sunlighten

Wooden Red Light instruction manual

Large scene diagram

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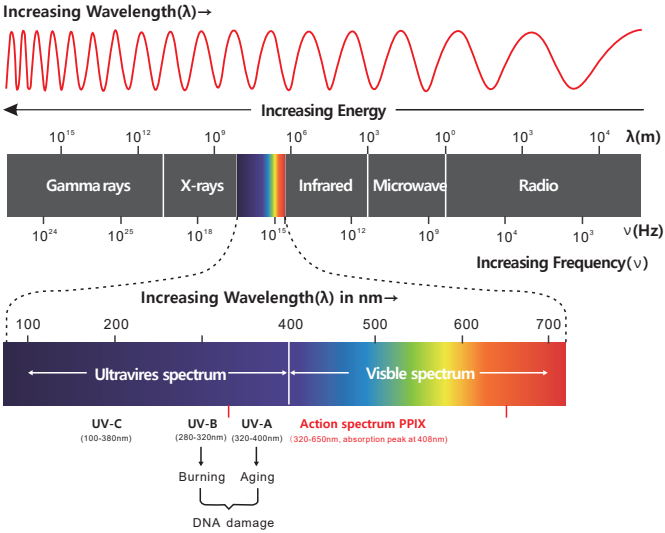
Overview of Light Therapy

What is Red and Near Infrared Light Therapy?

Red and near-infrared light therapy is one of the biggest breakthrough discoveries in health over the past century. Over the past few decades, scientists have amassed thousands of studies on the power of red and near-infrared light to enhance human health. Red and near-infrared light are those parts of the electromagnetic spectrum, and more specifically, the sunlight spectrum, that favor plant and animal growth.

The photo below shows the types of light that affect how our cells function.



History of phototherapy technology

- Red light therapy began in 1903, and its inventor, Niels Finsen, won the Nobel Prize in Medicine for it.
- 1960s: It began to be applied to the treatment of chronic pain, arthritis, joint rehabilitation and soft tissue damage;
- 1980s: Humans discovered infrared therapy, which began to be applied to wound healing and health beauty;
- 1990s: People discovered red Light therapy has a significant role in promoting sports trauma tissue repair;
- Entering the 21st century: Red light, blue light, and infrared light therapy have a large amount of mature data, and are widely used in skin diseases, pain treatment, medical beauty and other fields, and have received strong support from many medical experts and groups.

Scientific Research on Red Light Therapy

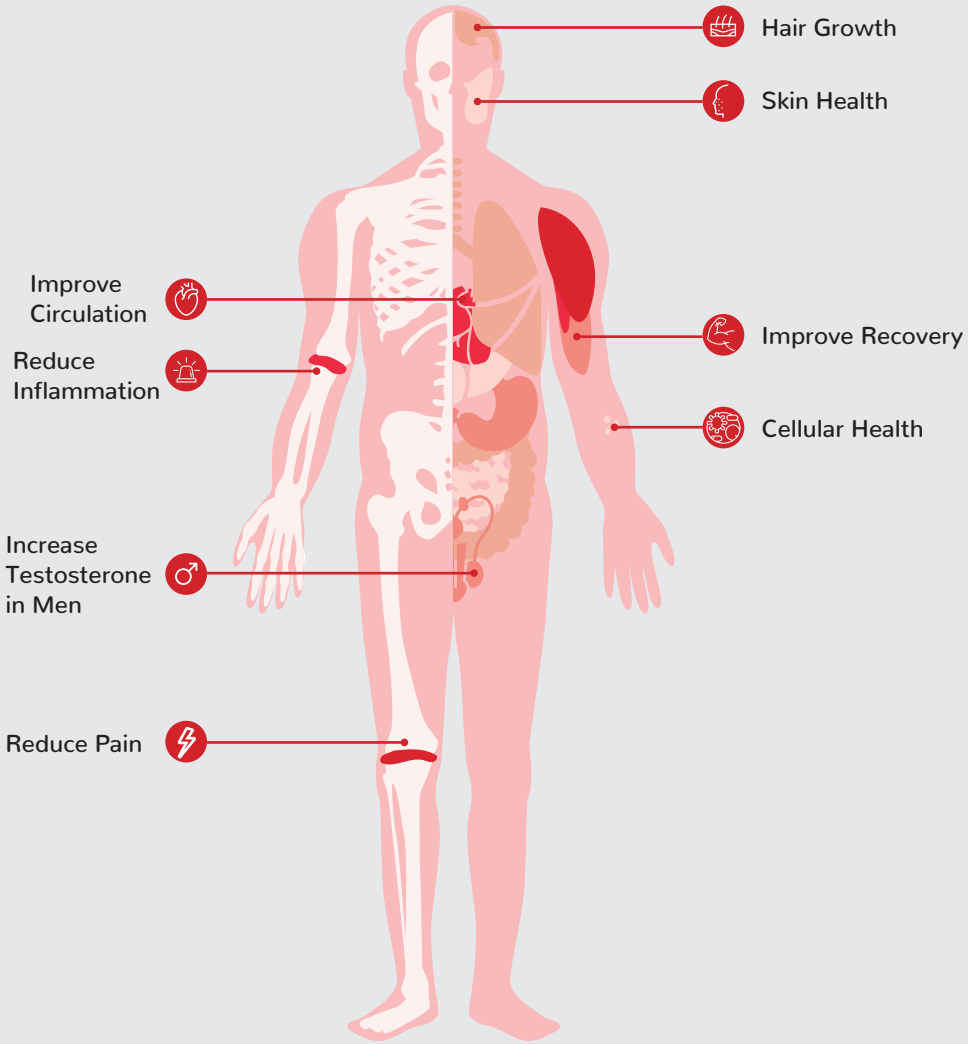
The principle of red light:

Red light can penetrate human tissue, and about 80% of the energy is absorbed in the first 2cm. Red light energy has a significant impact on the stimulation of mitochondria. Mitochondria are tiny organelles that are the energy powerhouses of all the cells in our body. Red light therapy helps the mitochondria to produce more ATP (adenosine triphosphate), a complex organic chemical that powers processes in cells such as muscles Contraction, transmission of nerve impulses, and chemical synthesis are present in all life forms. ATP is often referred to as the "molecular currency unit" of energy transfer in cells. When our cells get more energy, they can perform more vigorously. ATP can also promote cell cycle regeneration, enhance the discharge of harmful toxins and anti-inflammation ability, the health status will improve accordingly.

The principle of near infrared light:

Near-infrared light can penetrate deeper skin tissue, and about 50% of near-infrared light can penetrate to 8cm, and the deepest can reach 20cm (data from NASA research). Near-infrared energy heats tissue and is well-documented for use in pain therapy. Near-infrared light will stimulate the Nak+ pump, thereby increasing the permeability of the cell membrane, promoting the pH balance of the cell, increasing nutrient absorption and eliminating metabolic by-products, and has been widely used in the field of health and beauty.

Benefits of LED Light Therapy



Reduce Inflammation

Near-infrared (NIR) light reduces overall inflammation in the body by decreasing the presence of inflammatory markers. This reduction can help ease the symptoms associated with joint pain, sore muscles, autoimmune diseases, arthritis, traumatic brain injuries, and spinal cord injuries.

Improve Circulation

In many studies, LED light therapy has been clinically proven to increase the diameter of blood vessels and to improve circulation. What's more, LED light therapy also protects red blood cells against oxidative stress and limits platelet loss during surgical procedures.

Reduce Recovery Time

For high-performance athletes (and those who train like them) LED light therapy can help accelerate muscle repair following fatigue and injury. Mitochondria within cells are particularly responsive to LED light therapy, and muscle cells are exceptionally rich in mitochondria. LED light therapy may also stimulate stem cells, further assisting in muscle recovery.

Promote Cellular Health

The most significant benefit of LED light therapy is the effect it has on the body's cells. One of the most critical outcomes of LED light therapy on cellular function is the stimulation of collagen production. Collagen strengthens hair, is responsible for the health of connective tissue, and provides our skin with firmness and elasticity.

Stimulate Hair Growth

Alopecia, or hair loss, is a common disorder affecting 50% of males over the age of 40 and 75% of females over 65. Studies have shown that LED light therapy can stimulate hair growth. Red light wavelengths are believed to stimulate epidermal stem cells in the hair follicle, shifting the follicle into the anagen (active growth) stage.

Reduce Pain

In a clinical study, neuropathic pain caused by a spinal cord injury was dramatically reduced by the application of red light treatment. Nearinfrared light wavelengths reduce overall pain by easing joint stiffness and soreness, diminishing inflammation, easing muscle spasms and enhancing blood flow.

Increase Fertility

Around the age of 30, male testosterone levels naturally start to decrease. Men hoping to achieve a natural boost to their sex drives, sexual satisfaction, fertility, and physical performance can reap benefits from LED light therapy. Red and near-infrared wavelengths can stimulate photoreceptor proteins in the testes causing higher testosterone production. Other studies have theorized that low-level light therapy may affect the pineal gland in the brain, which bears a significant impact on reproduction.

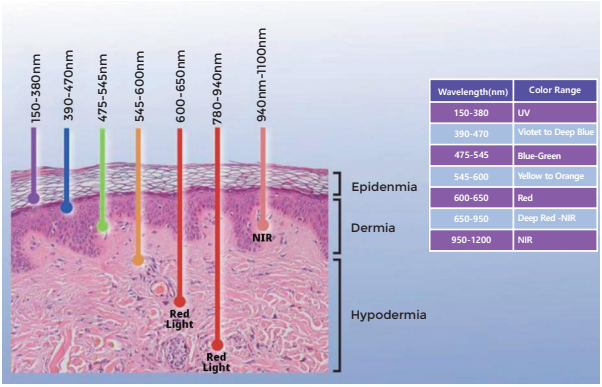
Improve Skin Health

LED light therapy can dramatically transform the skin. Red light wavelengths in particular target the mitochondrial chromophores within skin cells, generating production of collagen proteins. Collagen stimulation yields more holistic and enduring benefits than simply resurfacing the outer layers of the skin. Stem cells may also be activated, increasing tissue repair. The result is accelerated healing and wound repair, improved appearance in hypertrophic scars, a reduction in fine lines and wrinkles, and improved skin texture.

The benefits of red light: The wavelength of red light is between 600-700 nanometers, which can adjust the texture and tone of the skin, smooth fine lines and wrinkles, promote the production of collagen, regenerate skin tissue and hair, and restore cell vitality , enhance the ability to expel harmful toxins and anti-inflammation.

The benefits of near-infrared light: Near-infrared light has a wavelength between 700-1100 nanometers, which can penetrate skin tissue, promote wound healing, relieve muscle soreness, nerve damage and joint pain by accelerating the decomposition of lactic acid.

When used in combination, red and infrared light increase the biological effect and promote the synthesis of collagen and elastin fibers.



Wavelength(nm)	Color Range
150-380	UV
390-470	Violet to Deep Blue
475-545	Blue-Green
545-600	Yellow to Orange
600-650	Red
650-950	Deep Red -NIR
950-1200	NIR

The role of the pulse:

Pulses of different frequencies (usually 1Hz-10000Hz) have different effects on human skin tissue.

(1) Low-frequency pulses reduce nerve sensitivity by reducing the production of the Brinikin Lucitrin protein that is necessary to transmit pain signals.

(2) Medium-frequency pulses stimulate the production of endorphins. Endorphins are neuroactive substances produced by the pituitary gland of the brain. They have a great conditioning effect on the human body and have an analgesic effect. They are natural analgesics for the human body. At the same time, it can also regulate body temperature, respiration, heart rate, blood pressure and other functions. Endorphins can make people feel happy and euphoric, and can resist anxiety, depression and neurasthenia.

(3) High-frequency pulses will promote cell mitosis and accelerate cell repair. Mitosis is the precise and equal distribution of the chromosomes of the parent cell to the two daughter cells after duplication (essentially DNA duplication). Since the chromosome has the genetic material DNA, the stability of hereditary traits is maintained between the parents and offspring of the organism.

Irradiance and Applications

Speaking of red light and near-infrared light therapy. What you are looking for is a device that emits wavelengths that have been proven effective by research. Our lamps emit red light at 660nm and near-infrared light at 850nm. These are the two wavelengths that have been proven to be the most effective by a large number of research data. There are more than 3000 items. published research. In addition, our devices output these specific wavelengths of light, also known as irradiance, at high power, so you can achieve effective therapeutic results in a shorter period of time.

Red light therapy can be used for:

1.Improving skin health
2.Accelerating wound healing
3.Stimulating hair growth
4.Slow the visible effects of aging
5.Increasing circulation between blood and tissue cells
6.Optimize sleep
7.reducing inflammation
8.Soothe chronic pain
9.Improve acne
10.Relieves Muscle Spasms
11.Enhancing bone recovery

Target population

【Athletic】

Sports joint injury

Muscle strain and soreness

ligament strain

【The elderly】

Senile joint disease

Senile body pain

Senile osteoporosis

【People with Arthritis】

Rheumatism and Rheumatoid Arthritis

Body pain caused by chronic

Osteoarthritis

【Office sedentary/sub-healthy people】

Sedentary

Sleep disturbance

Fatigue

【Skin Problem Crowd】

Fine lines/Wrinkles

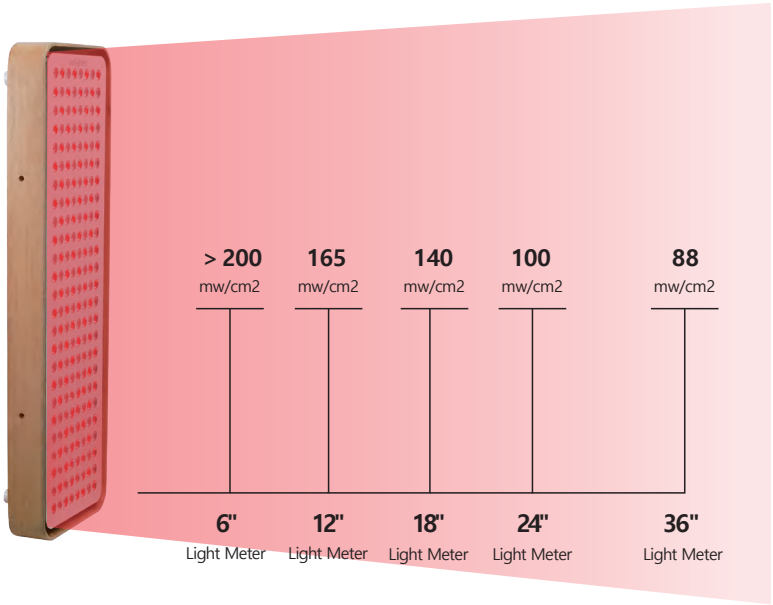
Age spot/Pigmented spot

Acne Treating

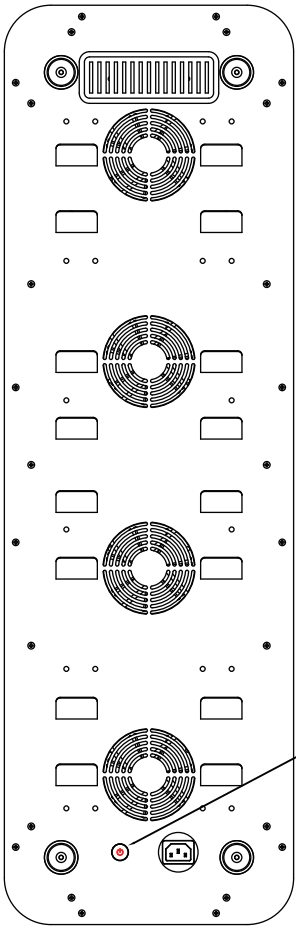
Product description

Wooden Red Light Therapy Panel Specification

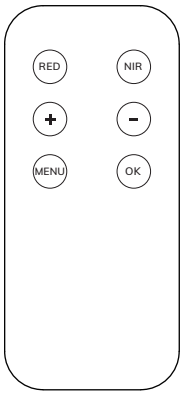
LED Power	600W
Wavelengths	Red 660nm & NIR 850nm / Customize
Amps @110V	3.3A
Amps @220V	1.6A
Dimensions	35" x 11" x 2.76"
Power Consumption	355W
LEDs	200 x 3W
Bean Angle	30 & 60 degree
Cooling Fans	4pcs
Weight	10.2kg
LED Lifespan	50,000hrs
EMF Emission	Negligible @6"
Warranty	3 Years
Best For	Targeed Treatment / Half Body
Max Area	47" x 24"



Setting up Your Light

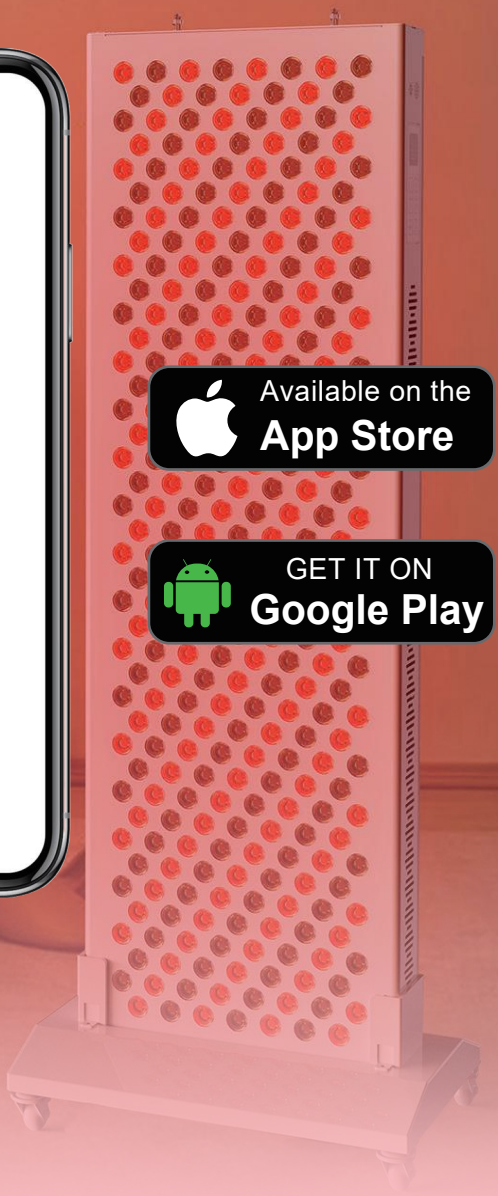


1. Plug in the socket ,press the switch to turn on the lamps, the switch on the red indicator when the lamp is working.
2. The default running time of the lamps is 20 minutes, the red light and infrared light is all on.
3. After the end of the operation, the lamps will be turned off automatically, and the red indicator light on the switch will turn off.
4. Lamps can be controlled by APP, please download APP and follow the user guide to operate the specific control mode.
5. Lamps with memory function, It can be adjust the default configuration,after setting and running on APP, remember the new configuration after turn off/on by master switch.



No matter which group the lamp control panel is adjusted to, the remote control can control the lamp.

RDPRO Total Control System



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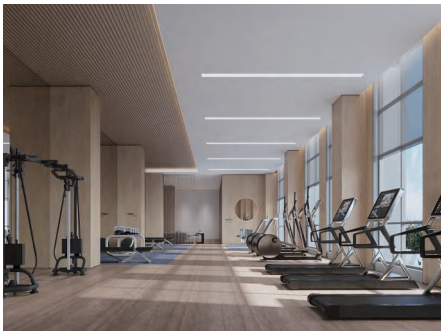
Using scenes

Beauty Salon

SPA

Home use

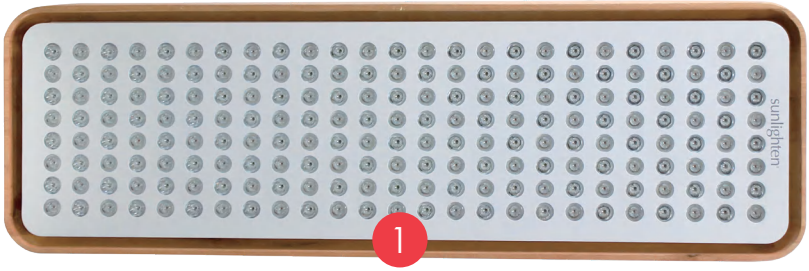
Office



Gym

Hospital

Scenes Show

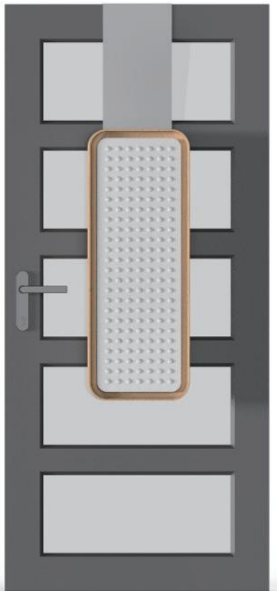


Accessories

1. LED Therapy Light
2. Remote control
3. Eye Protection
4/5. Power Cable

Installation mode

The back design of the panel allows for the mount to be used at various heights, accommodating a wide range of individuals.



Precausions

Please pay attention to the following NOTES when use the device:

- Please read all NOTES in the user manual before using the device.
- Use with caution in patients with allergic skin diseases
- Children and people with disabilities should use this device under the supervision of guardians or medical staff
- If the patient has a tendency to bleed or has acute inflammation, high fever, active tuberculosis, etc.,the LED therapy light should be prohibited.
- When using LED therapy light should pay attention to the safe irradiation distance and suitable treatment time.
- When irradiating the head should pay attention to protect the eyes to avoid eye burns.
- The device is not waterproof, do not clean it with an unwrung wet towel or immerse the device in water, do not wash electrical components with water or liquid.
- Stop using the device if it gets water or liquid.
- Do not pull the power cord forcefully during the device operation.
- Stop using the device if it gets water or liquid.
- Do not use with other heating equipment at the same time. Do not modify or repair this device by yourself.
- Do not use or store the device in environments where the temperature exceeds 45°C.
- Avoid direct sunlight when storing lamps and store in a cool, dry place.
- Please keep a distance of at least 11 cm between the skin and the light-emitting surface of the lamp to avoid high-temperature burns.
- If there is any abnormality or discomfort during use, please stop using it immediately and contact us.

Warranty Card

Contact Information

Product

Comments

Warranty Terms:

1.We are warranted against defects in materials and workmanship for a period of THREE (3) YEARS from the purchase date.

2. Free replacements are warranted for a period of SIX (6) MONTH.

Warranty does not cover the following damage(s): product been modified, improper installation or use, improper clean, electrical surges, or nature caused damage.

Warranty does not cover the loss of third party with direct or indirect damage(s)

Warning and Cleaning:

1. Unplug the fixture before cleaning.
2. Do not use cleaning sprays. Wipe with dry or lightly damp cloth to clean.

Warning:
Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user ’ s authority to operate the equipment.
NOTE:
This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.
FCC Statement:
This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:
—Reorient or relocate the receiving antenna.
—Increase the separation between the equipment and receiver.
—Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
—Consult the dealer or an experienced radio/TV technician for help.
The equipment complies with FCC Radiation exposure limit set forth for uncontrolled environment.RED Light Therapy This equipment should be installed and operated with minimum distance 20cm between the radiator and your body.
RF exposure compliance statement:
This device Remote control has been evaluated to meet the general RF exposure requirement

sunlighten®

Address: 7373 W 107th St. Overland Park,
KS 66212,United States