

# INTERNATIONAL STANDARD

## NORME INTERNATIONALE

**Safety of laser products –  
Part 4: Laser guards**

**Sécurité des appareils à laser –  
Partie 4: Protecteurs pour lasers**

Withdrawn



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## NORME INTERNATIONALE

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**Safety of laser products –  
Part 4: Laser guards**

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Partie 4: Protecteurs pour lasers**

INTERNATIONAL  
ELECTROTECHNICAL  
COMMISSION

COMMISSION  
ELECTROTECHNIQUE  
INTERNATIONALE

## CONTENTS

FOREWORD.....	4
INTRODUCTION.....	6
1 Scope.....	7
2 Normative references .....	7
3 Definitions .....	7
4 Laser processing machines .....	9
4.1 Design requirements .....	9
4.2 Performance requirements .....	10
4.3 Validation .....	10
4.4 User information.....	11
5 Proprietary laser guards.....	11
5.1 Design requirements .....	11
5.2 Performance requirements .....	11
5.3 Specification requirements .....	11
5.4 Test requirements .....	12
5.5 Labelling requirements .....	12
5.6 User information.....	13
Annex A (informative) General guidance on the design and selection of laser guards.....	14
Annex B (informative) Assessment of foreseeable exposure limit (FEL) .....	16
Annex C (informative) Elaboration of defined terms.....	23
Annex D (normative) Proprietary laser guard testing .....	25
Annex E (informative) Guidelines on the arrangement and installation of laser guards.....	27
Annex F (informative) Guideline for assessing the suitability of laser guards .....	37
Annex G (normative) Beam delivery systems.....	64
Bibliography.....	73
Figure B.1 – Calculation of diffuse reflections .....	17
Figure B.2 – Calculation of specular reflections .....	17
Figure B.3 – Some examples of a foreseeable fault condition .....	18
Figure B.4 – Four examples of errant laser beams that might have to be contained by a temporary guard under service conditions.....	19
Figure B.5 – Illustration of laser guard exposure during repetitive machine operation .....	20
Figure B.6 – Two examples of assessed duration of exposure .....	21
Figure B.7 – Assessed duration of exposure for a machine with no safety monitoring.....	22
Figure C.1 – Illustration of guarding around a laser processing machine .....	23
Figure C.2 – Illustration of active laser guard parameters .....	24
Figure D.1 – Simplified diagram of the test arrangement.....	26
Figure F.1 – Damage resistance of 1 mm thick zinc coated steel sheet derived from 10 s exposure to a defocused beam during experiments using a CW CO <sub>2</sub> laser .....	53
Figure F.2 – Damage resistance of 1 mm thick zinc coated steel sheet derived from 100 s exposure to a defocused beam during experiments using a CW CO <sub>2</sub> laser .....	53

Figure F.3 – Damage resistance of 2 mm thick zinc coated steel sheet derived from 10 s exposure to a defocused beam during experiments using a CW CO <sub>2</sub> laser .....	54
Figure F.4 – Damage resistance of 2 mm thick zinc coated steel sheet derived from 100 s exposure to a defocused beam during experiments using a CW CO <sub>2</sub> laser .....	54
Figure F.5 – Damage resistance of 3 mm thick zinc coated steel sheet derived from 10 s exposure to a defocused beam during experiments using a CW CO <sub>2</sub> laser .....	55
Figure F.6 – Damage resistance of 3 mm thick zinc coated steel sheet derived from 100 s exposure to a defocused beam during experiments using a CW CO <sub>2</sub> laser .....	55
Figure F.7 – Damage resistance of 2 mm thick aluminium sheet derived from 10 s exposure to a defocused beam during experiments using a CW CO <sub>2</sub> laser.....	56
Figure F.8 – Damage resistance of 2 mm thick aluminium sheet derived from 100 s exposure to a defocused beam during experiments using a CW CO <sub>2</sub> laser.....	56
Figure F.9 – Damage resistance of 1 mm thick stainless steel sheet derived from 10 s exposure to a defocused beam during experiments using a CW CO <sub>2</sub> laser.....	57
Figure F.10 – Damage resistance of 1 mm thick stainless steel sheet derived from 100 s exposure to a defocused beam during experiments using a CW CO <sub>2</sub> laser .....	57
Figure F.11 – Damage resistance of 6 mm thick polycarbonate sheet derived from 10 s exposure to a defocused beam during experiments using a CW CO <sub>2</sub> laser.....	58
Figure F.12 – Damage resistance of 6 mm thick polycarbonate sheet derived from 100 s exposure to a defocused beam during experiments using a CW CO <sub>2</sub> laser .....	58
Figure F.13 – Damage resistance of 1 mm thick zinc coated steel sheet derived from 10 s exposure to a defocused beam during experiments using a CW Nd:YAG laser .....	59
Figure F.14 – Damage resistance of 1 mm thick zinc coated steel sheet derived from 100 s exposure to a defocused beam during experiments using a CW Nd:YAG laser .....	59
Figure F.15 – Damage resistance of 2 mm thick zinc coated steel sheet derived from 10 s exposure to a defocused beam during experiments using a CW Nd:YAG laser .....	60
Figure F.16 – Damage resistance of 2 mm thick zinc coated steel sheet derived from 100 s exposure to a defocused beam during experiments using a CW Nd:YAG laser .....	60
Figure F.17 – Damage resistance of 3 mm thick zinc coated steel sheet derived from 10 s exposure to a defocused beam during experiments using a CW Nd:YAG laser .....	61
Figure F.18 – Damage resistance of 3 mm thick zinc coated steel sheet derived from 100 s exposure to a defocused beam during experiments using a CW Nd:YAG laser .....	61
Figure F.19 – Damage resistance of 2 mm thick aluminium sheet derived from 10 s exposure to a defocused beam during experiments using a CW Nd:YAG laser.....	62
Figure F.20 – Damage resistance of 2 mm thick aluminium sheet derived from 100 s exposure to a defocused beam during experiments using a CW Nd:YAG laser.....	62
Figure F.21 – Damage resistance of 1 mm thick stainless steel sheet derived from 10 s exposure to a defocused beam during experiments using a CW Nd:YAG laser.....	63
Figure F.22 – Damage resistance of 1 mm thick stainless steel sheet derived from 100 s exposure to a defocused beam during experiments using a CW Nd:YAG laser .....	63
Table D.1 – Laser guard classification .....	26
Table F.1 – Application of ALARP.....	40
Table G.1 – Beam delivery systems using free space beam delivery systems.....	69
Table G.2 – Beam delivery systems using fibre optic cables .....	71

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## SAFETY OF LASER PRODUCTS –

## Part 4: Laser guards

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International Standard IEC 60825-4 has been prepared by IEC technical committee 76: Optical radiation safety and laser equipment.

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The technical content is therefore identical to the base edition and its amendment and has been prepared for user convenience.

It bears the edition number 2.1.

A vertical line in the margin shows where the base publication has been modified by amendment 1.

This publication has been drafted in accordance with the ISO/IEC Directives, Part 2.

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- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.

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## INTRODUCTION

At low levels of irradiance or radiant exposure, the selection of material and thickness for shielding against laser radiation is determined primarily by a need to provide sufficient optical attenuation. However, at higher levels, an additional consideration is the ability of the laser radiation to remove guard material – typically by melting, oxidation or ablation; processes that could lead to laser radiation penetrating a normally opaque material.

IEC 60825-1 deals with basic issues concerning laser guards, including human access, interlocking and labelling, and gives general guidance on the design of protective housings and enclosures for high-power lasers.

This part of IEC 60825 deals with protection against laser radiation only. Hazards from secondary radiation that may arise during material processing are not addressed.

Laser guards may also comply with standards for laser protective eyewear, but such compliance is not necessarily sufficient to satisfy the requirements of this standard.

Where the term “irradiance” is used, the expression “irradiance or radiant exposure, as appropriate” is implied.

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