



International
Standard

ISO 11554

**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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Foreword

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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- a) Whole document: The term “power” and “energy” that mean optical power and optical energy have been replaced by “radiant power” and “radiant energy”, respectively, and the word “spectral density” has been replaced by “spectral” in order to align with ISO 80000-7:2019 and the International Electrotechnical Vocabulary.
- b) Normative references: IEC 61040:1990 has been removed because it was withdrawn in August 2011.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 The word “relative intensity noise spectral density” has been replaced by “spectral relative intensity noise”.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- f) In [6.5](#), The term “laser power density” has been replaced by “irradiance” in order to align with ISO 80000-7: 2019.
- g) In [7.9](#), measurement procedure has been modified to clarify the method for removing thermal and shot noise terms as well as pre-amplifier noise from the measured noise power.
- h) In [Clause 9](#) c) 5), the terms “current or energy input”, “pulse energy”, “pulse duration” and “pulse repetition rate” have been modified in order to clarify their characteristics.