WHAT IS CLAIMED IS:

1. An image reading apparatus comprising:

a light source that irradiates light onto a document;

a reading unit that receives light reflected from the document, converts the received light into electrical charges, and accumulates the electrical charges as an image signal;

a moving unit that relatively moves the light source and the document;

a moving speed control unit that controls a moving speed of the moving unit in accordance with a reading mode of the image reading apparatus to control a reading speed in the reading unit; and

a turn-ON time control unit that controls the light source to be turned off in a given period based on the reading mode when the reading unit accumulates the electric charges so as to prevent the electrical charges accumulated in the reading unit from reaching a saturation amount.

2. The image reading apparatus according to claim 1 further comprising an amplifier unit that amplifies the image signal at a given amplification factor,

wherein, in a case where the charge accumulated in the reading unit do not reach the saturation amount while the light source is continuously turned ON, the amplifier unit changes the amplification factor based on the reading speed.

3. The image reading apparatus according to claim 1 or 2, wherein the reading unit includes a semiconductor device that vertically and horizontally transfers the electrical charges accumulated by a charge coupled device to read out the electrical charges as the image signal, and

the turn-ON time control unit sets the given period in a period during which the electrical charges are horizontally transferred to control turn-ON time of the light source.

4. The image reading apparatus according to claim 1 or 2, wherein the reading unit includes a semiconductor device that vertically and horizontally transfers the electrical charges accumulated by a charge coupled device to read out the electrical charges as the image signal, and

the turn-ON time control unit does not turn ON or OFF the light source within a predetermined time in which a starting time and an ending time of the period during which the charges are vertically transferred are included.

5. An image reading program comprising:

controlling the light source that irradiates light onto a document;

controlling a reading unit that receives light reflected from the document, converts the received light into electrical

charges, and accumulates the electrical charges as an image signal; and

controlling a moving speed control unit that controls a moving speed of a moving unit that relatively moves the light source and the document in accordance with a reading mode of the image reading apparatus to control a reading speed in the reading unit,

wherein, in the controlling step of the light source, the light source is controlled to be turned off in a given period based on the reading mode when the reading unit accumulates the electric charges so as to prevent the electrical charges accumulated in the reading unit from reaching a saturation amount.

6. The image reading program according to claim 5, further comprising:

controlling an amplifier unit that amplifies the image signal at a given amplification factor,

wherein, in a case where the charge accumulated in the reading unit do not reach the saturation amount while the light source is continuously turned ON, the amplifier unit changes the amplification factor based on the reading speed.

What is claimed is:

1. An image reading apparatus comprising:

a light source that irradiates light onto a document;

a reading unit that receives light reflected from the document, converts the received light into electrical charges, and accumulates the electrical charges as an image signal;

a moving unit that relatively moves the light source and the document;

a moving speed control unit that controls a moving speed of the moving unit in accordance with a reading mode of the image reading apparatus to control a reading speed in the reading unit; and

a turn-ON time control unit that controls the light source to be turned off in a given period based on the reading mode when the reading unit accumulates the electric charges so as to prevent the electrical charges accumulated in the reading unit from reaching a saturation amount, wherein the reading unit includes a semiconductor device that vertically and horizontally transfers the electrical charges accumulated by a charge coupled device to read out the electrical charges as the image signal, and the turn-ON time control unit sets the given period in which the light source is controlled to be turned off such that the given period begins after a beginning of a period during which the electrical charges are

horizontally transferred and ends before an end of the period during which the electrical charges are horizontally transferred.

2. The image reading apparatus according to claim 1 further comprising an amplifier unit that amplifies the image signal at a given amplification factor,

wherein, in a case where the charge accumulated in the reading unit do not reach the saturation amount while the light source is continuously turned ON, the amplifier unit changes the amplification factor based on the reading speed.

3. The image reading apparatus according to claim 1, wherein the reading unit includes a semiconductor device that vertically and horizontally transfers the electrical charges accumulated by a charge coupled device to read out the electrical charges as the image signal, and

the turn-ON time control unit does not change an ON/OFF state of the light source within a predetermined time in which a starting time and an ending time of the period during which the charges are vertically transferred are included.

4. A non-transitory computer readable medium storing a program causing a computer to perform a process for reading an image, the process comprising:

controlling a light source that irradiates light onto a document;

controlling a reading unit that receives light reflected from the document, converts the received light into electrical charges, and accumulates the electrical charges as an image signal; and

controlling a moving speed control unit that controls a moving speed of a moving unit that relatively moves the light source and the document in accordance with a reading mode of the image reading apparatus to control a reading speed in the reading unit,

wherein, in the controlling the light source, the light source is controlled to be turned off in a given period based on the reading mode when the reading unit accumulates the electric charges so as to prevent the electrical charges accumulated in the reading unit from reaching a saturation amount,

in the controlling the reading unit, the reading unit that is controlled includes a semiconductor device that vertically and horizontally transfers the electrical charges accumulated by a charge coupled device to read out the electrical charges as the image signal, and

in the controlling the light source, the given period in which the light source is controlled to be turned off is set such that the given period begins after a beginning of a

period during which the electrical charges are horizontally transferred and ends before an end of the period during which the electrical charges are horizontally transferred.

5. The non-transitory computer readable medium according to claim 4, wherein the process further comprising:

controlling an amplifier unit that amplifies the image signal at a given amplification factor,

wherein, in a case where the charge accumulated in the reading unit do not reach the saturation amount while the light source is continuously turned ON, the amplifier unit changes the amplification factor based on the reading speed.

6. The non-transitory computer readable medium according to claim 4, wherein in the controlling the reading unit, the reading unit that is controlled includes a semiconductor device that vertically and horizontally transfers the electrical charges accumulated by a charge coupled device to read out the electrical charges as the image signal, and

in the controlling the light source, an ON/OFF state of the light source is not changed within a predetermined time in which a starting time and an ending time of the period during which the charges are vertically transferred are included.

7. A method of reading an image, the method comprising: controlling a light source that irradiates light onto a document;

controlling a reading unit that receives light reflected from the document, converts the received light into electrical charges, and accumulates the electrical charges as an image signal;

and controlling a moving speed control unit that controls a moving speed of a moving unit that relatively moves the light source and the document in accordance with a reading mode of the image reading apparatus to control a reading speed in the reading unit,

wherein, in the controlling the light source, the light source is controlled to be turned off in a given period based on the reading mode when the reading unit accumulates the electric charges so as to prevent the electrical charges accumulated in the reading unit from reaching a saturation amount,

in the controlling the reading unit, the reading unit that is controlled includes a semiconductor device that vertically and horizontally transfers the electrical charges accumulated by a charge coupled device to read out the electrical charges as the image signal, and

in the controlling the light source, the given period in which the light source is controlled to be turned off is set

such that the given period begins after a beginning of a period during which the electrical charges are horizontally transferred and ends before an end of the period during which the electrical charges are horizontally transferred.

8. The method according to claim 7, further comprising:

controlling an amplifier unit that amplifies the image signal at a given amplification factor,

wherein, in a case where the charge accumulated in the reading unit do not reach the saturation amount while the light source is continuously turned ON, the amplifier unit changes the amplification factor based on the reading speed.

9. The method according to claim 7, wherein in the controlling the reading unit, the reading unit that is controlled includes a semiconductor device that vertically and horizontally transfers the electrical charges accumulated by a charge coupled device to read out the electrical charges as the image signal, and

in the controlling the light source, an ON/OFF state of the light source is not changed within a predetermined time in which a starting time and an ending time of the period during which the charges are vertically transferred are included.