CLAIMS

1. An infrared transmitter that transmits a signal by changing a luminance of an infrared emitting LED, the infrared transmitter comprising:

a transmission signal generating unit;

a biasing voltage generating unit that generates a biasing voltage changed according to a magnitude of a transmission signal;

a signal/voltage mixing unit that mixes the transmission signal and the biasing voltage;

and a voltage-current conversion unit that converts a voltage into a current, wherein

the LED is driven by the current obtained by converting a composite voltage of the biasing voltage that changes according to the magnitude of the transmission signal and the transmission signal with the voltage-current conversion unit.

2. An infrared transmitter that transmits a signal through changing a luminance of an infrared emitting LED, the infrared transmitter comprising:

a transmission signal generating unit;

a switching unit that switches number of channels of a transmission signal;

a biasing voltage generating unit that generates a biasing voltage according to a magnitude of a transmission signal based on the number of channels of the transmission signal;

a signal/voltage mixing unit that mixes the transmission signal and the biasing voltage;

and a voltage-current conversion unit that converts a voltage into a current, wherein

the LED is driven with the current obtained by conversion in the voltage-current conversion unit.

3. The infrared transmitter according to claim 1, wherein the biasing voltage generating unit includes:

a detecting unit that detects the magnitude of the transmission signal;

and a voltage generating unit that generates a bias voltage based on the magnitude of the transmission signal, and

the biasing voltage generating unit automatically increases or reduces the biasing voltage in a nonstep manner according to the magnitude of the transmission signal.

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a transmission signal generating unit;

a switching unit that switches number of channels of a transmission signal;

a biasing voltage generating unit that generates a biasing voltage according to a magnitude of a transmission signal based on the number of channels of the transmission signal;

a signal/voltage mixing unit that mixes the transmission signal and the biasing voltage;

and a voltage-current conversion unit that converts a voltage into a current, wherein

the LED is driven by the current obtained by conversion in the voltage-current conversion unit.