

# 2026 Buyer's Guide TO RED LIGHT THERAPY BEDS

*Key information to know before investing  
in a red light therapy bed!*



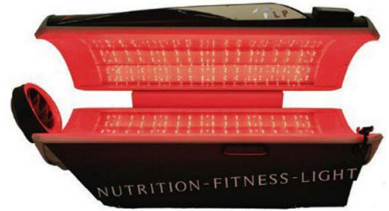
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# Introduction

Red Light Therapy (RLT) has established itself as one of the most notable contributors to the wellness sector, providing one of the most reliable and efficacious energy medicine techniques currently accessible. Over 50,000 scientific studies bear testimony to the therapeutic effects of RLT, offering potential benefits for a comprehensive range of conditions. Moreover, the Food and Drug Administration (FDA) has cleared RLT for various conditions including acne, muscular and joint discomfort, arthritis, muscle spasms, and diminished local blood circulation, to mention a few. Furthermore, studies undertaken by NASA have validated the use of red light LEDs for promoting wound healing and tissue regeneration. As well as being one of the most substantiated energy medicine modalities, RLT is recognized for its safety, with no identified risks or side effects.



At the top of the RLT product range are the full-body red light beds, representing the most innovative and comfortable RLT devices, specifically designed for professional use in wellness centers, spas, and clinics. These devices provide comprehensive body coverage by surrounding the body with red and near-infrared light, facilitating a thorough and efficient RLT experience. Owing to their high-grade components and cutting-edge technology, these devices come with a significantly higher price tag, ranging from \$30,000 to \$150,000.

The enhanced efficacy of these red light beds is due to their ability to envelop the body, thereby providing superior health benefits compared to localized light therapy devices. This immersive therapy ensures that all parts of the body receive an equal dosage of therapeutic light, leading to consistent and effective treatment results in a shorter span of time.

One of the notable advantages of red light beds is their efficiency in delivering an optimal dose of light in a considerably shortened time. Most quality red light beds can provide a beneficial therapeutic session within a span of 10 to 16 minutes, proving an ideal choice for professional settings to generate revenue. This operational efficiency facilitates faster client turnaround, thus maximizing the return on investment for business scenarios.

Prior to starting your journey with a Red Light Therapy Bed, there are many critical aspects to consider. We will outline 15 essential points that you should know before deciding on a red light bed for personal or professional use in our comprehensive Buyer's Guide to Red Light Therapy Beds.

# #1 POINT

## Research Proven Wavelengths

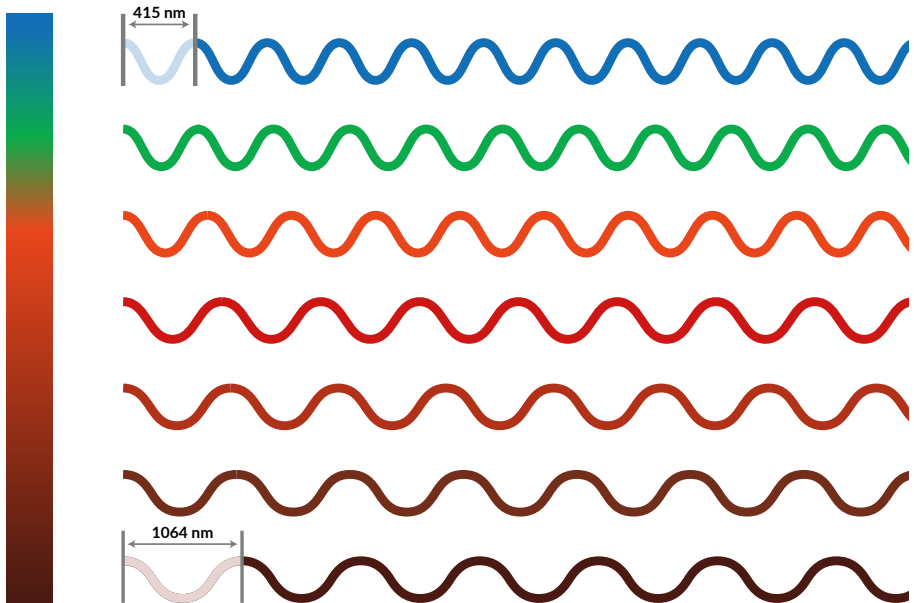
*Best Wavelengths—Research proven ranges that stimulate CCO (415, 528, 605, 630, 660, 670, 810, 830, 850, 980 & 1064)*

# Point #1

## Research Proven Wavelengths

When considering options for red light therapy, it's crucial that the device delivers scientifically and clinically validated wavelengths to ensure a broad spectrum of therapeutic applications as well as the maximum chromophore reception potential.

Specifically, what wavelengths does the device offer? Do these wavelengths carry clinically proven health benefits? Do they fall within the scientifically validated ranges?



Specific wavelengths in the range of 415 to 1064nm have demonstrated the most potent influence on mitochondrial function and energy production. These are the wavelengths known to yield the most impressive results for anti-aging, arthritis, fat reduction, waist circumference reduction, hair re-growth for those with hair loss, joint repair, bone repair, cancer recovery and prevention, cognitive enhancement, and brain health, among other benefits. The therapeutic effects are confined strictly to these specific wavelengths!








If a company fails to specify the wavelengths used, it should raise concerns because the wavelengths, coupled with the intensity or irradiance, are the two vital parameters of a red light bed that need to be accurate for the bed to offer the maximum possible benefits.

## Which Specific Wavelengths?

Though the wavelengths in the range of 415-680, 800-880, and 905-1070nm offer the most therapeutic benefits, some within these ranges are more extensively researched than others. Upon scrutinizing this chart, it is evident that some wavelengths are backed by more studies and validation.

The wavelengths demonstrating the most research are 630, 660, 810, 830, 850 (AND 980 or 1064 for the 905-1070 range). The 660 and 850 wavelengths are perhaps the most extensively used, but the 810 wavelength penetrates deepest, hence a device that includes this, along with the 980 or 1064 wavelength will provide superior benefits.

# LIGHT THERAPY HEALTH BENEFITS GUIDE

		Wave-length:	BLUE	GREEN	RED							NEAR INFRARED									
			415nm	528nm	605nm	630nm	633nm	640nm	650nm	660nm	670nm	800nm	810nm	820nm	830nm	850nm	855nm	860nm	900nm	980nm	
<b>Pain Relief &amp; Healing</b>		Pain Relief	✓	✓					✓	✓			✓	✓	✓				✓	✓	
		Arthritis				✓				✓	✓	✓			✓					✓	
		Wound Healing	✓	✓		✓				✓	✓	✓			✓					✓	
		Injury Healing				✓				✓	✓	✓	✓			✓				✓	
<b>Weight Loss</b>		Weight Loss				✓			✓				✓		✓	✓					
		Fat Burning				✓				✓				✓		✓	✓				
		Cellulite Reduction				✓				✓				✓		✓	✓				
		Metabolism				✓				✓				✓		✓	✓				
<b>Anti-aging</b>		Anti-aging			✓	✓	✓	✓	✓	✓	✓				✓		✓				
		Hair Growth								✓	✓										
		Sun Damage			✓	✓	✓	✓	✓	✓	✓	✓				✓		✓			
		Scars			✓	✓	✓	✓	✓	✓	✓	✓				✓		✓			
<b>Skin Care</b>		Wrinkles & Fine Lines			✓	✓	✓	✓	✓	✓	✓				✓		✓				
		Skin Infections	✓		✓	✓	✓	✓	✓	✓	✓	✓			✓		✓				
		Under Eye Circles & Bags			✓	✓	✓	✓	✓	✓	✓	✓			✓		✓				
		Acne	✓		✓	✓	✓	✓	✓	✓	✓	✓			✓		✓				
		Pigmentation		✓	✓	✓	✓	✓	✓	✓	✓	✓			✓		✓				
		Shingles		✓		✓	✓	✓	✓	✓	✓	✓			✓						
		Rosecea			✓	✓	✓	✓	✓	✓	✓	✓			✓		✓				
<b>Athletic Performance</b>		Athletic Performance				✓		✓		✓	✓		✓			✓			✓	✓	
		Post Workout Recovery				✓			✓	✓	✓		✓			✓			✓	✓	
		Muscle Building				✓			✓	✓	✓		✓			✓			✓	✓	
		Multiple Sclerosis				✓			✓	✓	✓		✓			✓			✓	✓	
<b>Brain Health</b>		Cognitive Performance							✓	✓		✓	✓								
		Depression & Anxiety				✓		✓					✓								
		Parkinson's Disease									✓		✓								
		Migraines		✓					✓	✓			✓		✓				✓	✓	
		Tinnitus							✓				✓		✓			✓		✓	
<b>Other</b>		Stem Cell Regeneration				✓			✓			✓									
		Liver Function				✓				✓		✓									
		Asthma, Hypertension							✓				✓								
		Fertility & Sperm Motility				✓			✓						✓						
		Sleep		✓		✓			✓	✓	✓		✓								
		Neuropathy		✓		✓			✓	✓	✓		✓		✓	✓					
		Diabetes		✓		✓			✓	✓	✓		✓		✓	✓					

# #2 POINT

**A Broad Spectrum  
Of Wavelengths For  
Increased Efficacy**

*605-680, 800-880, and either 980 or 1064*

## Point #2

### **A Broad Spectrum Of Wavelengths For Increased Efficacy**

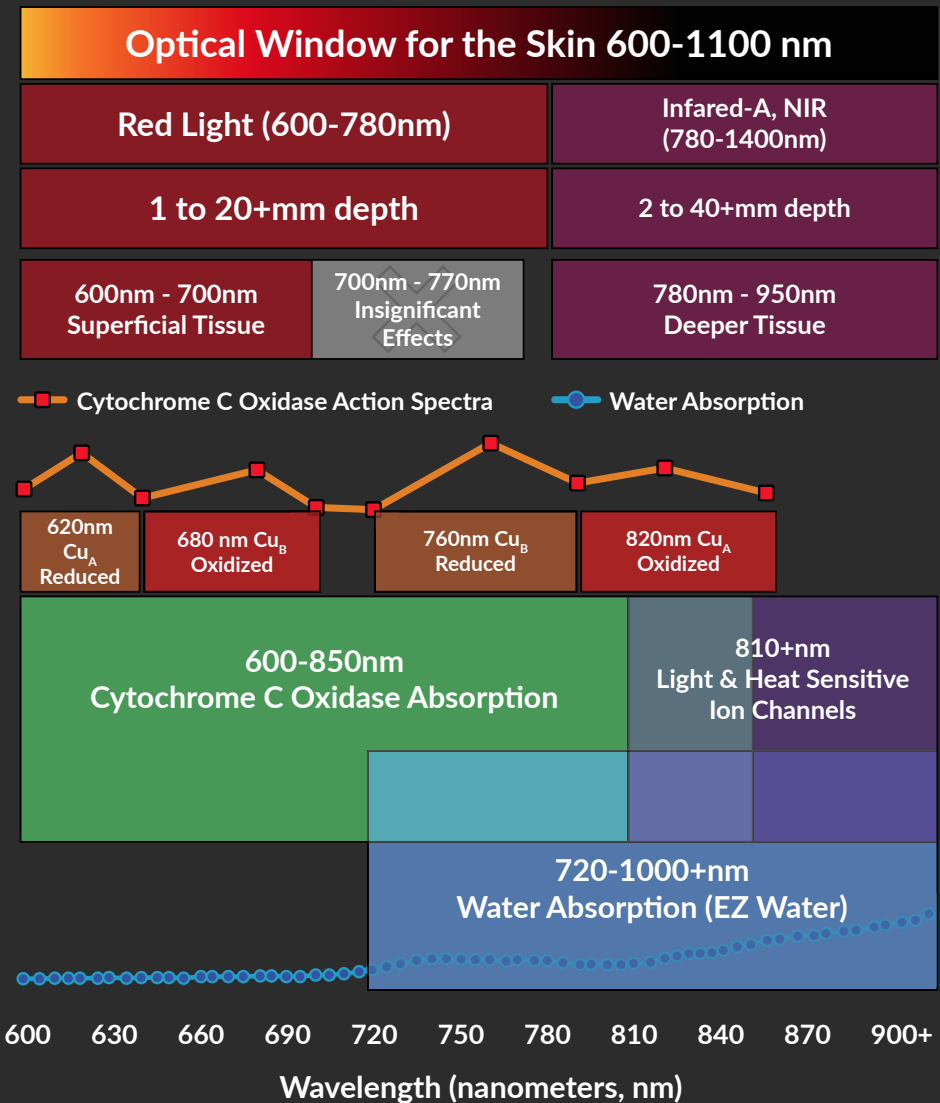
Is a higher quantity of wavelengths superior? What constitutes the ideal number of wavelengths? A majority of full-body red light devices that are available on the market offer between two and six distinct wavelengths.

There's substantial evidence supporting the notion that Cytochrome C Oxidase (CCO) serves as the primary chromophore, a molecule capable of capturing light, which contributes to the myriad of healing benefits of Red Light Therapy. CCO assumes 16 different configurations, each with a unique band gap (resonating to a different wavelength) which enables CCO to absorb a wide range of wavelengths in the empirically validated 605-880nm range rather than just a single wavelength. Consequently, the presence of multiple wavelengths augments the proportion of light absorbed by the mitochondria to generate energy, facilitating all the exceptional benefits associated with red light therapy. As suggested by research, the most efficacious red light devices include a broad spectrum of wavelengths in the 605-680nm and 800-880nm range, with at least one wavelength in the 905-1070nm range (more about this will be discussed in the following section).

A fitting comparison here is to consider the difference between consuming merely vitamin A and D versus a comprehensive multivitamin supplement which includes a range of vitamins such as A, B1, B2, B3, B5, B6, B12, C, E, D, along with a host of minerals and other antioxidants. A proficient red light therapy

featuring at least five or six different wavelengths furnishes a rich spectral content, similar to a high-quality multivitamin, providing everything required in a single session.

## Important Wavelength Ranges for Photobiomodulation



# #3 POINT

The Hidden Gem, A  
905–1100nm Wavelength.  
Warmth, Circulation, and  
Mitochondrial Benefits.

## Point #3

### **The Hidden Gem, A 905–1100nm Wavelength. Warmth, Circulation, and Mitochondrial Benefits**

The concealed treasure of near-infrared wavelengths, particularly those in the 905-1070nm range, ideally 980nm, utilize water as a chromophore, a light-absorbing molecule. The distinct sense of warmth provided by these wavelengths is unequivocal. This additional warmth is highly advantageous for three significant reasons.

The first and most observable benefit is that this supplementary warmth yields a far more pleasurable experience. It is not like a sauna but more like the deep warmth of the sun on a breezy day at the beach. It doesn't cause perspiration but suffices to offer an enhanced sensation. Possessing a 905nm-1070nm wavelength will be like indulging in a brief, 15-minute seaside vacation, even amidst a hectic and stressful day. The most efficacious red light beds, with both a top and a bottom, provide a more gratifying experience as the warmth surrounds you.

The second advantage of this additional warmth is enhanced circulation. By augmenting circulation and reducing blood pressure, this additional warmth synergistically heightens the benefits of a session. Moreover, increased circulation brings more blood to the surface, enhancing the impact of the light during a whole-



body session, as blood is the primary conduit of the systemic and full-body benefits of red light therapy. (Recent research has even suggested the presence of mitochondria in blood)

Lastly, and perhaps the most significant from a therapeutic perspective, wavelengths within the range of 905-1070nm appear to utilize water as a chromophore in a manner that yields many research-proven benefits within the mitochondria and ion channels. A pioneering study demonstrated increased ATPase activity from the 980nm wavelength, indicating enhanced ATP and energy production. Specifically, the 980nm wavelength is recommended as it has been among the most researched and validated wavelength within the 905-1070nm range.

# POINT #4

## Ideal Full Body Irradiance (30–40 mW/cm<sup>2</sup>)

*A critical component of Red Light Therapy (RLT) is the irradiance or intensity at the point of contact with the skin.*

# Point #4

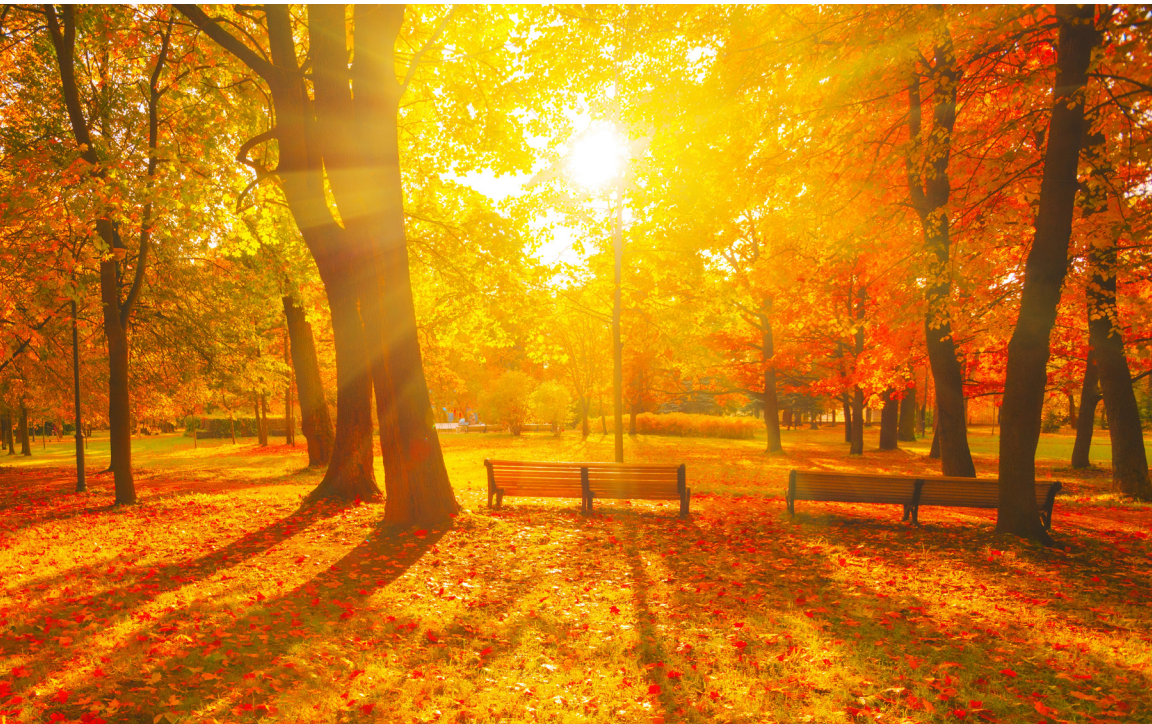
## Ideal Full Body Irradiance (30–40 mW/cm<sup>2</sup>)

Light irradiance signifies the power density of red light over a specified area, commonly measured in milliwatts per square centimeter (mW/cm<sup>2</sup>). To put it simply, the irradiance of a full-body light bed corresponds to the emitted light's intensity. This prompts the crucial question: what is the optimal irradiance in a whole-body red light bed? While there is no universally agreed-upon value, there is a generally accepted range which is clearly backed by clinical results.

In a study by Huang, Sharma, and Hamblin (2011), they concluded that irradiances ranging from 5 to 50 mW/cm<sup>2</sup> are typically employed for stimulation and healing, whereas higher irradiances are more often used for nerve inhibition and pain relief. Although higher irradiances may be suitable in certain contexts, for most



applications with clinical or at-home devices, it's generally best to maintain irradiance under  $50 \text{ mW/cm}^2$ , but a minimum of  $5 \text{ mW/cm}^2$  per wavelength is recommended to be physiologically beneficial. Irradiances over  $50 \text{ mW/cm}^2$  can quickly cause skin heating which is clinically proven to lower the benefits of the therapy.



## Illuminating Guidance for Dosage

***"Comprehend and Copy Nature"*** —Viktor Schauberger

According to a study by Hart (2016), the sun provides red and near-infrared light of about  $23.6 \text{ mW/cm}^2$  (subject to environmental factors). It might be prudent to imitate nature where feasible.

More broadly, the ranges for red and near-infrared light from the sun (600-1100nm) vary between 30-40 mW/cm<sup>2</sup>, contingent on season and geographic location.

This conclusion is reinforced by the article "Infrared and Skin: Friend or Foe" (Barolet 2016), which states that exposure to visible and near-infrared light, which replicates the conditions of natural sunlight in terms of wavelength, intensity, and dosage, can be beneficial to the skin.

While the range of biologically active irradiances or intensities for Red Light Therapy lies between 5-50 mW/cm<sup>2</sup>, research validates that the ideal range mirrors nature, falling between 30-40 mW/cm<sup>2</sup>.

Several commercially available red light beds promise irradiance values exceeding 100 mW/cm<sup>2</sup>, with some claiming figures as high as 160 mW/cm<sup>2</sup>. The highest actual true irradiance values observed for a whole red light bed are around 60 mW/cm<sup>2</sup>, with 17 mW/cm<sup>2</sup> of the total emanating from green light. So effectively, 40-45 mW/cm<sup>2</sup> are the highest readings you'll typically see on a bed. Ordinarily, they range from 20-35 mW/cm<sup>2</sup>. This insight leads us to point #5, which unveils a concerning deception in the red light therapy sector.

# #5 POINT

## Certified Irradiance

*Knowing the True Irradiance is critical to effectively calculating dosing.*

# Point #5

## Certified Irradiance

It is imperative to know the Irradiance of whichever red light device you choose. Why? Because without an accurate irradiance value, the dose will be wrong.

The two primary methods for calculating Irradiance are with a lab-grade spectroradiometer or by using a third-party light lab. (They also use certified spectroradiometers.)

### Method 1

**Use a Lab Grade Spectroradiometer** (sometimes called a Spectral Irradiance Meter). A spectroradiometer is a light measurement tool that is able to measure both the wavelength and amplitude of the light emitted from a light source.

An example of a spectroradiometer that meets all this criteria is the Spectis 5.0, which is a lab-grade optical spectroradiometer that has certified reliability and accuracy. The Spectis 5.0 is calibrated with the use of reference standards which are traceable to National laboratories and



**\$24,000**

confirmed by the globally recognized factory calibration. They guarantee their calibration and accuracy. This equipment costs over \$24,000 and requires some diligence to be properly trained in using it. Spectra Red Light includes a report certifying actual irradiance on every unit manufactured. This is one of only two ways to guarantee True Irradiance™.

## Method 2

**Use an Accredited Third-Party Lab.** An alternate option for companies who don't want to invest in certified equipment is to get a 3rd party lab to test the equipment. This type of Lab result is the most definitive because it is done accurately and unbiasedly by a third party. The only downside here is the company will only test one or a couple of units on hand, not every single one that is shipped.

The benefit of doing both is that the manufacturer has an unbiased reading from a third party, and with a calibrated device like a Spectis 5.0, the ability to accurately test each unit made and provide a report to the customer. Each bed can be certified to have the irradiance claimed.

Solar meters are NOT calibrated properly for red light therapy wavelengths, and the sensitivity of the photodiode leads to dramatically higher readings than reality. Plus, you need a meter for what is called a near-field measurement because you want to measure the irradiance that is close to the source. If you are lying on a red light bed, your body is close to the source, which is the LED arrays. If you are lying in the sun,



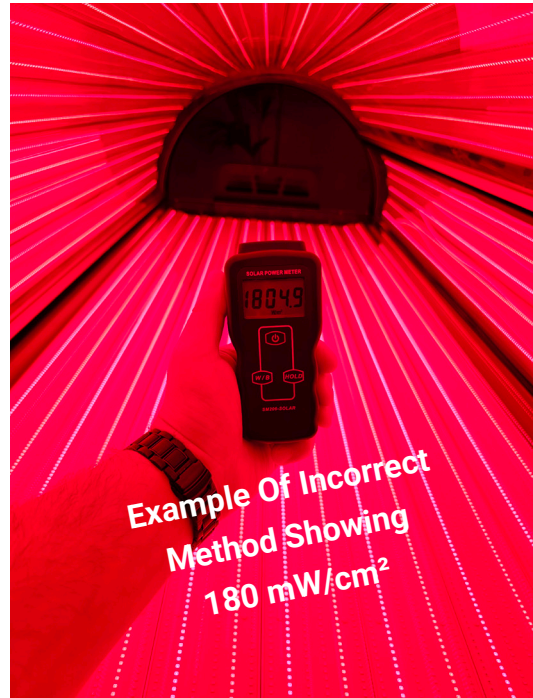
**\$88**

the source is 93 million miles away. Unfortunately, most Red light companies are using solar meters, or cheaper meters which are not in any way calibrated for near-field measurements. The solar irradiance meters usually cost between \$90 and \$200.

Solar meters are broad-spectrum devices for far-field measurements designed to measure sunlight (a far-field measurement), hence the name "Solar Power Meter." Yet, despite this fact, many authors and even manufacturers, as just mentioned, use these cheap devices to measure the narrow bandwidth light radiation from RLT. ***It is easy to tell if false values are reported as anything over 100 mW/cm<sup>2</sup> is virtually impossible with a whole body light bed. If a company is reporting Irradiance for a full body light bed over 60 mW/cm<sup>2</sup> and especially 100 mW/cm<sup>2</sup>, it is almost always a deceptive marketing practice.***

Also worth noting is how many photobiomodulation studies use Solar Power Meters or cheap meters of any kind. No true lighting expert would use one of them.

Readings like this are absolutely inaccurate readings taken with a solar meter or an uncalibrated meter of some sort that is not meant for measuring LED irradiance. Use caution when companies claim to have the "strongest irradiance" and therefore needing shorter session times, which places like spas find



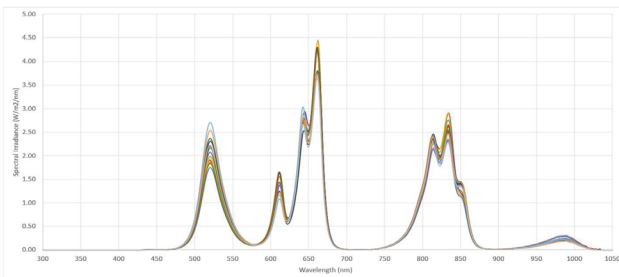
attractive because you can treat more people in a day. This is all based on inaccurate information.

What started out as ignorance is now a deceptive marketing practice and cover-up. So, if you ever suspect any deception from a brand that claims high irradiance values, ask them for irradiance measurements from one of these two test methods:



LightLab International Allentown, LLC report number: LLIA002809-001

Spectral Irradiance (300nm-1050nm) was measured in 15 locations pointing down at the height of the bed surface to evaluate the irradiance from the bed LEDs on a person laying in the bed.



Irradiance Measurements (300-1050nm) (mW/cm <sup>2</sup> )				
36.42	36.84	36.83	36.83	34.78
37.38	38.31	37.85	37.81	35.94
35.81	37.21	37.94	37.48	35.11

Maximum: 38.31 mW/cm<sup>2</sup>  
 Minimum: 34.78 mW/cm<sup>2</sup>  
 Average: 36.84 mW/cm<sup>2</sup>

# #6 POINT

**Recommended Session  
Time for a Therapeutic  
Dose**

# Point #6

## Recommended Session Time for a Therapeutic Dose

The next point to consider pertains to the optimal duration of a session for achieving a therapeutic dose in red light therapy. Essentially, the dose is the product of irradiance (or intensity) and the duration of the session. In the context of red light therapy, the intensity is quantified as the amount of light emitted per unit area per second ( $\text{mW}/\text{cm}^2$ ), while the dose represents the total quantity of light administered per unit area throughout the entire session. A 10-minute session, therefore, results in a dose that is double that of a 5-minute session. Michael Hamblin, a renowned authority in the field of Red Light Therapy, has indicated that doses as low as  $5 \text{ J}/\text{cm}^2$  can yield beneficial effects, although he advises maintaining doses below the range of  $50\text{-}100 \text{ J}/\text{cm}^2$ . Optimal doses are generally considered to be within the range of  $5\text{-}50 \text{ J}/\text{cm}^2$  (Calabrese 2001).

### The Ideal Dose

A thorough review of the existing scientific literature reveals approximately ten studies on red light therapy employing a full-body bed. By calculating the average dosage across these studies, we arrive at a figure of around  **$30 \text{ J}/\text{cm}^2$** . This average dosage, derived from research utilizing full-body light beds, provides a reliable benchmark for dosage considerations.

# Full Body Red Light Therapy Studies

(DOSAGE HIGHLIGHTED)

DATA	WAVELENGTH	IRRADIANCE	TIME	DOSAGE (Intensity x Time)
<b>STUDY #1</b> (Novothor)	660nm + 850nm	28mW/cm <sup>2</sup>	15min.	25 J/cm <sup>2</sup>
<b>STUDY #2</b> (Novothor)	660nm + 850nm	28mW/cm <sup>2</sup>	20 min.	33.6 J/cm <sup>2</sup>
<b>STUDY #3</b> (Novothor)	660nm + 850nm	28mW/cm <sup>2</sup>	20 min.	33.6 J/cm <sup>2</sup>
<b>STUDY #4</b> (Novothor)	660nm + 850nm	28mW/cm <sup>2</sup>	20 min.	33.6 J/cm <sup>2</sup>
<b>STUDY #5</b> (Novothor)	660nm + 850nm	28mW/cm <sup>2</sup>	14 min.	23.5 J/cm <sup>2</sup>
<b>STUDY #6</b> (Novothor)	660nm + 850nm	28mW/cm <sup>2</sup>	20 min.	33.6 J/cm <sup>2</sup>
<b>STUDY #7</b> (Unknown Brand)	570nm to 850nm	32.8 mW/cm <sup>2</sup> (avg)	18 min. (avg)	33.25 J/cm <sup>2</sup>
<b>STUDY #8</b> (Unknown)	658 nm	16.6 mW/cm <sup>2</sup>	30 min.	30 J/cm <sup>2</sup>
<b>STUDY #9</b> (Lightstim)	630nm + 660nm + 855nm + 940nm	13.05 mW/cm <sup>2</sup>	30 min.	23.49 J/cm <sup>2</sup>
<b>STUDY #10</b> (Joov)	660nm + 850nm	46.17 mW/cm <sup>2</sup>	5 min.	6.9 J/cm <sup>2</sup>

Here is the standardized formula for determining the dosage in red light therapy:

$$\text{Dose (J/cm}^2\text{)} = \text{Intensity (mW/cm}^2\text{)} \div 1000 * \text{Time (Seconds)}.$$

## The Ten Full Body Red Light Therapy Studies

See end of Guide.

### A couple of examples to better understand dosage

Taking the Spectra S10 Pro as a reference, we have determined through a lab-grade spectroradiometer that the average irradiance is between 32 and 36 mW/cm<sup>2</sup>. Applying these values to the dosing formula, we find that the session duration should be approximately 12-15 minutes for the S10 Pro to align with the research-proven dosages.

Comparatively, considering a less powerful red light bed with an average irradiance of 12-13 mW/cm<sup>2</sup> (we will use 13 mW/cm<sup>2</sup> for the benefit of the doubt), the required session time for achieving a similar dose would be 30 minutes, assuming the presence of both top and bottom lights. However, some LED beds only have a bottom or half, so a session duration of 40-50 minutes would likely be necessary to attain the desired dose. Some manufacturers recommend a 40-minute session or 20 minutes on each side. Additionally, the lower irradiance level results in lower penetration of light.

Power and time are crucial. This demonstrates why an appropriately powered Red Light bed can deliver more benefits in a shorter timeframe and highlights the importance of having both top and bottom lights in a red light bed.

## False Dosage And False Session Times

### *A Prevalent Misconception In The Red Light Industry*

False irradiance readings lead to inaccurate dosage calculations, subsequently resulting in incorrect therapy times. Companies reporting excessively inaccurate irradiance readings claim that their devices can deliver the optimal dosage in significantly less time. This is an enticing proposition for potential users, as it implies the same therapeutic benefits can be achieved in half the time.



# #7 POINT

## Pulsing Red Light, A Misguided Recommendation

*Pulsing vs. CW (Continuous Wave)*

# Point #7

## Pulsing Red Light, A Misguided Recommendation

In the realm of red light therapy, particularly with full-body beds, the question of incorporating a pulsing function has gained attention. While high-power LED or laser applications show promising results with pulsing over continuous wave (CW) light, it's important to understand the role and limitations of this technology.

Below are examples of duty cycle options when pulsing high power light.



*Continuous Wave*



*75% Duty Cycle*



*50% Duty Cycle*

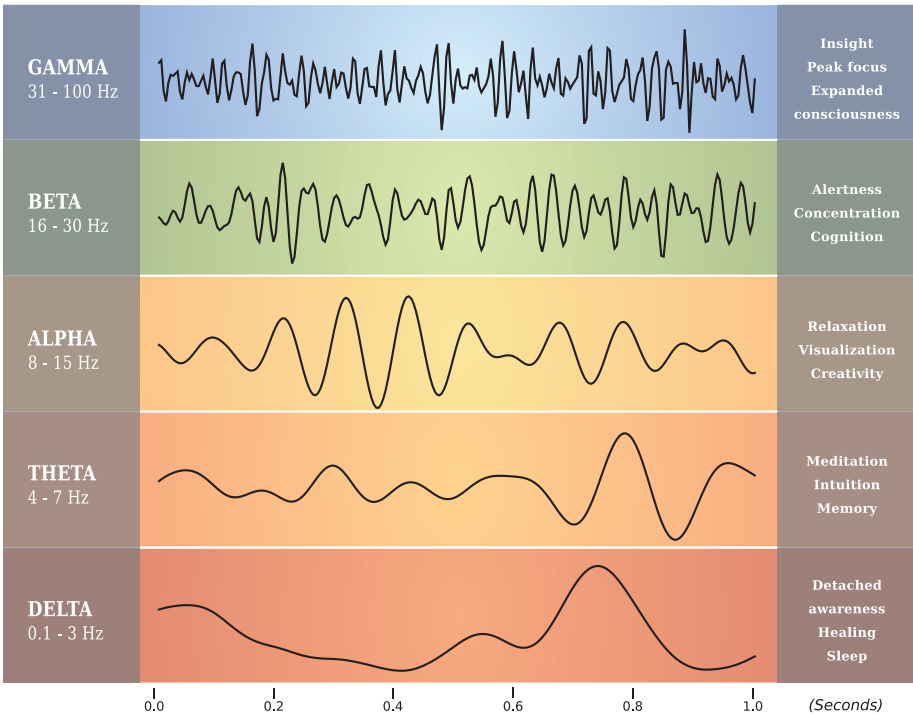


*25% Duty Cycle*

## 1. Heat Management Through Pulsing:

One of the primary benefits of pulsing in high-power light therapy devices is its ability to manage heat. Pulsing introduces 'quench periods' where LEDs temporarily switch off, providing a break that minimizes overheating risks and excessive tissue exposure. This is especially crucial in high-power LED or laser therapies. In contrast, continuous wave applications, particularly at high powers, can significantly raise tissue temperature. Pulsed light, therefore, offers the advantage of delivering the same energy density with less heat generation, allowing increased peak power and potentially deeper penetration, while keeping the average power level consistent.

### HUMAN BRAIN WAVES



## 2. Brainwave Entrainment

The concept of brain entrainment with pulsed light therapy, particularly championed by Michael Hamblin, posits that aligning the pulsing of red light with the brain's natural rhythms can enhance relaxation, creativity, and healing. A common frequency used is 10Hz, which corresponds to the brain's alpha rhythm. While this theory suggests that light pulse frequency could resonate with brain wave frequency, it's crucial to note that there is limited clinical evidence supporting the use of pulsed light for enhanced or different health outcomes compared to CW light.

For example, a study by the Hamblin Laboratory comparing CW, 10 Hz pulsing, and 100 Hz pulsing in a mouse model of traumatic brain injury (TBI) found that 10 Hz pulsing showed a significant improvement in cognitive function compared to CW and 100 Hz pulsing. However, it's important to note that frequencies above 100 Hz might not be as effective, aligning with the fact that brain rhythms mainly range between 1-40Hz.

One of the downsides to activating pulsed light for brainwave entrainment, is that it can conflict with other brainwave entrainment devices such as BrainTap.

While many companies claim to have special clinical protocols based on pulsing the light at specific frequencies, the therapeutic effectiveness of light therapy primarily stems from the wavelengths used, not the pulsing of these wavelengths. Wavelengths

correspond to frequencies, and these frequencies are what deliver specific health benefits.

The correct way to formulate light therapy protocols is by using the clinically validated wavelengths that offer specific and conclusive health outcomes.

Additionally, pulsing visible light such as blue, green or reds poses a high risk to those with conditions such as photosensitive epilepsy.

In conclusion, while pulsed light in high-power red light therapy devices offers benefits like efficient heat management and potential alignment with brain rhythms, its superiority over continuous wave therapy, particularly in terms of health outcomes, is not conclusively supported by clinical evidence. The key therapeutic benefit of light therapy lies in the wavelengths, or frequencies, utilized rather than in the pulsing of these wavelengths.

# #8 POINT

**Low For EMF Emissions—  
Passive And/Or Active  
EMF Protection**

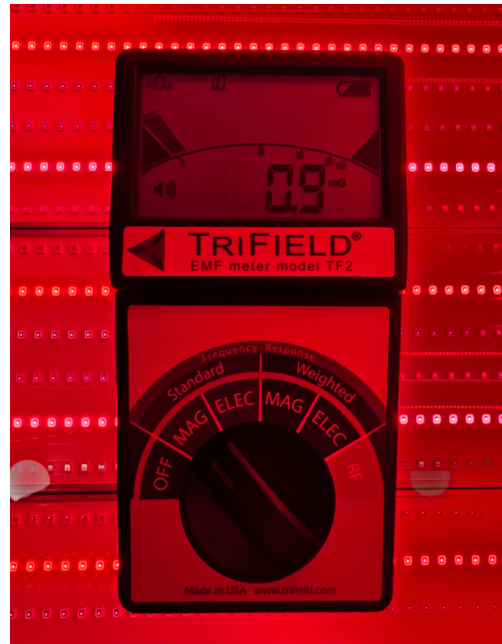
# Point #8

## Low For EMF Emissions—Passive And/Or Active EMF Protection

A crucial inquiry to make pertains to whether the red light bed generates electromagnetic field (EMF) emissions, and whether the manufacturer can substantiate their claims with evidence. All electronic appliances emit EMFs, and the implications of EMFs on health are a subject of ongoing debate. According to stringent European safety guidelines, regular exposure to EMFs should not exceed 3 milligauss (mG). For context, it is noteworthy to mention that a mobile phone emits considerably more than this every few seconds. When in use, a mobile phone's emissions can surge beyond 3mG, reaching up to 50mG or even nearing 100mG. Similarly, a domestic blender can emit EMFs in excess of 100mG.

There are primarily two strategies to minimize EMFs.

The first approach involves a passive design strategy, ensuring that the EMF source is positioned as far away from the user as



possible, in addition to specific wiring configurations.

The second strategy is the active mitigation of EMFs, employing various technologies to reduce EMF levels.

Given that the average duration of a red light therapy session ranges from 10-20 minutes, the associated EMF exposure risk is relatively low. Nonetheless, it is imperative to be informed about these aspects. It is advisable to opt for a red light bed that demonstrably emits low levels of EMFs. Trust should be placed not merely on the manufacturer's claims, but on the provision of tangible proof to demonstrate these claims.

#9  
POINT

## Price And Value

*Not The Cheapest But The Best Value/Dollar*

# Point #9

## Price And Value

Certainly, price is a critical factor to consider, and it is imperative to understand the justification behind the pricing of red light beds. Upon a thorough examination of the red light bed market, it is evident that there are numerous excessively priced options available. It is crucial to be cautious of more affordable alternatives, as they may lack a robust warranty, quality assurance, customer support, and other essential features that reputable manufacturers typically provide.

To make an informed decision regarding the purchase of a red light bed, take into account the following considerations:



Spectra S10 Pro  
**\$79,990**



NovoTHOR  
**\$130,000**



PRISM  
**\$89,000**



TheraLight 360  
**\$85,000**



LightStim  
**\$65,000**

**Value for Investment:** Evaluate the bed's functionalities, performance, and overall quality in relation to its price, ensuring that you attain optimal value for your expenditure.

**Future Expenditures:** Reflect on potential long-term costs linked with the bed, encompassing maintenance, replacement components, and energy consumption.

**Financing Alternatives:** Investigate whether the manufacturer offers financing solutions, enabling you to distribute the cost of your investment over a period, which can be particularly advantageous for business cash flow.

**Return on Investment (For Businesses):** Analyze the potential revenue generation and return on investment by considering factors such as treatment pricing, client turnover, and utilization of the bed. This analysis will assist you in determining whether the investment in the red light bed is economically justified, given its prospective financial returns.

# #10 POINT

How Long Is The  
Warranty, And What  
Does It Cover?

# Point #10

## The Warranty And Its Coverage

One crucial aspect to inquire about is the warranty provision. A thorough warranty and efficient customer support are indispensable for resolving potential issues, offering assurance and safeguarding your investment.



Review the specifics of the warranty, including the small details. Aim for a minimum of a five-year comprehensive warranty that encompasses coverage for any potential malfunctions. While some companies might propose limited warranties, such as two-year plans, others may advertise five-year warranties yet exclude numerous items (check the fine print). Remarkably, one company extends a five-year warranty solely on the bed's frame, arguably the least of your concerns.

Additionally, certain companies boast U.S.-based assembly and rigorous quality checks, only to subsequently offer a mere two-year warranty. A robust warranty serves as a reflection of the product's quality, indicating the manufacturer's confidence in their design and product.

Additional factors to consider include:

**Replacement Policy:** Ensure the warranty includes a straightforward and equitable replacement policy for faulty components,

aiming to minimize disruption to business operations and maintain operational continuity.

**Maintenance Services:** Investigate whether the manufacturer offers maintenance services within the warranty. This provides added value and support, enhancing the longevity of your investment.

**Customer Service Reputation:** Examine the company's reputation regarding customer service and their track record in honoring warranties. Assess their estimated response times for issue resolution, as this is crucial for reducing potential revenue loss and ensuring efficient problem resolution.

It cannot be stressed enough: clarity regarding the warranty's coverage is paramount. Strive to secure a red light bed that offers a comprehensive five-year "bumper to bumper" warranty, safeguarding your investment and providing peace of mind.

# #11 POINT

**Bed Assembled With  
Strict Quality Standards**

# Point #11

## Bed Assembled With Strict Quality Standards

The assembly quality of a red light bed is pivotal for ensuring its longevity, dependability, and optimal performance over time. Utilizing top-notch components and meticulous construction methods can substantially diminish the likelihood of equipment failure, curtail maintenance expenditures, and heighten client satisfaction. Additionally, it is imperative to ascertain whether the product is designed and assembled domestically or by an overseas third party. If the latter, does it conform to U.S. standards of quality and safety? Is the product a private label, or is it directly assembled by the company that markets it?



In the assessment of red light beds, it is essential to take into account various facets related to assembly quality:

**Materials:** Opt for beds constructed from robust and durable materials like stainless steel, aluminum, or high-grade plastics. These materials are crucial for enduring heavy usage and ensuring a prolonged service life.

**Electrical Components:** Ensure that the bed's electrical elements, including LED lights, power units, and control mechanisms, are

procured from established manufacturers and are designed to meet the rigors of commercial utilization.

**Assembly Process:** The bed should be assembled through precision-driven manufacturing practices and stringent quality control protocols, aiming to secure uniform performance and minimize the potential for defects or operational failures.

**Regulatory Compliance:** The red light bed must adhere to pertinent industry standards and regulations, affirming its safety and performance efficacy.

**Testing and Certification:** The bed should be subjected to exhaustive testing both during assembly and before shipment. Quality Red Light Bed manufacturers conduct irradiance and wavelength evaluations using lab-grade, calibrated, and certified spectrometers. A critical operational test ensures all device features and components are in perfect working order prior to delivery. This test should also include thermal imaging scans to verify the bed and its electronic components are operating within the appropriate temperature ranges.

Issuing a commissioning report for each manufactured bed is paramount, as it verifies that all manufacturing and assembly standards have been met, ensuring the product's reliability and safety for end-users.

# #12 POINT

**FDA Registration  
And FDA Cleared Prod-  
ucts**

# Point #12

## FDA Registration And FDA Cleared Products

It is imperative to inquire whether both the company and its assembly manufacturer hold registration with the U.S. Food and Drug Administration (FDA), and if the product itself has received FDA clearance. It is advisable to request tangible proof of active FDA registration and take the initiative to validate this information through the official FDA database, as there are instances where companies and products lack the necessary registrations and clearances.

This inquiry is crucial as possessing FDA registration and product clearance, alongside other safety and quality certifications, demonstrates the company's adherence to pertinent regulatory standards. It also highlights that the product has gained endorsements from authoritative bodies, ensuring its safety and effectiveness for users. By doing so, you are taking an informed and proactive step to confirm the legitimacy and compliance of the product and the company behind it, ultimately safeguarding your investment and the well-being of end-users.



# #13 POINT

**Customer Service,  
Training And Support**

# Point #13

## Customer Service, Training And Support

Investing in red light therapy bed is a substantial financial commitment, underscoring the importance of securing exemplary customer service throughout the entire lifecycle of the product. This encompasses assistance from the moment of order placement, progressing through shipping, delivery, and extending to post-purchase support such as training and troubleshooting.

Furthermore, it is crucial to ascertain that the company's personnel are well-versed in the scientific basis of red light therapy, including the latest research, and adept at providing precise dosage recommendations. This ensures not just a smooth transactional experience but also positions you to maximize the therapeutic benefits of your investment, backed by informed and competent guidance. Ensuring these criteria are met is pivotal

in fostering a positive and supportive customer relationship, which is integral when investing in advanced therapeutic technology such as red light therapy beds.



# #14 POINT

Product Design  
(For Business)

# Point #14

## Product Design (For Business)

The architectural structure of a red light therapy bed holds considerable influence over its practicality, efficiency, and the overall experience it provides to the clients. An optimally designed red light bed should encapsulate aesthetic appeal, ease of use, and comfort, enhancing the client's experience.

When assessing red light therapy beds, pay attention to the following design elements:



**Ease of Access:** Ensure that the bed is readily accessible, accommodating clients with varying mobility levels, including those dependent on wheelchairs or walking aids.

**Sanitation:** Opt for materials that facilitate easy cleaning and maintenance, to uphold a sanitary treatment space for all clients.

**Ventilation:** A design that promotes adequate air flow is essential to avert overheating during sessions, thereby boosting client comfort and safety. It is noteworthy that certain beds may necessitate cooling periods between sessions, potentially impacting revenue.

**Aesthetic Quality:** A red light therapy bed with an attractive appearance can leave a lasting positive impression on clients, contributing significantly to a contemporary and professional treatment setting.

Incorporating these design considerations will ensure that the red light therapy bed not only meets aesthetic standards but also excels in functionality and client comfort, leading to an enhanced therapeutic experience.

# #15 POINT

**Business And Marketing  
Support (For Business)**

# Point #15

## **Business And Marketing Support (For Business)**

### Optimizing Success In Offering Red Light Therapy

Red light therapy (RLT) has gained significant traction within the health and wellness sector, presenting numerous potential advantages for clients. For business proprietors aiming to effectively generate income via red light beds, it is imperative to meticulously evaluate numerous vital elements such as client experience, pricing strategies for sessions, accessibility, and strategies for acquiring beds. This segment aims to delve into



these crucial factors, guiding you towards enhancing client contentment and amplifying sustained revenue for your venture.

Achieving financial success with red light beds necessitates a thorough examination of pivotal aspects encompassing client experience, session pricing, accessibility, and acquisition tactics. By placing client satisfaction at the forefront, ensuring competitive pricing, and selecting the most apt acquisition strategy tailored to your enterprise, you position yourself to boost prolonged revenue streams and solidify your standing in the red light therapy domain.

Crucially, it is paramount to acknowledge that the session pricing remains constant, irrespective of the red light bed's acquisition cost or the method employed to obtain it. By opting for a cost-effective red light bed and simultaneously upholding competitive pricing for sessions, your business stands to reap enhanced profitability.

# 10

## Full Body Red Light Therapy Studies

*From Point #6*

# 10 Full Body Red Light Therapy Studies

1 Wunsch A, Matuschka K. A controlled trial to determine the efficacy of red and near-infrared light treatment in patient satisfaction, reduction of fine lines, wrinkles, skin roughness, and intradermal collagen density increase. *Photomed Laser Surg.* 2014;32(2):93-100.

2 Zhao J, Tian Y, Nie J, Xu J, Liu D. Red light and the sleep quality and endurance performance of Chinese female basketball players. *J Athl Train.* 2012;47(6):673-678.

3 Z. Marcinkevics, Dz. Briljonoks, H. Kronberga, and J. Spigulis "LED-bed therapy of cardiovascular disorders: a volunteer study", *Proc. SPIE 11221, Mechanisms of Photobiomodulation Therapy XV, 112210R* (11 March 2020).

4 James Carroll Interview within the: "BRAIN + TRANSCRANIAL PHOTOBIMODULATION THERAPY VIRTUAL SUMMIT" <https://brain-tpbmt.app.virtualsummits.com/>

5 Zagatto AM, Dutra YM, Lira FS, Antunes BM, Faustini JB, Malta ES, Lopes VHF, de Poli RAB, Brisola GMP, Dos Santos GV, Rodrigues FM, Ferraresi C. Full Body Photobiomodulation Therapy to Induce Faster Muscle Recovery in Water Polo Athletes: Preliminary Results. *Photobiomodul Photomed Laser Surg.* 2020 Dec;38(12):766-772.

6 Ghigiarelli JJ, Fulop AM, Burke AA, Ferrara AJ, Sell KM, Gonzalez AM, Pelton LM, Zimmerman JA, Coke SG, Marshall DG. The Effects of Whole-Body Photobiomodulation Light-Bed Therapy on Creatine Kinase and Salivary Interleukin-6 in a Sample of Trained Males: A Randomized, Crossover Study. *Front Sports Act Living*. 2020 Apr 29;2:48.

7 \*Completed Trial Citation:

Navarro-Ledesma S, Carroll J, González-Muñoz A, Pruimboom L, Burton P. Changes in Circadian Variations in Blood Pressure, Pain Pressure Threshold and the Elasticity of Tissue after a Whole-Body Photobiomodulation Treatment in Patients with Fibromyalgia: A Tripled-Blinded Randomized Clinical Trial. *Biomedicines*. 2022 Oct 23;10(11):2678.

Navarro-Ledesma S, Gonzalez-Muñoz A, Carroll J, Burton P. Short- and long-term effects of whole-body photobiomodulation on pain, functionality, tissue quality, central sensitisation and psychological factors in a population suffering from fibromyalgia: protocol for a triple-blinded randomised clinical trial. *Therapeutic Advances in Chronic Disease*. January 2022.

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8 Fitzmaurice B, Heneghan NR, Rayen A, Soundy A. Whole-body photobiomodulation therapy for chronic pain: a protocol for a feasibility trial. *BMJ Open*. 2022 Jun 29;12(6):e060058.

9 Wunsch A, Matuschka K. A controlled trial to determine the efficacy of red and near-infrared light treatment in patient satisfaction, reduction of fine lines, wrinkles, skin roughness, and intradermal collagen density increase. *Photomed Laser Surg*. 2014 Feb;32(2):93-100.

10 Rentz LE, Bryner RW, Ramadan J, Rezai A, Galster SM. Full-Body Photobiomodulation Therapy Is Associated with Reduced Sleep Durations and Augmented Cardiorespiratory Indicators of Recovery. *Sports (Basel)*. 2022 Jul 31;10(8):119.




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







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# Comparison Chart

Model	Spectra S11 Pro Med + Vit D3	Spectra S10 Pro	Spectra S5 Pro	Lumati LG	NovoTHOR XL
Product Image					
Location of Manufacturing	 USA	 USA	 USA	 USA	Unknown
Advertised Pricing	\$94,990	\$74,990	\$49,990	\$120,000	\$130,000
Advertised Irradiance	34.7 mW/cm <sup>2</sup>	34.7 mW/cm <sup>2</sup>	27.9 mW/cm <sup>2</sup>	36.2 mW/cm <sup>2</sup>	N/A
Comparative Irradiance - Measured At Acrylic By Third-Party Light Lab	36.84 mW/cm <sup>2</sup> *same as S10 Pro	36.84 mW/cm <sup>2</sup>	27.9 mW/cm <sup>2</sup>	36.2 mW/cm <sup>2</sup>	29 mW/cm <sup>2</sup>
Advertised Session Time	14 min	14 min	16 min	14 min	12-20 min
Time Needed To Reach A Clinical Dose of 30J/cm2	14 min	14 min	16 min	14 min	17 min
Wavelengths	293nm 415nm 528nm 605nm 630nm 660nm 670nm 810nm 830nm 850nm 1064nm	415nm 528nm 605nm 630nm 640nm 660nm 810nm 830nm 850nm 980nm	528nm 630nm 660nm 810nm 850nm	450nm 530nm 589nm 605nm 630nm 660nm 810nm 850nm 940nm 1064nm	660nm 850nm
LED Lifetime Rating	100,000 hrs	100,000 hrs	100,000 hrs	100,000 hrs	100,000 hrs
Power Requirements	30 amp 208Ð240v	30 amp 208Ð240v	30 amp 208Ð240v	30 amp 208Ð240v	20 amp 240v
Independent Control of Wavelengths	✓ Yes	✓ Yes	✓ Yes	✓ Yes	✓ Yes
Internal Reflecting Coating	✓ Yes	✓ Yes	✓ Yes	✓ Yes	✓ Yes
Control Unit	Touch Screen	Touch Screen	Touch Screen	Touch Screen	Touch Pad
Intergrated PEMF Option	✓ Yes	✓ Yes	✓ Yes	✓ Yes	✗ No
Product Dimensions	84" L x 44" H x 40" W	84" L x 44" H x 40" W	84" L x 44" H x 40" W	90" x 52" W x 58" H	94" x 38" W x 52" H
Product Weight	400 lbs	400 lbs	400 lbs	460 lbs	350lbs
User Weight Capacity	500 lbs	500 lbs	500 lbs	500 lbs	300 lbs
Led Warranty	Lifetime	Lifetime	Lifetime	Lifetime	Unknown
Product Warranty	6 Years	6 Years	6 Years	6 Years	5 Years
Bottom Wheels for Mobility	✓ Yes	✓ Yes	✓ Yes	✓ Yes	✗ No
FDA Class II Cleared	✓ Yes	✓ Yes	✓ Yes	✓ Yes	✓ Yes

LightStim	ARRC RFQ	TheraLight 360+	Trifecta	Hue Light
				
 USA	 USA	 China	 China	 Korea
\$55,000	\$95,000	\$84,997	\$59,997	\$109,995
Up to 45 mW/cm <sup>2</sup>	N/A	165 mW/cm <sup>2</sup>	80 mW/cm <sup>2</sup>	17-25 mW/cm <sup>2</sup>
14.86	46.35 mW/cm <sup>2</sup>	13.47 mW/cm <sup>2</sup>	39.22 mW/cm <sup>2</sup>	16.52 mW/cm <sup>2</sup>
40 min	10@15 min	10@15 min	10@20 min	1@20 min
66 min (33 min/side)	10.8 min	37 min	12.7 min	30.2 min
630nm 660nm 855nm 940nm	635nm 810nm 850nm 940nm	635nm 810nm 850nm 940nm	633nm 810nm 850nm 940nm	530nm 660nm 850nm 940nm
Unknown	100,000 hrs	100,000 hrs	50,000 hrs	? hrs
15 amp 120v	30 amp 240v	30 amp 240v	30 amp 240v	30 amp 240v
✗ No	✓ Yes	✓ Yes	✓ Yes	✓ Yes
✗ No	✓ Yes	✗ No	✗ No	✗ No
Touch Pad	Wireless Tablet	Wireless Tablet	Wireless Tablet	Touch Screen
✗ No	✓ Yes	✓ Yes	✗ No	✓ Yes
86"L × 40"W × 18"H	87"L × 48"W × 64"H	87"L × 48"W × 64"H	77"L × 34"H	86.5"L × 35"W × 41.5"H
Unknown	620 lbs	620 lbs	265 lbs	485 lbs
Unknown	500 lbs	500 lbs	350 lbs	? lbs
Unknown	Lifetime	Lifetime	Lifetime	10 Years
2 Years	5 Years	5 Years	3 Years	5 Years
✗ No	✓ Yes	✓ Yes	✓ Yes	✓ Yes
✓ Yes	✓ Yes	✓ Yes	✓ Yes	✓ Yes



[www.SpectraRedLight.com](http://www.SpectraRedLight.com)