

Horizon Infrared Therapy

from Hill Therapeutics



The “right” phototherapy device can accelerate tissue repair^{1,2} and eliminate or reduce pain^{3,4,5} inflammation⁶ and loss of range of motion.⁵ New research also has shown the beneficial effect of light on nerve regeneration.^{7,8} But, what is the “right” device? With a slew of manufacturers and sometimes misleading claims, it is not easy to sort through information and find the best product for your money.

Here the 5 most important factors regarding light therapy:

1. Power: The power for a low-level light system is expressed in milliwatts or mW. 1000 milliwatts equals 1 watt. Higher wattage corresponds to a faster treatment; however this is dependent on the size of the probe. Most medical research and literature advocate a light dose between 3-8 J/cm².^{9,10} Basically, the dosage depends on the size of the device, power and treatment time. 3-8 J/cm² is considered a relatively low dosage and follows the Arndt-Schultz Law that low stimuli activate physiological processes where high stimuli inhibit physiological responses. Whether it takes 1 minute or 20 minutes, as long as you provide an adequate dose, your patients will benefit. When comparing the power of different manufacturer's devices, it is important to ask how long it takes to produce 1 joule per cm². Unless you are treating acupuncture points, it is not practical to buy a very low powered device (<50mW).

2. Wavelength: Look for a device that emits infrared light (>750nm). It has been established that the penetration of light is deeper with higher wavelengths.^{11,12} A strictly red light device will not penetrate deep enough and will be ineffective at treating deep musculoskeletal conditions.¹¹ Many devices have a combination of red and infrared light. Red light is beneficial at superficial levels and is used as a visual indicator that lets the user know when the device is operating since infrared light cannot be seen with the human eye.

3. Cluster size: Today's phototherapy devices are made of LEDs/SLDs and Lasers. SLD means super luminous diode. SLD is a fancy way of saying LED and with today's technology there is no difference between the two. Because of the makeup of lasers, they tend to be spaced farther apart which reduces their ability to effectively treat larger areas.¹³ Lasers and LEDs produce the same therapeutic effect and lately some researchers prefer LEDs over Lasers.^{13,14} LED systems tend to be more affordable, durable and portable. The diodes can be packed closer together and there are more wavelengths available.^{13,14}

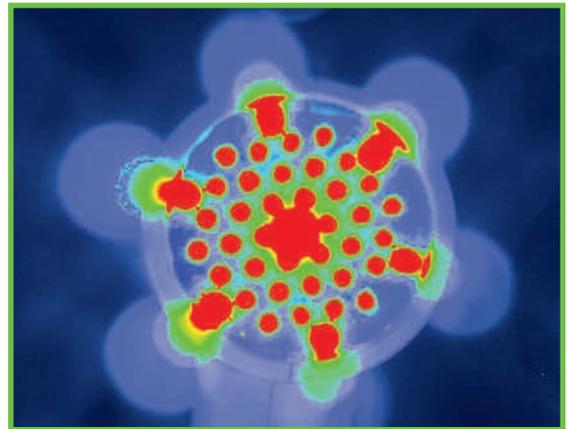


Image showing active infrared diodes

4. Ease of use: The light device should be lightweight, portable, and have a friendly user interface. Since light therapy treatment times are typically quick, you do not want a device that takes longer to set up than to treat.

5. Price: Price is typically the biggest deciding factor when purchasing a new device. With the current competition available, you shouldn't have to pay more than a couple thousand dollars for a high quality, high-powered light device.

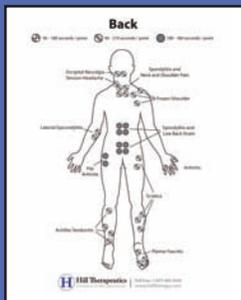
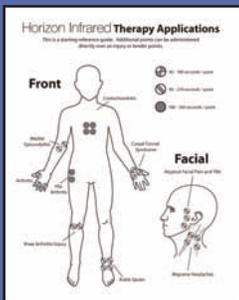
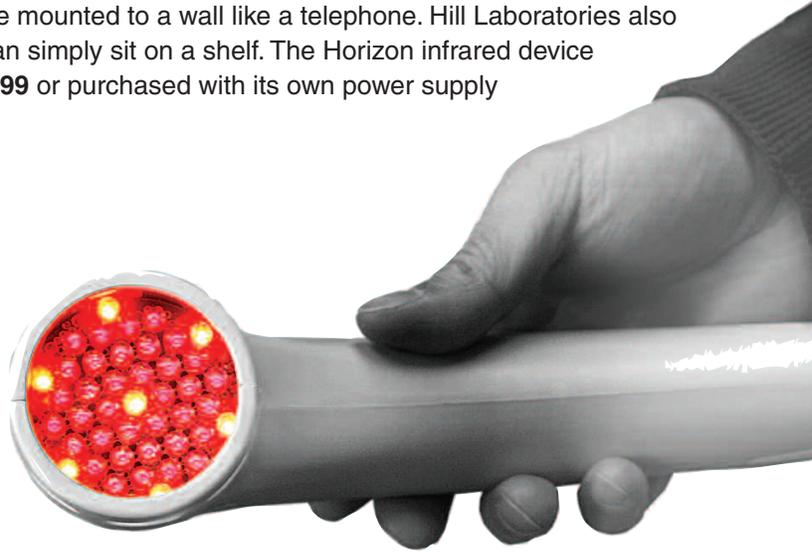
Over for more -

The Horizon Infrared Device

Hill Laboratories, predominately recognized as a high quality medical-table manufacturer, has expanded its therapy line by developing the Horizon Infrared light device. The Horizon Infrared and Red Light Therapy unit delivers a powerful 800mW of infrared (880nm) and red (660nm) light with 36 infrared LEDs and 7 visible red LEDs. The treatment surface plate is roughly 2" in diameter. A dose of 4 J/cm² takes a little over 90 seconds. The Horizon probe can be purchased as a plug-in to the new HF54 Hands Free Ultrasound or separate as a portable standalone. The standalone Horizon was designed to be lightweight, durable and portable. The entire unit weighs 2lbs. 8oz. with the probe handle weighing only 8 ½ oz. This lightweight design eliminates operator fatigue and makes it easy to transport. The standalone power supply has two key-hole mounts on the backside of the enclosure enabling it to be mounted to a wall like a telephone. Hill Laboratories also manufactures an inexpensive rolling cart for \$85 or the unit can simply sit on a shelf. The Horizon infrared device can be plugged into the HF54 Hands Free Ultrasound for **\$1499** or purchased with its own power supply (standalone) for **\$1795**.

Operating the Horizon:

The Horizon only has two buttons, one to select the time and one to start and stop. To further simplify this unit there are only three time selections 30, 60, 90 seconds. When pressed a fourth time, all three time selections light up and the unit runs continuously. The buttons to operate the Horizon light probe are on the probe itself and not on the HF54 generator or the standalone power supply. All of the timing circuitry and on/off control for the output are within the handle of the light probe.



Horizon Infrared Therapy Application Guide

The Horizon Infrared Therapy Application Guide comes with every Horizon Unit. It provides a starting reference for administering treatment for a number of common patient conditions.

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