1061.5.c.2.c.2. con't.

b. An average or CW output power exceeding 30 W;

3. A wavelength exceeding 800 nm but not exceeding 1,400 nm, as follows:
   a. "Q-switched lasers" having:
      1. An output energy exceeding 0.5 J per pulse and a pulsed "peak power" exceeding 50 W; **or**
      2. An average output power exceeding:
         a. 10 W for single-tranverse mode "lasers";
         b. 30 W for multiple-transverse mode "lasers";
   b. Non-"Q-switched lasers" having:
      1. An output energy exceeding 2 J per pulse and a pulsed "peak power" exceeding 50 W; **or**
      2. An average or CW output power exceeding 50 W; **or**
4. A wavelength exceeding 1,400 nm and having any of the following:
   a. An output energy exceeding 100 mJ per pulse and a pulsed "peak power" exceeding 1 W; **or**
   b. An average or CW output power exceeding 1 W;

5. d. Dye and other liquid "lasers", having any of the following:
   1. A wavelength less than 150 nm **and**:
      a. An output energy exceeding 50 mJ per pulse and a pulsed "peak power" exceeding 1 W; **or**
      b. An average or CW output power exceeding 1 W;
   2. A wavelength of 150 nm or more but not exceeding 800 nm and having any of the following:
      a. An output energy exceeding 1.5 J per pulse and a pulsed "peak power" exceeding 20 W;
      b. An average or CW output power exceeding 20 W; or
      c. A pulsed single longitudinal mode oscillator having an average output power exceeding 1 W and a repetition rate exceeding 1 kHz if the "pulse duration" is less than 100 ns;
   3. A wavelength exceeding 800 nm but not exceeding 1,400 nm and having any of the following:
      a. An output energy exceeding 0.5 J per pulse and a pulsed "peak power" exceeding 10 W; **or**
      b. An average or CW output power exceeding 10 W; or
   4. A wavelength exceeding 1,400 nm and having any of the following;
      a. An output energy exceeding 100 mJ per pulse and a pulsed "peak power" exceeding 1 W; **or**
      b. An average or CW output power exceeding 1 W;
   e. Components, as follows:
      1. Mirrors cooled either by active cooling or by heat pipe cooling;

Technical Note:

Active cooling is a cooling technique for optical components using flowing fluids within the subsurface (nominally less than 1 mm below the optical surface) of the optical component to remove heat from the optic.

      2. Optical mirrors or transmissive or partially transmissive optical or electro-optical components specially designed for use with controlled "lasers";
   f. Optical equipment, as follows:

N.B.:

For shared aperture optical elements, capable of operating in "Super-High Power Laser" ("SHPL") applications, see Item 2019., Note 2.d. on the Munitions List.

1. Dynamic wavefront (phase) measuring equipment capable of mapping at least 50 positions on a beam wavefront having any of the following:
   a. Frame rates equal to or more than 100 Hz and phase discrimination of at least 5% of the beam's wavelength; **or**
   b. Frame rates equal to or more than 1,000 Hz and phase discrimination of at least 20% of the beam's wavelength;
2. "Laser" diagnostic equipment capable of measuring "SHPL" system angular beam steering errors of equal to or less than 10 μr (microradians);
3. Optical equipment and components specially designed for a phased-array "SHPL" system for coherent beam combination to an accuracy of lambda/10 at the designed wavelength, or 0.1 μm, whichever is the smaller;
4. Projection telescopes specially designed for use with "SHPL" systems.

6. Magnetometers

"Magnetometers", "magnetic gradiometers", "intrinsic magnetic gradiometers" and compensation systems, and specially designed components therefore, as follows:

Note:

1061.6. does not control instruments specially designed for biomagnetic measurements for medical diagnostics.

a. "Magnetometers" using "superconductive", optically pumped or nuclear precession (proton/Overhauser) "technology" having a "noise level" (sensitivity) lower (better) than 0.05 nT rms per square root Hz;
b. Induction coil "magnetometers" having a "noise level" (sensitivity) lower (better) than any of the following:
   1. 0.05 nT rms per square root Hz at frequencies of less than 1 Hz;
   2. 1×10^{-3} nT rms per square root Hz at frequencies of 1 Hz or more but not exceeding 10 Hz; **or**
   3. 1×10^{-4} nT rms per square root Hz at frequencies exceeding 10 Hz;
c. Fibre optic "magnetometers" having a "noise level" (sensitivity) lower (better) than 1 nT rms per square root Hz;
d. "Magnetic gradiometers" using multiple "magnetometers" controlled by 1061.6.a., 1061.6.b. or 1061.6.c.;
e. Fibre optic "intrinsic magnetic gradiometers" having a magnetic gradient field "noise level" (sensitivity) lower (better) than 0.3 nT/m rms per square root Hz.
f. "Intrinsic magnetic gradiometers", using "technology" other than fibre-optic "technology", having a magnetic gradient field "noise level" (sensitivity) lower (better) than 0.015 nT/m rms per square root Hz;
g. Magnetic compensation systems for magnetic sensors designed for operation on mobile platforms;
h. "Superconductive" electromagnetic sensors, containing components manufactured from "superconductive" materials and having all of the following: