WHAT IS CLAIMED IS:

1. A laser beam profiler unit for measuring an intensity distribution of a laser beam oscillated from a laser oscillator incorporated in a laser processing apparatus, comprising:

a magnifying optical system for magnifying a spot diameter of the laser beam oscillated from the laser oscillator and focused by a condensing lens;

a first transmission prism for attenuating the laser beam;

a second transmission prism for further attenuating a laser beam reflected by the first transmission prism;

an image capturing element for detecting the laser beam reflected by the second transmission prism; and

an analyzer for analyzing an intensity distribution of a spot of the laser beam from data of the laser beam detected by the image capturing element.

2. A laser beam profiler unit for measuring an intensity distribution of a laser beam oscillated from a laser oscillator incorporated in a laser processing apparatus, comprising:

a magnifying optical system for magnifying a spot diameter of the laser beam oscillated from the laser oscillator and focused by a condensing lens;

a first transmission prism for attenuating the laser beam;

a second transmission prism for further attenuating a laser beam reflected by the first transmission prism:

an image capturing element for detecting the laser beam reflected by the second transmission prism; and

an analyzer for analyzing an intensity distribution of a spot of the laser beam from data of the laser beam detected by the image capturing element;

wherein the first transmission prism and the second transmission prism serve as paired transmission prisms, one of the paired transmission prisms attenuates P-polarized light of the laser beam at a higher attenuation rate, and the other of the paired transmission prisms attenuates S-polarized light of the laser beam at a higher attenuation rate, whereby the first transmission prism and the second transmission prism attenuate the P-polarized light and the S-polarized light equally.

3. The laser beam profiler unit according to claim 1, wherein each of the first transmission prism and the second transmission prism comprises a triangular prism having a bottom face corresponding to the hypotenuse of a

triangle, and the laser beam is applied to a side face of the triangular prism which includes one of the two catheti of the triangle.

4. A laser processing apparatus comprising:

a laser beam irradiation unit for applying a laser beam to a workpiece held on a chuck table;

a control unit for controlling conditions under which the laser beam irradiation unit applies the laser beam; and

a laser beam profiler unit for measuring an intensity distribution of a spot of the laser beam; wherein

the laser beam profiler unit includes;

a magnifying optical system for magnifying a spot diameter of the laser beam oscillated from a laser oscillator and focused by a condensing lens;

a first transmission prism for attenuating the laser beam;

a second transmission prism for further attenuating a laser beam reflected by the first transmission prism;

a light detector for detecting the laser beam reflected by the second transmission prism; and

an analyzer for analyzing an intensity

distribution of a spot of the laser beam from data of the laser beam detected by the light detector.

5. The laser processing apparatus according to claim 4, wherein the laser beam irradiation unit includes the laser oscillator for oscillating the laser beam, the condensing lens for focusing the laser beam, and the magnifying optical system for guiding the laser beam from the laser oscillator to the condensing lens, and

the magnifying optical system shapes a spot shape of the laser beam.

6. The laser beam profiler unit according to claim 1, wherein the first transmission prism and the second transmission prism serve as paired transmission prisms, whereby the first transmission prism and the second transmission prism attenuate differently polarized light equally.

7. The laser beam profiler unit according to claim 1, wherein the magnifying optical system is disposed before the first transmission prism.

8. The laser processing apparatus according to claim 4, wherein the magnifying optical system is disposed before the first transmission prism.

9. The laser beam profiler unit according to claim 1, further comprising:

a third transmission prism for further attenuating a laser beam reflected by the second transmission prism; and

a fourth transmission prism for further attenuating a laser beam reflected by the third transmission prism.

10. The laser beam profiler unit according to claim 2, further comprising:

at least one of an additional pair of transmission prisms,

wherein each pair of transmission prisms attenuates the P-polarized light and the S-polarized light equally.

11. The laser processing apparatus according to claim 4, wherein the first transmission prism and the second transmission prism serve as paired transmission prisms, whereby the first transmission prism and the second transmission prism attenuate differently polarized light equally.

12. The laser beam profiler unit according to claim 1, wherein the first and second transmission prisms only reflect approximately 2 to 4% of the laser beam applied thereto.

13. The laser processing apparatus according to claim 4, wherein the first and second transmission prisms

only reflect approximately 2 to 4% of the laser beam applied thereto.

14. The laser beam profiler unit according to claim 1, wherein the first and second transmission prisms attenuate the laser beam to at least 1/400,000 of the energy density of the laser beam oscillated from the laser oscillator and focused by the condensing lens.

15. The laser processing apparatus according to claim 4, wherein the first and second transmission prisms attenuate the laser beam to at least 1/400,000 of the energy density of the laser beam oscillated from the laser oscillator and focused by the condensing lens.

16. The laser beam profiler unit according to claim 1, wherein each of the first and second transmission prisms reflect the laser beam at an angle of 90°.

17. The laser processing apparatus according to claim 4, wherein each of the first and second transmission prisms reflect the laser beam at an angle of 90°.