UL 2333

STANDARD FOR SAFETY

Portable Infrared Thermometers for Food Safety

UL Standard for Safety for Portable Infrared Thermometers for Food Safety, UL 2333

Third Edition, Dated May 31, 2016

Summary of Topics

This revision of ANSI/UL 2333 dated March 23, 2026 includes updates to references; 3.1, 18.2.1, 18.3.1, B1.1 (deleted)

Text that has been changed in any manner or impacted by ULSE's electronic publishing system is marked with a vertical line in the margin.

The revised requirements are substantially in accordance with Proposal(s) on this subject dated January 16, 2026.

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Standard for Portable Infrared Thermometers for Food Safety

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Second Edition – March, 2008

Third Edition

May 31, 2016

This ANSI/UL Standard for Safety consists of the Third edition including revisions through March 23, 2026.

The most recent designation of ANSI/UL 2333 as an American National Standard (ANSI) occurred on March 23, 2026. ANSI approval for a standard does not include the Cover Page, Transmittal Pages, and Title Page.

Comments or proposals for revisions on any part of the Standard may be submitted to ULSE at any time. Proposals should be submitted via a Proposal Request in the Collaborative Standards Development System (CSDS) at https://csds.ul.com.

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INTRODUCTION

1 Scope

1.1 These requirements cover portable, battery operated infrared thermometers and accessories affecting accuracy intended for food safety.

1.2 These requirements do not cover temperature indicating devices intended for non-food uses.

2 Devices

2.1 The devices covered by this standard are evaluated for their intended use as SCREENING TOOLS only. As such, they are not intended to take the place of or supersede the readings of food contact thermometers used in accordance with the FDA Food Code or the related requirements of Authorities Having Jurisdiction.

2.2 The devices indicate surface temperature at a minimum accuracy of ±2.2°C (4°F) for food product surfaces at 60°C (140°F) and 5°C (41°F). This accuracy is determined at an intended use range of 2.54 cm (1 in) to 30.5 cm (1 ft) with a surface area larger than the area of measurement of the unit in a range of ambient air temperatures.

2.3 Because external environmental use conditions, thermal shock, cleanliness of optics, mechanical abuse and other use factors influence the accuracy of the devices, the operator needs to adhere to all manufacturer's instructions for their use and care.

3 Reference publications

3.1 Equipment shall comply with the applicable requirements of the following publications:

a) Food and Drug Administration (FDA) Food Code;

b) Code of Federal Regulations (CFR), Title 21, Chapter I, Subchapter J, 1999;

c) International Electrotechnical Commission 61000-4-2 (IEC 61000-4-2): Electromagnetic compatibility (EMC) – Part 4-2: Testing and measurement techniques – Electrostatic discharge immunity test;

d) International Electrotechnical Commission 61000-4-3 (IEC 61000-4-3): Electromagnetic compatibility (EMC) – Part 4-3: Testing and measurement techniques – Radiated, radio-frequency electromagnetic field immunity test;

e) Standard for Marking and Labeling Systems, UL 969; and

f) Standard for Class 2 Power Units, UL 1310

3.2 Any undated reference to a code or standard appearing in the requirements of this standard shall be interpreted as referring to the latest edition of that code or standard.

4 Units of Measurement

4.1 Values stated without parentheses are the requirement. Values in parentheses are explanatory or approximate information.

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