

**1062. Test, Inspection and Production Equipment**

1. Acoustics - None.
2. Optical Sensors - None.
3. Cameras - None.
4. Optics  
Optical equipment, as follows:
  - a. Equipment for measuring absolute reflectance to an accuracy of  $\pm 0.1\%$  of the reflectance value;
  - b. Equipment other than optical surface scattering measurement equipment, having an unobscured aperture of more than 10 cm, specially designed for the non-contact optical measurement of a non-planar optical surface figure (profile) to an "accuracy" of 2 nm or less (better) against the required profile.

**Note:**  
1062.4. does not control microscopes.
5. Lasers- None.
6. Magnetometers - None.
7. Gravimeters  
Equipment to produce, align and calibrate land-based gravity meters with a static accuracy of better than 0.1 mgal.
8. Radar  
Pulse radar cross-section measurement systems having transmit pulse widths of 100 ns or less and specially designed components therefore.

**1063. Materials**

1. Acoustics - None.
2. Optical Sensors  
Optical sensor materials, as follows:
  - a. Elemental tellurium (Te) of purity levels of 99.9995% or more;
  - b. Single crystals (including epitaxial wafers) of any of the following:
    1. cadmium zinc telluride (CdZnTe), with zinc content of less than 6% by mole fraction,
    2. cadmium telluride (CdTe) of any purity level; **or**
    3. mercury cadmium telluride (HgCdTe) of any purity level

**Technical Note**  
Mole fraction is defined as the ratio of moles of ZnTe to the sum of the moles of CdTe and ZnTe present in the crystal.
3. Cameras - None.
4. Optics  
Optical materials, as follows:
  - a. Zinc selenide (ZnSe) and zinc sulphide (ZnS) "substrate blanks" produced by the chemical vapour deposition process, having any of the following:
    1. A volume greater than 100 cm<sup>3</sup>; **or**
    2. A diameter greater than 80 mm having a thickness of 20 mm or more;
  - b. Boules of the following electro-optic materials:
    1. Potassium titanyl arsenate (KTA);
    2. Silver gallium selenide (AgGaSe<sub>2</sub>);
    3. Thallium arsenic selenide (Tl<sub>3</sub>As<sub>2</sub>Se<sub>3</sub>, also known as TAS);
  - c. Non-linear optical materials having all of the following:
    1. Third order susceptibility ( $\chi_3$ ) of  $10^{-6}$  m<sup>2</sup>/V<sup>2</sup> or more; **and**

2. A response time of less than 1 ms;
- d. "Substrate blanks" of silicon carbide or beryllium beryllium (Be/Be) deposited materials exceeding 300 mm in diameter or major axis length;
- e. Glass, including fused silica, phosphate glass, fluorophosphate glass, zirconium fluoride (ZrF<sub>4</sub>) and hafnium fluoride (HfF<sub>4</sub>), having all of the following:
  1. A hydroxyl ion (OH<sup>-</sup>) concentration of less than 5 ppm;
  2. Integrated metallic purity levels of less than 1 ppm; **and**
  3. High homogeneity (index of refraction variance) less than  $5 \times 10^{-6}$ ;
- f. Synthetically produced diamond material with an absorption of less than  $10^{-5}$  cm<sup>-1</sup> for wavelengths exceeding 200 nm but not exceeding 14,000 nm.
5. Lasers  
Synthetic crystalline "laser" host material in unfinished form, as follows:
  - a. Titanium doped sapphire;
  - b. Alexandrite.
6. Magnetometers - None.
7. Gravimeters - None.
8. Radar - None.

**1064. Software**

1. "Software" specially designed for the "development" or "production" of equipment controlled by 1061.4, 1061.5., 1061.8. or 1062.8.
2. "Software" specially designed for the "use" of equipment controlled by 1061.2.b., 1061.8. or 1062.8.
3. Other "software", as follows:
  - a. Acoustics  
"Software", as follows:
    1. "Software" specially designed for acoustic beam forming for the "real time processing" of acoustic data for passive reception using towed hydrophone arrays;
    2. "Source code" for the "real time processing" of acoustic data for passive reception using towed hydrophone arrays;
    3. "Software" specially designed for acoustic beam forming for the "real time processing" of acoustic data for passive reception using bottom or bay cable systems;
    4. "Source code" for the "real time processing" of acoustic data for passive reception using bottom or bay cable systems;
  - b. Optical Sensors - None;
  - c. Cameras - None;
  - d. Optics - None;
  - e. Lasers - None;
  - f. Magnetometers  
"Software", as follows:
    1. "Software" specially designed for magnetic compensation systems for magnetic sensors designed to operate on mobile platforms;
    2. "Software" specially designed for magnetic anomaly detection on mobile platforms;
  - g. Gravimeters  
"Software" specially designed to correct motional influences of gravity meters or gravity gradiometers;
  - h. Radar  
"Software", as follows: