

# Radiation and Nuclear Safety Authority Regulation on the Use of High-Power Laser Equipment

Adopted in Helsinki on 24 March 2021

In accordance with a decision of the Radiation and Nuclear Safety Authority, the following provisions are issued by virtue of the Radiation Act (859/2018):

## Section 1 Scope of application

This regulation applies to the practice referred to in section 165 of the Radiation Act.

## Section 2 Information about the applicant to be included in the licence application

The application for the licence must include:

- 1) Identity and contact details of the applicant;
- 2) description of the training and experience related to laser safety of the applicant or the person using the laser device on their behalf;
- 3) other information necessary to identify the applicant.

## Section 3 Information about the high-power laser equipment and its intended use to be included in the licence application

The application shall indicate whether a licence is being applied:

- 1) for a fixed or indefinite term;
- 2) for fixed equipment permanently installed in a single location or for portable equipment;
- 3) for indoor or outdoor use of laser equipment; and
- 4) whether beams are directed into the sky or into the audience.

## Section 4 Risk assessment

In the risk assessment, the risks involved with the use of high-power laser equipment, as well as potential radiation safety deviations and the potential exposure resulting from them, shall be identified and assessed.

Additionally, measures taken to prevent and prepare for radiation safety deviations shall be presented in the risk assessment.

## Section 5 Information about the person in charge to be presented in the licence application

The licence application shall state the name of the person in charge as referred to in section 168 of the Radiation Act.

## Section 6 Notification on the use of high-power laser equipment

The licensee shall notify the Radiation and Nuclear Safety Authority of the use of high-power laser equipment no later than five days prior to the intended time of use of the equipment. The licensee shall include in the notification:

- 1) the place of use of the high-power laser equipment;
- 2) contact information for the place of use of the high-power laser equipment;
- 3) the user of the high-power laser equipment;
- 4) the date and time for the installation and use of the high-power laser equipment;
- 5) the date and time when the presentation can be inspected if deemed necessary;
- 6) the high-power laser equipment to be used and their technical specifications related to radiation safety;
- 7) an installation plan that indicates the location of the high-power laser equipment and the alignment, path and termination of beams.

If the beams are projected into the sky, the licensee shall also state:

- 1) the geographical coordinates of the place of use of the high-power laser equipment;
- 2) the beam directions; the horizontal sector as compass directions and the upper and lower limit of the vertical alignment;
- 3) eye safety and glare distances as well as their maximum values in the horizontal and vertical directions.

## Section 7 Notifications concerning changes in practice

The licensee shall notify the Radiation and Nuclear Safety Authority in advance of any changes to the contact information pursuant to section 165, subsection 2, paragraph 1 of the Radiation Act (859/2018) without delay and any changes referred to in paragraphs 2–4 thirty days prior to the changes.

## Section 8 Area protected by exposure limits

Any exposure to laser radiation shall be lower than the exposure limits up to a height of three metres in the vertical direction and up to a distance of two and half metres in the horizontal direction in areas where members of the public have access.

Additionally, in an area that is not under the continuous supervision by the operator, the exposure to laser radiation shall be lower than the exposure limits up to a height of six metres in the vertical direction.

If laser beams are directed or reflected to areas referred to in subsection 1 or 2, the undertaking shall, prior to each use, ensure by carrying out measurements that the exposure limits are not exceeded. A measuring instrument suitable for the purpose shall be used in the measurements.

Section 9  
Entry into force and transitional provisions

This regulation enters into force on 1 April 2021 and is valid until further notice.  
This regulation applies to any matters pending on the date of its entry into force.  
This regulation repeals the Radiation and Nuclear Safety Authority Regulation on the Use of High-Power Laser Equipment (S/4/2018).

In Helsinki on 24 March 2021

Director General                      Petteri Tiippana

Director                                  Tommi Toivonen

**Availability of the regulation, guidance and advice**

This regulation has been published as part of the regulations issued by the Radiation and Nuclear Safety Authority (STUK) and it is available from the Radiation and Nuclear Safety Authority.

Visiting address: Laippatie 4, FI-00880 Helsinki

Mailing address: P.O. Box 14, FI-00811 Helsinki

Telephone: +358 9 759 881

Collection of regulations: <http://www.finlex.fi/en/viranomaiset/normi/555001/>