

# radii xpert

Professional LED Curing Light

Smarter design.  
Optimal cure every time.



target assist  
precision curing



collimated  
light



smart technology  
for ease of use



ergonomically  
well-balanced grip



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Leaders in LED curing

# Smarter design. Optimal cure every time.

## Unique target assist for precision curing

Radii Xpert's unique target assist technology enables you to correctly position the light and be confident of the angulation before curing. A light source must be held close and perpendicular to a restoration to avoid incomplete polymerization<sup>1</sup>. By activating the positioning light and releasing once over the tooth, you can be sure that curing only begins when the light is in position and restorations will receive a complete cure. Ensure you are on target every time with Radii Xpert.



target assist precision curing

<sup>1</sup> Marianne Federlin, D.D.S., Ph.D et al (2012), 'Improving Light-Curing Instruction in Dental School', Journal of Dental Education, Vol 77, No 6

## Optimally collimated beam

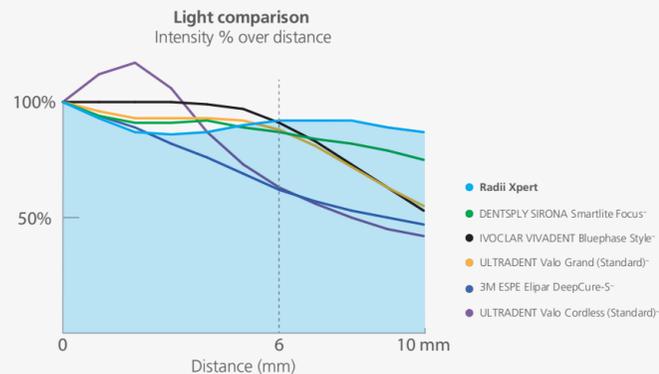
Radii Xpert is the ideal choice for restorations of all sizes, including bulk fill restorations that require a deep cure. The collimated beam ensures light intensity is maintained on the restoration being cured. Achieve a predictable cure, every time with Radii Xpert.



collimated light

## Consistent light intensity

Radii Xpert has better performance due to the light intensity remaining consistent over clinically relevant distances. The consistent intensity ensures light will penetrate the underlying restorative with limited drop off, giving you the confidence of a full cure to the depth of a restoration.



Independently tested by Tufts University School of Dental Medicine, Boston, USA, 2017  
Results normalised to 100% at 0 mm  
Tested on a BlueLight Analytics<sup>®</sup> Inc. MARC<sup>®</sup> light collector with 4-mm aperture  
~ These are not registered trademarks of SDI Ltd



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## Smart technology for ease of use

Smart technology improves the efficiency of your dental appointment. A LCD display with countdown timer eliminates estimation and provides accuracy during a curing cycle. Radii Xpert gives you the ability to save your favourite setting and the multi-coloured status rings offer a visual representation when you need to charge or when curing is in progress.



smart technology for ease of use

## Ergonomically well-balanced grip

Radii Xpert's ergonomic design allows you to comfortably access all restoration sites. The 360-degree rotatable head enables restorations in all quadrants to be accessed easily. Radii Xpert has a well-balanced slimline design and can be held in a pencil or pistol grip, minimising hand and arm fatigue.



ergonomically well-balanced grip

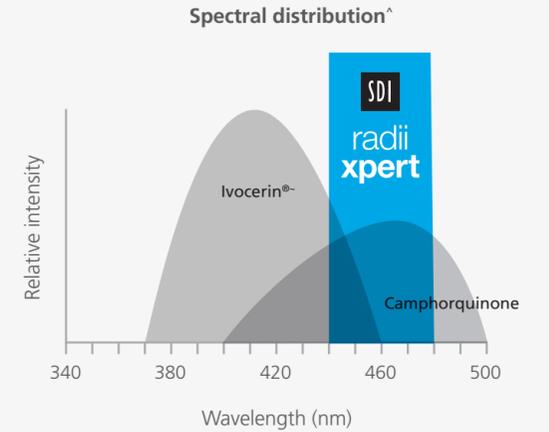
## Base with intensity indicator

Radii Xpert's built-in intensity indicator allows light intensity to be monitored easily, without the need to purchase an additional hand held meter to assess relative change in output. Routine evaluation of a curing light is important for optimal operation<sup>2</sup>.

<sup>2</sup> Christensen GJ 'Are direct restorative resins being cured adequately?', Dental Economics (2013). Available from: <http://www.dentaleconomics.com/articles/print/volume-103/issue-5/practice/are-direct-restorative-resins-being-cured-adequately.html>

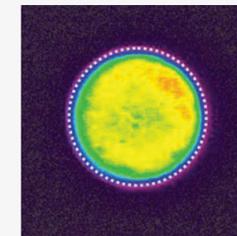
## Cures all composites

Radii Xpert will cure all commercially available composites without the need for a polywave light. The light intensity of 1500 mW/cm<sup>2</sup>\* over a 4-mm aperture covers a wavelength range between 440 nm - 480 nm. Radii Xpert delivers the right spectral distribution without the need for extended wavelengths, giving you a reliable cure for all composites, including those with Camphorquinone and Ivocerin<sup>®</sup>.



## Consistent beam profile

Restorations can be cured with the confidence of a uniform beam profile using Radii Xpert. The beam delivers an even energy distribution, with reduced hot and cold spot variation. The entire beam profile of a curing light is important to ensure restorations are cured evenly.



Beam profile at 0 mm distance within the active area.

BlueLight Analytics<sup>®</sup> Inc., 2017



## Enhanced heat management

Restorations can be cured safely with Radii Xpert. Heat sink technology is incorporated to reduce the amount of heat emission. Enhanced heat management prevents damage to pulp tissue that can be caused by excess heat<sup>3</sup>.

You can conveniently cure multiple restorations without the risk of overheating the unit. The absence of excess heat also helps to maintain the life of the LED.

<sup>3</sup> E. Armellin et al (2016), 'LED Curing Lights and Temperature Changes in Different Tooth Sites', BioMed Research International, Vol 2016, Article ID 1894672

## Pulse technology

Radii Xpert uses a combination of pulse technology and steady current to further reduce heat emitted onto the tooth. With multiple pulses per second, light output is maintained on the restoration being cured, without the risk of overheating.

## Interchangeable attachments

Radii Xpert offers versatility with the availability of full arch bleaching, diagnostic and orthodontic attachments that snap in with ease.

<sup>^</sup>Timothy S. Menees et al, (2015), 'Depth of cure of bulk fill composites with monowave and polywave curing lights', American Journal of Dentistry, 28(6): 357-361  
SDI Ltd internal data



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SDI, a leading manufacturer of specialised dental materials that are marketed in over 100 countries globally, brings you the Radii Xpert – a smarter curing light that incorporates the latest in LED technology.

\* Ivocerin<sup>®</sup> is not a registered trademark of SDI Ltd.

# Key features

- Unique target assist for precision curing
- Optimally collimated beam
- Consistent light intensity
- Smart technology for ease of use
- Ergonomically well-balanced grip
- Cures all composites
- Consistent beam profile
- Enhanced heat management
- Base with intensity indicator

## Rotatable head

Radii Xpert's 360-degree rotatable head enables restorations in all quadrants to be accessed with ease.

## Interchangeable attachments

Radii Xpert offers versatility with the availability of full arch bleaching, diagnostic and orthodontic attachments.

## Slimline design

Radii Xpert's slimline design enables easy access to the posterior region of the mouth. This is particularly beneficial when treating children.

## Lightweight

Weighing 185 g, Radii Xpert is lightweight and minimises hand and arm fatigue.

## Heat sink technology

Multiple restorations can be cured safely due to the heat absorption properties of heat sink. Heat sink technology directs heat away from the LED, without the need for a cooling fan.



## Pulse technology

Radii Xpert can generate a high light output without excess heat by using a combination of pulse technology and steady current.

## Recharging

Achieve 900 x 10 second cures with Radii Xpert before the need to recharge. This equates to a convenient 2-hour 30 minute runtime.

## Easy to clean

Radii Xpert has smooth surfaces and comes with a perfectly fitted barrier sleeve to prevent cross-contamination.

## Durable

Radii Xpert is constructed with high strength polymer for durability.

## Cordless

Radii Xpert is a cordless unit allowing complete freedom of movement.



## Technical data - Standard attachment

Wavelength	440 nm – 480 nm
Peak wavelength	460 nm
Light intensity	1500 mW/cm <sup>2</sup> * (+ 5 %, - 15 %)
Maximum duration of continuous use	20 seconds
Time to charge flat battery	3 - 5 hours
Time to charge battery (general use)	60 - 180 minutes
Battery	1 x 3.7 V 2600 mAh
Multi-region plug pack	AC input: 100 - 240 V ~ 1.0 A, 50 - 60 Hz DC output: 12 V, 1.5 A & 15 W Max
Operating temperature	10°C - 40°C / 50°F – 104°F
Weight	185 g / 6.5 ounces
Total height with handpiece	290 mm

Radii Xpert LED curing light has a 3 - year warranty.  
Battery has a 2 - year warranty.

\*The irradiance as measured using a 4-mm diameter sensor that is centred.

## LED attachments available

LED attachment type	Indications	Program	Colour
Standard	<ul style="list-style-type: none"> <li>Light curing at contra angle similar to a hand piece</li> </ul>	<ul style="list-style-type: none"> <li>Run time: 2, 10, 20 seconds as selected</li> <li>Beeps at completion</li> </ul>	Blue light (440 nm - 480 nm)
Diagnostic	<ul style="list-style-type: none"> <li>Detection of cracks, fractures, calculus, decay, caries, root canal openings, non-vital teeth, leaking restorations and root tips</li> </ul>	<ul style="list-style-type: none"> <li>Run time: 5 minutes</li> <li>Low, medium or high intensity selections available</li> <li>Beeps at completion</li> </ul>	White light
Orthodontic	<ul style="list-style-type: none"> <li>Light curing specifically for orthodontic use</li> </ul>	<ul style="list-style-type: none"> <li>Run time: 5 minutes or 10 seconds as selected</li> <li>Beeps at completion</li> </ul>	Blue light (440 nm - 480 nm)
Full arch bleaching	<ul style="list-style-type: none"> <li>In-office whitening of upper and lower arch</li> <li>Vital and non-vital whitening procedures</li> </ul>	<ul style="list-style-type: none"> <li>Run time: 8, 10, 15 minutes as selected</li> <li>Beeps at half-way point for each selection and at completion</li> </ul>	Blue light (440 nm - 480 nm)

### Radii Xpert LED curing light 5600300

- 1 x Radii Xpert handpiece
- 1 x charger
- 1 x multi-region plug pack
- 5 x small light shields
- 1 x large light shield
- 3 x spare lens caps
- 100 x barrier sleeves

### LED attachments:

- Radii Xpert standard LED attachment 5600301
- Radii Xpert full arch bleaching LED attachment 5600308
- 1 x full arch bleaching LED attachment
- 2 x light shields
- 50 x barrier sleeves
- Radii Xpert diagnostic LED attachment 5600306
- Radii Xpert orthodontic LED attachment 5600307

### Accessories and replacement parts:

- Radii Xpert replacement lens caps (5 pack) 5600310
- Radii Xpert barrier sleeves (1000 pack) 5600309

- Radii Xpert small light shield (5 pack) 5600056
- Radii Xpert large light shield 5600089
- Radii Xpert replacement battery pack 5600305
- Radii Xpert charger + plug pack 5600304
- Bleach stand 5600095
- Full arch bleaching LED attachment barrier sleeves (50 pack) 5600093
- Full arch bleaching LED attachment light shields (5 pack) 5600094
- Diagnostic adapter tip 5600078
- Tacking tip set (1 mm and 2 mm openings) 5600079



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