



American National Standard/American Dental Association
Specification No. 48-2

LED Curing Lights

Identical adoption of ISO 10650-2:2007, *Dentistry – Powered polymerization activators – Part 2: Light – emitting diode (LED) lamps.*

ADA American
Dental
Association®
Council on
Scientific Affairs

AMERICAN NATIONAL STANDARD/AMERICAN DENTAL ASSOCIATION SPECIFICATION NO. 48-2 FOR LED CURING LIGHTS

The Council on Scientific Affairs of the American Dental Association has approved American Dental Association Specification No. 48-2 for LED Curing Lights. This and other specifications for dental materials, instruments and equipment are being formulated by working groups of the ADA Standards Committee on Dental Products (formerly Accredited Standards Committee MD156 for Dental Materials, Instruments and Equipment). The Committee has representation from all interests in the United States in the standardization of materials, instruments and equipment in dentistry. The Council has adopted the specifications, showing professional recognition of their usefulness in dentistry, and has forwarded them to the American National Standards Institute with a recommendation that the specifications be approved as American National Standards. The American National Standards Institute granted approval of ADA Specification No. 48-2 as an American National Standard on January 8, 2010.

The Council thanks the working group members and the organizations with which they were affiliated at the time the specification was developed:

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**AMERICAN NATIONAL STANDARD/AMERICAN DENTAL ASSOCIATION SPECIFICATION NO. 48-2 FOR
LED CURING LIGHTS****FOREWORD**

(This Foreword does not form a part of ANSI/ADA Specification No. 48-2 for LED Curing Lights).

This specification is an identical adoption of ISO 10650-2:2007, *Dentistry – Powered polymerization activators – Part 2: Light-emitting diode (LED) lamps*. ADA SCDP Working Group No. 6.33 on Activator Lights examined the international standard and found it acceptable for identical adoption as ANSI/ADA Specification No. 48-2.

This specification sets forth requirements and test methods for light emitting diodes (LED) type powered polymerization activators in the 190 nm to 385 nm wavelength region and the wavelength region above 515 nm. No requirements are given for the 400 nm to 515 nm wavelength region.

This specification uses wavelength regions based on cut-off filters. Thus the 190 nm to 385 nm region includes not only the ultraviolet region but also the near-blue wavelength region around 380 nm. The 400 nm to 515 nm region is taken as the blue region for powered polymerization activation. The region above 515 nm extends to approximately 1 100 nm, which is the detection limit of the detector specified in this document.

The test methods described do not give absolute values nor do they reflect energy emitted as black body radiation. The measured values are not true radiant exitance but are values obtained using the methods described in this document. Nevertheless, the values obtained using these test methods are used in conjunction with this document.

This specification refers to IEC 60601-1:2005, the basic International Standard on safety of medical electrical equipment, wherever relevant, by stating the respective clause numbers of IEC 60601-1:2005.