

# Optics and photonics — Lasers and laser-related equipment — Test methods for laser beam radiant power, radiant energy and temporal characteristics

*Optique et photonique — Lasers et équipements associés aux lasers — Méthodes d'essai de la puissance rayonnante, de l'énergie rayonnante et des caractéristiques temporelles des faisceaux lasers*

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ISO copyright office  
CP 401 • Ch. de Blandonnet 8  
CH-1214 Vernier, Geneva  
Phone: + 41 22 749 01 11  
E-mail: [copyright@iso.org](mailto:copyright@iso.org)  
Website: [www.iso.org](http://www.iso.org)

Published in Switzerland

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## Foreword

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The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO document should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see [www.iso.org/directives](http://www.iso.org/directives)).

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This document was prepared by Technical Committee ISO/TC 172, *Optics and photonics*, Subcommittee SC 9, *Laser and electro-optical systems*, in collaboration with the European Committee for Standardization (CEN) Technical Committee CEN/TC 123, *Lasers and photonics*, in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

This fifth edition cancels and replaces the fourth edition (ISO 11554:2017) which has been technically revised.

The main changes are as follows:

- a) Whole document: The term “power” and “energy” that mean optical power and optical energy have been replaced by “radiant power” and “radiant energy”, respectively, and the word “spectral density” has been replaced by “spectral” in order to align with ISO 80000-7:2019 and the International Electrotechnical Vocabulary.
- b) Normative references: IEC 61040:1990 has been removed because it was withdrawn in August 2011.
- c) In [3.1](#), the definition of RIN has been corrected. The word “relative intensity noise spectral density” has been replaced by “spectral relative intensity noise”.
- d) In [Figure 2](#), keys 4, 5 and 6 have been amended.
- e) In [6.3](#), the explanatory text has been added instead of referencing IEC 61040:1990.
- f) In [6.5](#), The term “laser power density” has been replaced by “irradiance” in order to align with ISO 80000-7: 2019.