CLAIMS

1. Glass for use in substrate for information recording medium, which comprises SiO_2; Al_2O_3; one or more alkali metal oxides selected from the group consisting of Li_2O, Na_2O and K_2O; and one or more oxides selected from the group consisting of ZrO_2, HfO_2, Nb_2O_5, Ta_2O_5, La_2O_3, Y_2O_3 and TiO_2;

wherein SiO_2 content is equal to or greater than 50 molar percent, and the total content of SiO_2 and Al_2O_3 is equal to or greater than 70 molar percent;

the total content of alkali metal oxides selected from the group consisting of Li_2O, Na_2O and K_2O and alkaline earth meal oxides selected from the group consisting of MgO, CaO, SrO and BaO is equal to or greater than 8 molar percent;

the molar ratio of the total content of said oxides selected from the group consisting of ZrO_2, HfO_2, Nb_2O_5, Ta_2O_5, La_2O_3, Y_2O_3 and TiO_2 to the total content of said alkali metal oxides and said alkaline earth metal oxides $((ZrO_2 + HfO_2 + Nb_2O_5 + Ta_2O_5 + La_2O_3 + TiO_2)/(Li_2O + Na_2O + K_2O + MgO + CaO + SrO + BaO))$ is equal to or greater than 0.035;

MgO content is less than 3 molar percent; and

the molar ratio of the content of ZrO_2 to the total content of ZrO_2, HfO_2, Nb_2O_5, Ta_2O_5, La_2O_3, Y_2O_3 and TiO_2 $(ZrO_2/(ZrO_2 + HfO_2 + Nb_2O_5 + Ta_2O_5 + La_2O_3 + Y_2O_3 + TiO_2))$ ranges from 0.5 to 1.

2. The glass according to any of claim 1, which comprises one or more alkaline earth metal oxides selected from the group consisting of MgO, CaO, SrO and BaO.

3. The glass according to any of claim 1 or 2, which comprises no BaO.

4. The glass according to any of claim 1 or 2, which comprises Li_2O in a quantity of equal to or greater than 6.3 molar percent.

5. The glass according to any of claim 1 or 2, wherein SiO_2 content is equal to or greater than 60 molar percent, and the total content of SiO_2 and Al_2O_3 is equal to or greater than 75 molar percent.

6. The glass according to any of claim 1 or 2, which comprises at least one of Li_2O and Na_2O with the total content of Li_2O and Na_2O being equal to or less than 24 molar percent.

7. The glass according to any of claim 1 or 2, which comprises, denoted as molar percentages,

60 to 75 percent of SiO_2;

3 to 15 percent of Al_2O_3; and

0.3 to 4 percent of ZrO_2.

8. A glass substrate for information recording medium being comprised of the glass according to claim 1 or 2.

9. An information recording medium comprising an information recording layer on the glass substrate for information recording medium according to claim 8.

CLAIMS

1. Glass for use in substrate for information recording medium, which comprises SiO_2; Al_2O_3; one or more alkali metal oxides selected from the group consisting of Li_2O, Na_2O and K_2O; one or more alkaline earth metal oxides selected from the group consisting of MgO, CaO, SrO and BaO; and one or more oxides selected from the group consisting of ZrO_2, HfO_2, Nb_2O_5, Ta_2O_5, La_2O_3, Y_2O_3 and TiO_2;

wherein SiO_2 content is equal to or greater than 50 molar percent, and the total content of $SiO_2$and $A1_2O_3$ is equal to or greater than 70 molar percent;

both Li_2O and Na_2O are contained;

Li_2O content is within a range of 4.3 molar percent to 15 molar percent;

Na_2O content is within a range of 5 molar percent to 15 molar percent;

the total content of the alkali metal oxides and the alkaline earth metal oxides is equal to or greater than 10 molar percent;

the molar ratio of the total content of ZrO_2, HfO_2, Nb_2O_5, Ta_2O_5, La_2O_3, Y_2O_3 and TiO_2 to the total content of the alkali metal oxides and the alkaline earth metal oxides $((ZrO_2+HfO_2+Nb_2O_5+Ta_2O_5+La_2O_3+Y_2O_3+TiO_2)/(Li_2O+Na_2O+K_2O+MgO+CaO+SrO+BaO))$ is equal to or greater than 0.035;

MgO content is less than 3 molar percent, CaO content is equal to or less than 4 molar percent, and the molar ratio of MgO content to CaO content (MgO/CaO) ranges from 0.227 to 0.727; and

the molar ratio of ZrO_2 content to the total content of ZrO_2, HfO_2, Nb_2O_5, Ta_2O_5, La_2O_3, Y_2O_3 and TiO_2 $(ZrO_2/(ZrO_2+HfO_2+Nb_2O_5+Ta_2O_5+La_2O_3+Y_2O_3+TiO_2))$ ranges from 0.5 to 1.

2. The glass according to claim 1, which comprises no BaO.

3. The glass according to claim 1, wherein SiO_2 content is equal to or greater than 60 molar percent, and the total content of SiO_2 and Al_2O_3 is equal to or greater than 75 molar percent.

4. The glass according to claim 1, wherein the total content of Li_2O and Na_2O is less than 24 molar percent.

5. The glass according to claim 1, which comprises, denoted as molar percentages,
60 to 75 percent of SiO_2;
3 to 15 percent of Al_2O_3; and
0.3 to 4 percent of ZrO_2.

6. A glass substrate for information recording medium being comprised of the glass according to claim 1.

7. An information recording medium comprising an information recording layer on the glass substrate for information recording medium according to claim 6.

8. The glass according to claim 1, wherein the molar ratio of the content of ZrO_2 to the total content of ZrO_2, HfO_2, Nb_2O_5, Ta_2O_5, La_2O_3, Y_2O_3 and TiO_2 (ZrO_2/ (ZrO_2+HfO_2+Nb_2O_5 +Ta_2O_5+ La_2O_3+Y_2O_3 +TiO_2)) is within a range of 0.9 to 1.

9. The glass according to claim 8, further comprising Fe.

10. The glass according to claim 1, wherein the molar ratio (MgO/CaO) is within a range of 0.4 to 0.727.

11. The glass according to claim 1, wherein the total content of Li_2O and Na_2O is within a range of 15 molar percent to 22 molar percent.

12. The glass according to claim 1, wherein the Al_2O_3 content is within a range of 7 molar percent to 15 molar percent.

13. The glass according to claim 1, wherein Li_2O content is within a range of 6.3 molar percent to 15 molar percent.