

### THE RATINGS

## Radii Xpert New



4.3 0.0 (0) 17 0 2 0

Compare

**ORIGINAL POST DATE**  
March 08, 2021

**MANUFACTURER/DISTRIBUTOR**  
SDI

**WEBSITE**  
<https://www.sdi.com.au/au/> (<https://www.sdi.com.au/au/>)

**RAVES & RANTS**

- + Plenty of power
- + Consistent output
- Tip could be larger
- Parabolic lens cover can be difficult to stabilize

**PRICES**  
**Basic unit**  
\$1,365.52 (includes 8mm tip)

**Replacement tips**

8mm	\$281.64
Diagnostic	\$281.64
Ortho	\$281.64
Bleaching	\$682.64



(<https://realityratings.com/media/reviews/photos/origin: Xpert-hi-77-1615243801.jpg>)



(<https://realityratings.com/media/reviews/photos/origin: xpert-side-HR-85-1615243896.jpg>)

**BRO\_Radii Xpert US\_M1003 28 A\_FA** 1 MB 0

**USA - Radii Xpert Quick Tip F lyer** 500 KB 0

## **WARRANTY**

3 years (light)

2 years (battery)

## **INTRODUCTION/MANUFACTURER'S CLAIMS**

New flagship LED curing light from SDI. Its main features include a targeted positioning beam, optimally collimated beam, well-balanced grip, consistent light intensity and beam profile, enhanced heat management, and interchangeable tips.

## **BASE UNIT/BATTERY CHARGER**

Off-white plastic with an oval footprint and an angled upper surface at about 45°. The width is 2.8in/7.2cm, while the depth (including the power cord) is 5.9in/15.0cm. Most (86%) evaluators considered its size to be acceptable, while the other 14% thought it was too large.

The wand fits securely into a simple recess in the back of the top surface of the base unit. The overall height with the wand in place is about 11.2in/28.5cm. Seating the wand properly for charging is a simple matter – you just merely drop it into the recess without having to apply any pressure. All evaluators considered docking and retrieving the wand to be easy.

Immediately in front of the wand recess are five LEDs that sequentially illuminate green when the wand is charging and are solid green when the wand is fully charged. And at the bottom of the top surface is the slightly recessed aperture for the radiometer.

There is no other function to the base unit. There is no power switch as the unit is always activated as long as it is plugged into an electrical outlet. The power cord connects to the unit on the bottom and has a positioning slot on the rear surface.

Although not very heavy, the base unit is relatively stable due to a thin rubber gasket-like, circumferential extension on its bottom surface instead of the more common rubberized feet. However, more weight and heft would help it resist tipping over when the wand is docked and retrieved. Most (91%) evaluators found it to be stable, while 9% thought it moved around too much during docking and retrieving it. Some comments:

- The stability of the base is good, however the wand on the base moves around a bit.
- Very stable -- fits very well.
- If you grab it from an angle, it could be unstable.
- If you lift it straight up, no problem. Even at an angle, I didn't have an issue.

The design of the base unit was applauded by 48% of the evaluators, while another 48% evaluators considered it to be acceptable and 4% were not impressed. Some comments:

- It is just acceptable.
- Could be smaller but generally the light slots in nicely.
- Very stable design, doesn't take up a lot of space.
- It has all I need. Level of the battery and the light meter. Much better than in VALO, which turns off without any warning, doesn't have a base unit to recharge, and its batteries have to be changed.
- It was ok.
- The oval shape saves on counter space.
- Very well combined.
- The wand seems like it should face other direction and lean over the base for support. My base wobbled a little too much because I found it difficult to get the power cord in the small slot.
- Simple and also shows amount of the charging.
- Simple, but everything we wanted.

## WAND

The cordless wand is clad in the same white plastic as the base unit, with a primarily glossy finish that transitions into matte on its underside for a more secure grip. This wand is fairly large (see below) compared to some of its competitors, but its weight is only 6.8oz/192.8g (similar to an electric handpiece). Most (91%) evaluators felt the weight was acceptable, while the other 9% thought it was too heavy. Some comments:

- Maybe just a bit heavy.
- Not heavy, not light, but because of the size, it gives you a feeling that it is heavy.
- OK to me, but two of my assistants felt it was too heavy.
- If you are curing most of the day, it does get heavy.
- No complaints here.
- It feels solid. The weight and balance are fine.
- Suits the needs and matches to the size.

Its 10.1in/25.6cm length was considered to be acceptable by most (76%) evaluators, while the other 24% felt it was too long. Some comments:

- At first I thought it was too long and too tall when standing, but this size seems necessary.
- I initially thought it would be too long, but I quickly adjusted to it and liked the ease of use.
- While not inconvenient, I would prefer it to be smaller (like Fusion).
- It would always be nice to get the curing light smaller.
- I would think that the length could be a bit shorter without jeopardizing its features.
- I really thought this size was just right.

It has a slight bend at roughly its half-way point. Since it is designed to be held in a pencil grasp, this bend helps with hand placement and balance. Most (95%) evaluators noted that it is acceptably balanced and comfortable to hold, while the other 5% considered it to be too unwieldy. Some comments:

- I like the feel when holding the device. Balanced feel.
- Very typical.
- Radium fits in my hand very well with my being able to access the switch.
- I really like it very much!
- Very nice.

The only controls, located on the top side in a rubberized gray oval, are the activation button near the tip and the function control button, both of which are within the aforementioned oval. These buttons are soft-touch and require moderate pressure to activate. Most (86%) evaluators found activation to be easy, while the other 14% thought it was cumbersome. Some comments:

- Need to press two buttons, which is not easily done.
- For me the location was a little awkward.
- The activation pressure is fine.
- Once you figured out which button was the trigger, it was great. We kept hitting the wrong button.

There is no audible signal when the light is activated and a single beep when it deactivates. Note: you can change the volume of the beeps from mute to low, medium, or loud. You can scroll through these selections by using the function button. Most (76%) evaluators found changing the volume to be easy, while the other 24% thought it was difficult. Some comments:

- Actually I could not find where to change the volume of timer beeps. I did not need to change it either. The default level is just fine for me.
- Did not try this function.
- Not something I use much.

- Changing the volume is way more involved than changing the polymerization time. However, you would only do this once and that would be it.
- Nice and quiet if desired.

In the middle of the gray oval is the LED display, with its easy-to-read white numbers and characters on a dark background. There is also a cool “status ring” at the base of the removable tip. This ring turns yellow when you are using the positioning beam (see below), blue when you are actively curing, 1 red flash before the light deactivates due to being too warm (12-15 minutes), and blue with two short beeps when the battery level is low. This status ring was appreciated by 38% of the evaluators, while 33% noticed the colors but didn’t pay much attention to them and 29% never even noticed them.

There is a unique, low intensity “positioning” beam that allows you to place the light in the correct orientation over the prep before you actually begin curing. To activate the positioning beam, push on the activation button and keep it depressed. Once you have the light where you need it, release the pressure on the trigger and the full power of the light will begin to cure the restoration. While 48% of evaluators found this mode to be useful, 24% did not think it was necessary and 28% did not even know it was an option. Some comments:

- Actually if there is no positioning possibility, I might still cure the restoration or bonding agent well due to the nice design of the curing unit. However I felt satisfied when I changed the positioning of the light. While curing from lingual and buccal side especially in the posterior region, I felt that I made an effective cure. Therefore I found it very useful.
- Helpful in posterior when positioning is a bit more challenging.
- It is helpful in certain angles of the mouth.
- If I were practicing in total darkness, it could be handy!
- I don't know what this is.

The sleep mode, which completely turns off the wand, activates about three minutes after curing. In addition, the wand also goes to sleep immediately after docking it in the base unit, but it wakes up as soon as you retrieve it. Even though awakening the gun is not difficult, it is somewhat of a nuisance to have to press the function button and then the activation button, especially if you need to cure a restoration quickly. And annoyingly, the curing interval time upon waking it up is always 10 seconds regardless of its setting before it went to sleep.

Most (57%) evaluators really liked the design of the wand, while 33% thought it was acceptable and 10% did not particularly like it. Some comments:

- At first it seemed too long, but remember...SIZE MATTERS! I got used to the length. RE: rotatable head--sounded great but not easy to rotate...otherwise it would be spinning in patient's mouth...so it's much easier to rotate my hand.
- Too long, have to press 2 buttons for function.
- The design seems to fit every clinical position. I worked in a private room due to pandemic. However, if I have worked in crowded clinical conditions as I worked in the past, I might be worried about it falling to the ground and breaking since it is quite tall while standing. It is very convenient for private clinics.
- Possibly a bit bulky.
- Slender and easy to grip; rotating head great for accessing teeth in all areas; lightweight.
- Two of my nurses liked the good balance of the handle, two felt it was too heavy. Body design is better than the VALO. The rotation of the head is nice. Heavy made quality.
- Easy to use. Comfortable.
- Good angle for handling.
- Very light and comfortable.
- The curve in the wand lends itself better for polymerizing maxillary teeth vs mandibular teeth. I had to lift my arm up in order to get it parallel to the occlusal surface of mandibular posterior teeth.
- Excellent design.
- Too long.
- Easy to use.

- I liked it. Only 2 buttons. Lightweight. When I asked my assistant what she thought she said that she would like the 'trigger' button on the underside of the wand.

In this age of pandemics, barriers have become even more important. Most (76%) evaluators thought the barriers supplied with the light fit well, while the other 24% didn't use them and still preferred to wipe them with disinfectants. Some comments:

- Shorter barriers to cover top only is good.
- Barriers are the must in these days. VALO barriers also fit.
- Most of the time I like using a barrier.
- I still wiped the wand after I changed the barrier.
- Of high importance in today's environment!

## **BATTERY**

The back end of the wand contains the recess to the battery compartment. The battery can easily be removed and replaced if necessary. The LED display features a fuel tank indicator in the shape of a battery. A fully charged battery will be displayed as three solid squares within the battery icon. As you use the light and drain the battery, the indicator squares go to two and finally one, so you are always aware of how much juice is left. When the battery is out of charge, the light beeps twice and the one square remaining in the fuel tank blinks on and off for three minutes until it goes back to sleep.

When the wand is placed back into the base unit, two of the LEDs, which are used for the radiometer (see below) also serve to indicate the battery charge status – they glow red along with a red status ring. However, in about three minutes, the LEDs change to green and three of them are sequentially illuminated along with a blinking green status ring. As charging proceeds, the three lights increase to four and finally to five. These lights indicate the battery is being charged.

Our test found the fully charged lithium ion battery should give you about 116 minutes or slightly less than two hours of curing (SDI claims 2.5 hours), while we found it will recharge completely in 5.8 hours (SDI claims 3-5 hours). Of course, if you place it back into the base unit between patients and overnight, you will probably never run out of power and the recharging time will be irrelevant.

Most (91%) evaluators thought the battery life and recharging time were acceptable, while 9% found it ran out of power too quickly and took too long to recharge it. Some comments:

- Never had an issue.
- Used for a full day without recharging.
- On a couple of occasions only, when we were bonding multiple restorations, it ran out of battery.
- The IFUs say that the battery will be good for 300 total discharges. This seems to be very limited. If you leave it on the charging base, how long will the battery last before it needs to be replaced? How much is the replacement battery?
- Always had it on the stand charging, so not an issue.
- Never really used it until the battery ran out.

## **FAN**

None – uses heat sink technology. It passed the 10-minute, continual cure test with its feeling only slightly warm. 2, 10, and 20 second intervals. Most (81%) evaluators found these settings to be acceptable, while the other 19% wanted more options. One evaluator wanted a 5-second option, while another wanted 30 seconds. Most (86%) evaluators found changing the timer settings to be easy, while the other 14% thought it was cumbersome. All evaluators had no problem with overheating and cutting off during a procedure. One evaluator used it for six crowns and had no issues.

## **TIMER**

2, 10, and 20 second intervals. Most (81%) evaluators found these settings to be acceptable, while the other 19% wanted more options. One evaluator wanted a 5-second option, while another wanted 30 seconds. Most (86%) evaluators found changing the timer settings to be easy, while the other 14% thought it was cumbersome.

## TIPS

**4** While our evaluation unit came with only the standard tip, there is also a white light diagnostic tip, a specific ortho tip, and a full arch bleaching tip. Most (76%) evaluators liked the fact that optional tips were available, while the other 24% stated the optional tips were not important. Some comments:

- I love this option.
- For bleaching I almost never use a light.
- I had the diagnostic tip. It would have been handy to have a slot attached to the base to put it in as it's easily misplaced on its own.
- Generally speaking, more tips would make it more versatile but I don't believe they are necessary.
- If the optional tips are better designed for the task they are intended for compared to the tiny diameter of the curing tip, it might make this unit more desirable.
- I think this is a nice addition.

The photobloc orange shield that is supplied with the light is one of the better ones we have seen and mounts reasonably securely on the base of the tip. However, it still does not give you adequate protection, especially when you are curing a restorative material with the tip positioned on the lingual surface. There are also small, rubberized rings that mount directly around the lens, but these offer minimal protection. We continue to advise using a paddle-like shield that can give you and your assistant maximum protection.

The actual lens of the tip is covered with a removable plastic cap that is parabolic in profile and only 8.0mm in diameter. This type of small tip may be acceptable for small to medium restorations, but it will not give you total coverage of a large restoration or veneer at one time. Nevertheless, most (86%) evaluators thought the tip size was acceptable, while 10% found it to be too small and 4% too large. Some comments:

- I would prefer to have an accessory that extends into the pulp chamber.
- Actually I like the size.
- There is absolutely no reason for a new light to have a diameter less than 10mm today!
- Might have preferred the tip size to be larger.

The parabolic cap was acceptable to 38% of evaluators, 33% preferred a flat tip, and 29% didn't have a preference. Some comments:

- Easier to stabilize a flat tip.
- Maybe the difference can be evaluated in a laboratory study. It might be effective by providing a close contact to the anatomy of the tooth.
- Difficult to access posterior restorations, and create a distance.
- I'm just unsure if this means the light is not as concentrated on one spot.
- I'm used to a flat lens, but don't mind the parabolic.
- I almost prefer flat.
- The curvature is annoying when polymerizing a flat restoration such as a Class IV.
- The shape is fine as I have 2 Valos, but there seems to be some light that leaks from the side because the housing is all clear plastic.
- Benefits are well worth it.

There is no small tacking tip, but most (71%) evaluators noted they rarely used a small tacking tip. On the other hand, the other 29% of the evaluators still missed a tacking tip, especially when seating veneers.

The tip can be rotated 360° and is removed with a firm pulling motion. The tip angle is slightly more obtuse than a right

angle, but you should be able to cure the occlusal surface of a second molar without subluxating the condyle! Most (57%) evaluators thought the tip angle really expedited positioning throughout the mouth, while 38% found it to be acceptable and 5% felt it was difficult to position properly. Some comments:

- I worked every part of the oral cavity. It allows easy positioning. Especially in the posterior region I felt satisfied.
- The size of the tip and the lens are cumbersome mostly in patients with restricted mouth openings in upper area.
- In those with small mouths, it was a bit trickier.
- Good angle, but could be still a bit more, almost 90 degrees.
- I like that I can rotate it.
- Overall, the tip angle is good. The bend of the wand makes it less desirable with mandibular posterior restorations.

### **POWER AND CURING MODES**

There is only one mode, which is all you need anyway. It is stated to be 1,500mW/cm<sup>2</sup>, but using a checkUP radiometer, we found it to be 1,384mW/cm<sup>2</sup>.

### **PEAK POWER (MW/CM<sup>2</sup>)**

1,384

### **HEAT GENERATION (°C)**

30. Peak temperature on the lens cap was 52°C.

### **DOES IT CURE ALL MATERIALS?**

With a wavelength range from 440-480nm, it should cure most if not all materials.

### **BUILT-IN RADIOMETER**

Place the tip over the aperture and activate the light. The power will be indicated by the illumination of 1-5 blue LEDs. Most (67%) evaluators felt it was easy to use and the lights were acceptable, while the other 33% still thought it was easy to use, but preferred a digital readout. Some comments:

- The lights are very helpful and informative. I prefer lights instead of digital readout.
- I prefer to have a number although we know that radiometers are not very accurate.
- Prefer a digital number so it's more easily compared.
- Very nice feature.
- Most important is to show the efficiency, lights or digit, no matter.
- Lights are approximate. Numbers are absolute.
- That is fine. I have no problem with the lights.
- My preference is to have a numerical value shown. For most clinicians, even if they use it, the lights would be fine.
- Great combination.
- Love this feature but yes, ideally I would love a digital readout.

### **PACKAGING**

Plain white cardboard box secured with a slide-off sleeve that has a photo of the top half of the wand along with some of its more prominent features. Interestingly it is tagged as a "Professional" LED Curing Light, as opposed to one targeted more for amateurs, we suppose! Inside the box the light and accessories are secured in cutouts in dense, black foam.

Most (57%) evaluators found the packaging to be boilerplate, while the other 43% thought it was exemplary. Some comments:

- Impressive box when received. Makes you want to open it immediately.

- Somewhere between exemplary and OK—I liked the outside box design.
- Recyclable is always good.
- Nice foam insert. It was a bit difficult to remove the wand.
- Very nice!
- It was more than ok, but not exemplary. It was nice.
- They do a really nice job at this. The presentation was excellent.

### DIRECTIONS

Multi-lingual, 51-page, coated paper manual with numerous somewhat polychromatic illustrations. Information is reasonably clear, straightforward and very detailed. There is also a smaller, shorter Quick Start Guide version. Most (71%) evaluators felt they were just OK, while the other 29% thought they were exemplary. Some comments:

- The mostly black background of the Quick Start Guide makes you look at it because it's unlike any other IFU around.
- Helped me figure out that the dimple in the stand was the radiometer!
- Very thorough and well organized, easy to follow. Helpful charts and images.
- Pretty straight forward. No complaints.
- The quick start guide is good. The complete IFUs are easy to follow.

## REALITY > REVIEW

### Strengths

Overall

4.3

Rubberized button covers make them non-slip. Plenty of power. Adjustable timer. Simple to use – no complicated and rarely used options. Built-in radiometer is convenient. Lack of fan makes it very quiet. Ergonomic with well-balanced grip. Rotatable head allows access in all areas of the mouth. Barriers fit reasonably well. Due to multi-colored status ring, it is easy to understand whether charging is required. High quality, solid construction. The positioning beam is helpful. Interchangeable tips. Good battery life. Easy to use out of the box. Intuitive. Nice design. Practical. Good angle of the handle. Fairly lightweight. Nice contemporary design. Collimated beam. Consistent light intensity. Uniform beam profile.

### Weaknesses

Tip size is small. Parabolic lens can be difficult to stabilize. Digital readout for radiometer would be helpful. Somewhat bulky -- length is more than needed. Having to push the trigger button twice, once to wake it up and once to activate it, can be a nuisance. More curing time options (5s and 15s) would be nice. Tip gets fairly hot. Adjusting the volume of the timer beeps is difficult. There could be more barrier sleeves in the package. Not easy to get it positioned in certain tough posterior distal regions. Long recharging time.

### BOTTOM LINE

If the rather small tip and parabolic lens cap don't bother you, then Radium Xpert will provide reliable and consistent light curing with some cool innovations.

Comments (0) (<https://realityratings.com/curing-lights/led/discussions/review?id=1245>) |



## USER REVIEWS

There are no user reviews for this listing.

 Add new review



---

## Login Form

Hi Samantha Cheetham,

[Log out](#)

## User Menu

[My Profile \(https://realityratings.com/members/member\)](https://realityratings.com/members/member)

---

[Buy / Renew Membership \(/buy-renew-membership\)](/buy-renew-membership)

---




[The REALITY Cult \(/the-reality-cult\)](/the-reality-cult)

---

[My Favorites \(/my-favorites\)](/my-favorites)

---

 [Add a product review \(/add-a-product-review\)](/add-a-product-review)

---

[Most Recent Ratings \(/most-recent\)](/most-recent)

---

[Most Recent FirstLook \(/most-recent-firstlook\)](/most-recent-firstlook)

---

[Top Rated Products \(/top-rated-products\)](/top-rated-products)

---

[All Upcoming Products \(/upcoming-products\)](/upcoming-products)

---

[Most Viewed Products \(/most-viewed-products\)](/most-viewed-products)

---

## Product Categories

[Product Categories \(https://realityratings.com/products\)](https://realityratings.com/products) (1295)

## Publications

[REALITY NOW \(https://realityratings.com/pubs/rn/\)](https://realityratings.com/pubs/rn/)

---

[The Techniques, Vol.1 \(https://realityratings.com/pubs/tech\\_vol\\_1/\)](https://realityratings.com/pubs/tech_vol_1/)

---

[REALITY Book 2012 \(https://realityratings.com/pubs/2012/\)](https://realityratings.com/pubs/2012/)

---

[REALITY Book 2009 \(https://realityratings.com/pubs/2009/\)](https://realityratings.com/pubs/2009/)

---

[REALITY Book 2005 \(https://realityratings.com/pubs/2005/\)](https://realityratings.com/pubs/2005/)

---

[All Manufacturers & Vendors](#)

Select

© 2021 REALITY RATINGS & REALITY PUBLISHING COMPANY