ISO 19818-1:2021 (E)

Eye and face protection — Protection against laser radiation — Part 1: Requirements and test methods

Contents

Foreword

Introduction

1 Scope

2 Normative references

3 Terms and definitions

4 Requirements for the protector1 1 For the purposes of this document, “protector” is used as a general term for eye protector and/or eye and face protectors used for laser protection.

- 4.1 Performance requirements
- 4.1.1 Laser pulse and exposure duration
- 4.1.2 Optical density (OD)
- 4.1.3 Transmittance to short pulses
- 4.1.4 Resistance category (RC)
- 4.1.5 Luminous transmittance
- 4.1.6 Dynamic protection
- 4.1.7 Field of view
- 4.1.8 Refractive power of filters and protectors
- 4.2 Construction of protectors
- 4.3 Robustness of protectors
- 4.3.1 Basic requirement
- 4.3.2 Optional requirements
- 4.4 Quality of material and surface of filters
- 4.4.1 Material and surface defects
- 4.4.2 Scattered light
- 4.5 Environmental stability
- 4.5.1 General
- 4.5.2 Filter and protector resistance to heat and humidity
- 4.5.3 Stability to ultraviolet radiation
- 4.5.4 Resistance of filters and frames to ignition by contact with hot surfaces
- 4.6 Marking
- 4.6.1 Marking requirements
- 4.6.2 Marking syntax and examples of marking
- 4.7 Manufacturer’s instruction and information
- 4.8 Requirements not mandatory for protectors worn by patients during medical or aesthetic treatment with lasers

5 Test methods

- 5.1 General
- 5.2 Optical density
- 5.3 Transmittance of short pulses
- 5.4 Resistance of filters and frames to laser radiation
- 5.5 Luminous transmittance of filters
- 5.6 Scattered light
- 5.7 Resistance to elevated temperature

Page count: 19