

# The simplicity of one-step placement with the confidence of a deep cure.



If you like the idea of a time-saving, 5mm bulk placement, but are concerned whether it will cure sufficiently, then learn how 3M™ Filtek™ One Bulk Fill Restorative and 3M™ Elipar™ DeepCure LED Curing Lights can help.

Most incrementally placed composites have a level of “cloudiness” prior to light curing that affects depth of cure. To overcome the cloudiness, the refractive indices of the matrix and filler components need to match.

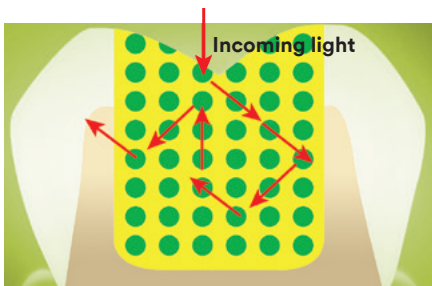
Typically, the matrix has a refractive index that’s significantly lower than that of the filler. But Filtek One Bulk Fill Restorative is formulated to allow the refractive index to more closely match the filler.

The result is an increased depth of cure.

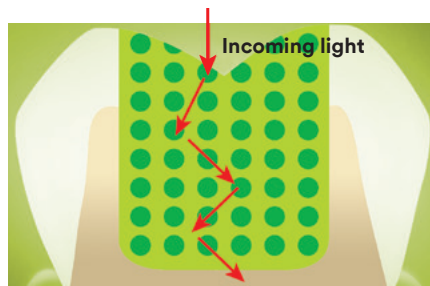
**The action that forces the pencil to optically displace (diagram at right) is the same action that forces the light to redirect in a composite when the refractive indices of the filler and resin do NOT match.**

If the light traveling through a material is redirected to a large enough degree, then the light will not be transmitted through the material (left diagram below), thus resulting in composite with a lower depth of cure.

**Refractive index does not match**



**Refractive index does match**



## What’s a refractive index?



**A material’s refractive index determines how light passes through it.**

Ever notice how a pencil appears to be displaced when it’s placed in a glass of water? That’s because it’s placed in two materials with unmatched refractive indices. When light passes from air (refractive index of 1) into water (refractive index of 1.33), the light is redirected—and so the pencil appears to be displaced.

- = Refractive index mismatch
- = Refractive index match
- = Potential scattering site
- = Light ray

If the filler and the matrix **DO** have matching optical properties (right diagram), as is the case with 3M™ Filtek™ One Bulk Fill Restorative, then the light will not be significantly redirected, and the light will be successfully transmitted through the material, which increases the material’s depth of cure.

# Designed to work together.

Imagine how fast and easy posterior restorations could be with a simple, one-step placement AND the confidence of a deep cure! That's precisely what you get when you use 3M™ Filtek™ One Bulk Fill Restorative and a 3M™ Elipar™ DeepCure LED Curing Light together ... a fast posterior restoration and a predictable, reliable cure.

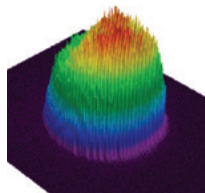
## Curing Protocol

Restoration Type	Increment Depth	Halogen Lights (with output of 550–1000 mW/cm <sup>2</sup> )	LED Lights (with output of 1000–2000 mW/cm <sup>2</sup> )
Class I	4mm	40 sec	20 sec
Class II	5mm	20 sec occlusal 20 sec buccal 20 sec lingual	10 sec occlusal 10 sec buccal 10 sec lingual

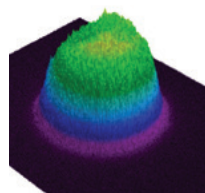
Note: For Class II restorations, remove the matrix band prior to the buccal and lingual curing steps.

**A deep, uniform cure, even at the bottom of the cavity.** Another reason light may not make it through the composite may be the curing light. That's why we make the Elipar DeepCure LED Curing Lights! They produce a more collimated beam profile for better light uniformity and intensity distribution at clinically relevant distances—even in deeper areas.

Uniform Beam Profile



0mm Distance



4mm Distance

low 0 20 40 60 80 100 high 3D Beam Profile Imaging (%): 100% = Maximum Irradiance

Source: 3M internal data



## Ordering Information

### 3M™ Filtek™ One Bulk Fill Restorative

Refill	Item #	Item #
Shade	Syringe	Capsule
A1	4866A1	4867A1
A2	4866A2	4867A2
A3	4866A3	4867A3
B1	4866B1	4867B1
C2	4866C2	4867C2

SYRINGE SHADE REFILLS include: 1 – 4g syringe; Technique Guide; Instructions for Use.

CAPSULE SHADE REFILLS include: 20 – 0.2g capsules; Technique Guide; Instructions for Use.



### 3M™ Elipar™ DeepCure LED Curing Lights

Item #	Product Description
76976	3M™ Elipar™ DeepCure-S LED Curing Light—Stainless Steel Includes: Handpiece (Cordless); charging base (230V); Li-ion battery; 10mm light guide; eye shield
76981	3M™ Elipar™ DeepCure-S Light Guide, 10mm
76984	3M™ Elipar™ DeepCure Eye Shield
76985	3M™ Elipar™ DeepCure-S Rechargeable Li-ion Battery



3M Oral Care  
2510 Conway Avenue  
St. Paul, MN 55144-1000 USA  
Phone 1-800-634-2249  
Web 3M.com/dental

3M Canada  
Post Office Box 5757  
London, Ontario N6A 4T1  
Canada  
Phone 1-888-363-3685

3M, ESPE, Elipar and Filtek are trademarks of 3M or 3M Deutschland GmbH. Used under license in Canada. Printed in USA. © 3M 2016. All rights reserved. 70-2013-0808-0