

90.13 - Liquid crystal devices not constituting articles provided for more specifically in other headings; lasers, other than laser diodes; other optical appliances and instruments, not specified or included elsewhere in this Chapter.

9013.10 - Telescopic sights for fitting to arms; periscopes; telescopes designed to form parts of machines, appliances, instruments or apparatus of this Chapter or Section XVI

9013.20 - Lasers, other than laser diodes

9013.80 - Other devices, appliances and instruments

9013.90 - Parts and accessories

In accordance with Chapter Note 5, measuring or checking optical appliances, instruments and machines are **excluded** from this heading and fall in **heading 90.31**. Chapter Note 4, however, classifies certain refracting telescopes in this heading and not in heading 90.05. It should, moreover, be noted that optical instruments and appliances can fall not only in **headings 90.01 to 90.12** but also in other headings of this Chapter (in particular, **heading 90.15, 90.18 or 90.27**). This heading includes :

- (1) **Liquid crystal devices** consisting of a liquid crystal layer sandwiched between two sheets or plates of glass or plastics, whether or not fitted with electrical connections, presented in the piece or cut to special shapes and not constituting articles described more specifically in other headings of the Nomenclature.
- (2) **Lasers**. These produce or amplify electro-magnetic radiation in the wavelength range between 1 nanometre and 1 millimetre (ultra-violet, visible light and infra-red regions of the spectrum), by the process of controlled stimulated emission. When the lasing medium (e.g., crystals, gases, liquids, chemical products) is excited by the light from an electric source or by the reaction from another source of energy, the light beams which are produced inside the lasing medium are repeatedly reflected and amplified in such a way that a coherent light beam (visible or invisible) is emitted from one end which is partly transparent.

In addition to the lasing medium, the energy source (pumping system) and the resonant optical cavity (reflector system), i.e., the basic elements combined in the laser head (possibly with Fabry-Perot interferometers, interference filters and spectroscopes), lasers generally also incorporate certain auxiliary components (e.g., a power supply unit, a cooling system, a control unit and, in the case of the gas laser, a gas supply system or, in the case of liquid lasers, a tank, fitted with a pump for the dye solutions). Some of these auxiliary components may be contained in the same housing as the laser head (compact laser) or may take the form of separate units, connected to the laser head by cables, etc. (laser system). In the latter case the units are classified in this heading **provided** they are presented together.

Lasers are classified in this heading not only if they are intended to be incorporated in machines or appliances but also if they can be used independently, as compact lasers or laser systems, for various purposes such as research, teaching or laboratory examinations, for example, laser pointers.

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However, the heading **excludes** lasers which have been adapted to perform quite specific functions by adding ancillary equipment consisting of special devices (e.g., work-tables, work-holders, means of feeding and positioning workpieces, means of observing and checking the progress of the operation, etc.) and which, therefore, are identifiable as working machines, medical apparatus, control apparatus, measuring apparatus, etc. Machines and appliances incorporating lasers are also **excluded** from the heading. **Insofar** as their classification is not specified in the Nomenclature, they should be classified with the machines or appliances having a similar function. Examples include :

- (i) Machine-tools for working any materials by removal of material by laser (e.g., metal, glass, ceramics or plastics) (**heading 84.56**).
- (ii) Laser soldering, brazing or welding machines and apparatus, whether or not capable of cutting (**heading 85.15**).
- (iii) Instruments for levelling (aligning) pipes by means of a laser beam (**heading 90.15**).
- (iv) Laser apparatus specially used for medical purposes (e.g., in ophthalmological operations) (**heading 90.18**).

Subject to the provisions of Notes 1 and 2 to this Chapter, parts and accessories for lasers, for example, laser tubes, are also classified in this heading. However, this heading **does not include** electric flash lamps used for pumping, such as xenon lamps, iodine lamps and mercury vapour lamps (**heading 85.39**), laser diodes (**heading 85.41**) and laser crystals (e.g., rubies), laser mirrors and lenses (**heading 90.01 or 90.02**).

- (3) **Hand magnifying glasses and magnifiers** (e.g., pocket type or those for office use), and thread counters (these magnifiers may be fitted or combined with an illuminating lamp, they remain in this heading if the lamp enhances the use of the magnifier); binocular magnifying glasses (generally on supports) which, unlike stereoscopic microscopes of **heading 90.11**, are fitted with eyepieces but not with an objective.
- (4) **"Door-eyes"** for viewing through doors; also similar articles fitted with an optical system.
- (5) **Telescopic sights for weapons, refracting or reflecting, presented separately**; optical devices suitable for use with arms and mounted thereon or presented with the firearms on which they are designed to be mounted, are classified with the arm, see Note 1 (d) to **Chapter 93**.
- (6) **Telescopes of a kind designed to form parts of instruments of other headings of this Chapter** (e.g., telescopes forming parts of surveying instruments) or of machines of Section XVI.
- (7) **Fibrescopes for industrial use**. Fibrescopes for medical purposes (endoscopes) are **excluded** (**heading 90.18**).
- (8) **Stereoscopes**, including **hand-operated stereoscopes**, for three-dimensional viewing of coloured photographic diapositives, consisting of a case of plastics incorporating two fixed lenses and a lever-operated revolving mechanism (to change the pictures which are mounted in sets on each interchangeable revolving disc).
- (9) **Kaleidoscopes, other than toy kaleidoscopes** (**Chapter 95**).
- (10) **Magnifying periscopes** for submarines or tanks; and **non-magnifying periscopes** (e.g., for trenches).

- (11) **Mounted glass mirrors, optically worked, which are unsuitable for fitting to instruments or apparatus** (for example, certain rear-view mirrors, chimney or drain inspection mirrors, and special mirrors for wind-tunnel observations).
- Rear-view or other mirrors, **not** optically worked (including shaving mirrors, whether or not magnifying) are **excluded** (heading 70.09 or 83.06).
- (12) **Optical lightbeam signalling apparatus**, for the long-distance transmission of optical signals (for example, in morse code).
- (13) **Slide viewers** fitted with a single magnifying lens and used for examining photographic slides.

PARTS AND ACCESSORIES

Subject to the provisions of Notes 1 and 2 to this Chapter (see the General Explanatory Note), parts and accessories of apparatus or appliances of this heading remain classified here.