass with the selected colors, wherein the printing takes place in each case with the determined print opacity.

13. Method for producing a cover glass according to claim 8, comprising the steps of:
- selecting at least one color from the primary colors black, white, red, green, blue and/ or yellow,

- fixing a pre-determined relative efficiency,
- determining the required print opacity for each of the selected printing colors by means of the table of claim 8,
- printing the cover glass with the selected colors, wherein the printing takes place in each case with the determined print opacity.