

Abstract

The invention comprises: a light-transmission-side lens 12 that shapes a laser beam L emitted from a laser light source 11 into a line shape extending along a horizontal direction X; a scanner 13 that projects the line-shaped laser beam L while scanning the same in a vertical direction Y of a measurement-target area A; a light-reception-side lens 16 that receives reflected light R reflected from the measurement-target area A; a light reception line sensor 18 including a plurality of light reception cells lined up along the horizontal direction X; a light-reception-side optical system 17 that gathers the reflected light R received by the light-reception-side lens 16 toward the light reception line sensor 18, and in which the light-gathering ratio in the vertical direction Y is set so as to be greater than the light-gathering ratio in the horizontal direction X; and an information generation unit 21 that generates three-dimensional information of the measurement-target area A on the basis of a reception signal outputted by the light reception line sensor 18.