Introduction

Light curing of resin-based adhesives, filling materials and cements is an essential part of daily clinical practice—so an LED curing light is one of the most used devices in the dental operatory. Clinical longevity of restorations is based on reliable materials and devices; an inadequate cure has negative effects on physical and chemical properties of the restoration material, leading to failure of the final results due to marginal defects, secondary caries or restoration fracture.

The Paradigm™ LED Curing Light from 3M ESPE offers all the features you need.

- High intensity of 1200 mW/cm² for fast and complete curing.
- Special optics for up to 5 times more intensity at the clinically relevant distance of 7 mm compared to leading devices tested.
- Wide 10mm light guide that illuminates up to 80% more curing surface compared to traditional devices tested.
- Long-life, high-performance Li-ion battery, that provides 60 minutes of cure time with a single charge.
- Consistent light output throughout the lifetime of the battery, irrespective of the level of battery charge or number of curing cycles.
Fast, reliable and effective curing

Special optics deliver a more focused light output.

Light beams do not come out in parallel, but spread out with a certain angle. With increasing distance from the light guide tip to the restoration surface, the same amount of light is spread over a larger surface. As a result, the intensity drops. The Paradigm light is optimized to maintain a high intensity even at the clinically relevant distance of 7 mm.

A more focused light output results in a higher intensity at clinically relevant distances.

The best curing technique requires positioning the light guide as close as possible to the dental material in order to maximize light intensity. In some clinical situations—like curing the bottom layer in a deep cavity—close positioning is not possible. In that case, a typical distance between the light guide and material may be about 7 mm.

High performance Li-ion battery technology offers more 10-second cycles than competitor lights tested.

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Redefining depth of cure

Effective intensity distribution from center to rim.

The Paradigm light provides reliable curing results as the special optics cover a large curing area with a uniform intensity distribution at a clinically relevant distance of 7 mm. This is a prerequisite for completely cured restorations.

Intensity at 7 mm distance

The wide 10mm light guide covers a large illumination surface.

The 10mm Paradigm light guide offers up to 80% more illumination surface compared to leading devices tested. That makes it possible to cure larger restoration surfaces in one shot.

All of this translates into a greater depth of cure.

Fig. 6: Paradigm™ LED Curing Light achieves the highest depth of cure among tested devices at the clinically relevant distance of 7 mm. Source: 3M ESPE internal data

Fig. 5: Illustration of a clinical situation: Curing of a large Class II cavity in a typical lower molar. The Paradigm™ LED Curing Light offers more illumination surface, allowing the full cavity surface to be cured in one shot. Source: 3M ESPE internal data

Fig. 4: The images show clearly that the Paradigm™ LED Curing Light delivers a more consistent intensity distribution across the illuminated surface at a 7 mm distance resulting in a more effective light output (see the extent of red areas with highest intensity). Source: 3M ESPE internal data

Fig. 3: Normalized Intensity [%]

With 10mm light guide

Paradigm™ LED Curing Light
bluephase® C8
bluephase® G2

With 8mm light guide

Demi™ Plus

Depth of Cure [mm]

FLASHTite H401
Cellulux™ LED
Radi Plus
Paradigm™ LED Curing Light

Distance between tip and composite 7 mm

Filtek™ Supreme Ultra Universal Restorative A3B, 10-second cure time
Designed for maximum efficiency

The Paradigm™ LED Curing Light offers all the features you need.

- Simple, intuitive 2-button operation with one cure mode for all indications.
- Multiple-setting light timer with easy, push-button control offers preset cure times of 5, 10, 15 and 20 seconds, a continuous 120-second mode, and tack-cure mode.
- Tack-cure function allows predictable curing with reproducible short light pulses produced by simply keeping the start button pressed.
- Lightweight, ergonomic “V-shape” design provides a comfortable grip that best fits your technique.
- Durable resin housing is made of shatter-proof, high-performance plastic.
- Fan-free for silent operation.
- Vent-free housing for fast and easy disinfection.

![Light guide rotates 360° for easy alignment of light tip to restoration]

**TECHNICAL DATA**

<table>
<thead>
<tr>
<th>Feature</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power supply</td>
<td>Built-in Lithium-ion battery, exchanged through Customer Care Center</td>
</tr>
<tr>
<td>Utilizable wavelength range</td>
<td>430-480 nm</td>
</tr>
<tr>
<td>Wavelength peak</td>
<td>455 nm ±10 nm</td>
</tr>
<tr>
<td>Light intensity (between 400 and 515 nm)</td>
<td>1200 mW/cm² -10%/+20% (independent of battery power level)</td>
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<tr>
<td>Optically active light emission area</td>
<td>60-65 mm²</td>
</tr>
<tr>
<td>Timer settings</td>
<td>5, 10, 15, 20 seconds, continuous mode (120 sec) and tack cure mode</td>
</tr>
<tr>
<td>Total exposure time (new, fully charged battery)</td>
<td>Typically 60 minutes</td>
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<tr>
<td>Charging time empty battery</td>
<td>Approximately 120 minutes</td>
</tr>
<tr>
<td>Continuous runtime until thermal safety shutdown</td>
<td>Typically 7 minutes at room temperature of 73.4°F (23°C)</td>
</tr>
<tr>
<td>Dimensions</td>
<td>Diameter 1.10 in (28 mm), length 10.63 in (270 mm)</td>
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<tr>
<td>Weight</td>
<td>.40 lb (180 g) (including light guide)</td>
</tr>
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Customer Care Center: 1-800-634-2249   www.3MESPE.com