

HighTech by...









Committed to Innovation, Focused on the Customer

LightSources and sister company LightTech have rapidly established themselves as key players in the tanning lamp market setting new standards. This success is due to a commitment to innovation and a clear focus on customer requirements in all strategic decisions. In fact, LightSources and LightTech have revolutionized many aspects of tanning lamp technology. Unique products, superior quality standards, carefully monitored production processes, and outstanding customer relations are the basis of our unprecedented track record.













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20 Years of Tanning Innovation: LightSources and LightTech

The success story began in 1983 with the founding of LightSources in the USA. From the outset, the company's philosophy was inspired by innovation and quality. As a result, many breakthroughs in tanning lamp technology over the last two decades bear the LightSources hallmark. Today, the company is recognized as the undisputed world market leader in specialty gas discharge lamps. To address the specific standards and customer requirements of Europe, LightSources Inc. established LightTech Lamp Technology Ltd. in Budapest, Hungary in 1993 as an independent subsidiary. LightTech commenced production of its own lamp ranges in 1995.

Success in Europe

LightTech's meteoric rise was due largely to a rapid expansion of its production capacity. Within eight years, the total area of production facilities in Hungary arew from 500 to 14.000 square meters (5,400 to 150,700 square feet). Over the same period, the workforce grew from 8 to 700 including machinery building and glass work plant to ensure end-to-end product quality. Stringent controls have enabled continuous improvements in quality. In 2001, LightTech created one of the most advanced glass works in Europe. A vertically integrated approach, including in-house glass manufacture, helps to eliminate potential supply chain problems and quality issues. And thanks to a continuous improvement in production methods, a commitment to quality and exceptional customer service, the young company soon rose to become leader in the European tanning lamp market.

Skin - Our Contact with the Outside World

The human skin protects the body against penetration by damaging substances (such as germs or dust), as well as heat, cold, electric current and radiation. Exposure to UV radiation results in increased pigment production, also known as tanning. The intensity of this effect is determined genetically, which explains the differing results with different people.

There are four levels of skin sensitivity:

- **Type I** burns easily, tans very little, fair skin, blue eyes, freckles
- Type IIburns a little, tans minimally, fair skinblue or hazel eyes, blond hair
- **Type III** burns less, tans average, average white skin type
- **Type IV** burns minimally, tans easily, dark brown hair, dark eyes, Mediterranean, some light Hispanics

The period of time a person can be exposed unprotected to UV radiation without any damaging effects to skin increases from Type I to Type IV.

Tanning and the Skin

Tanning is the natural result of exposure to ultraviolet (UV) light. The tanning effect is dependent on the wavelength. In natural sunlight, UV-B (280-320 nm) stimulates the skin's melanin granules (which are pink in color), causing them to rise. As they rise, UV-A (320-400 nm) oxidizes the melanin, which results in a photo-protective tan. However, because the sun is not controllable, tanning this way can easily result in overexposure and burn.



Artificial Tanning -Simulated Sunshine

To support and enhance the tanning process of the skin, special gas discharge lamps emit UV radiation (mainly of UV-A type) in carefully controlled doses. The effectiveness and durability of the tanning depend on the intensity ratio of the UV-B versus UV-A wavelength intervals. Sophisticated lamp technology can adjust this ratio to achieve a fast, intense, and lasting effect. This natural-looking gold-brown skin color avoids damaging the skin.



Tanning Lamps

anning lamps are special gas discharge tubes that have varying characteristics depending on their color-generating materials type of glass. Cutting-edge technologies management of radiation intensit cial tanning more effective an roll than the natural sun. LightSou offer a wide range of lamp (up to 200 cm). This includes working of 15-225 watts and bi of 400 Watts. Models of 2,000 watts will soon be a , providing deep, dark, and long-lasting







HighTech Products...

A strong focus on ongoing innovation means that the names LightSources and LightTech are now synonymous with technological leadership and product reliability across the globe. Cup-Cathode Technology (CCTTM) and a series of revolutionary Combi and Dual phosphor lamps won widespread attention and praise. LightTech's innovative strategy never stands still, and the company will continue to maintain its pioneering role.

CCT[™] - A Revolution in Lamp Technology

From the very beginning of the tanning industry, customers were often concerned by blackening at the ends of lamps, believing they were no longer able to produce a tan. With the introduction of Cup-Cathode Technology (CCT^M) LightSources and LightTech have revolutionized lamp technology, removing black traces caused by aging once and for all. Lamp cathodes are covered with a special metal cup (Cup Cathode), eliminating blackening. The lamp retains its effectiveness and customers now enjoy the "just installed" look over the entire lifecycle of the lamp.









Dual Phosphor - Combi Lamp Two Lamps in One

Customers also require variable radiation intensities, due to differing aesthetic tastes, and the fact that the various parts of the body tan differently. The development of the high-tech Dual and Combi tanning lamps, LightSources and LightTech achieved a technological breakthrough, making a significant impact on the entire industry. Two different phosphors (one of them pink, the other blue) in the same lamp offer varied ultraviolet intensities. This "two lamps in one" technology was long on the customer wish list. The face and body now receive the intensities that match the customer's individual requirements.

Twist - Spiral Power

LightSources and LightTech have devoted significant resources to developing new technologies to increase lamp power without reducing lamp life. The result is the Twist lamp - an ultrahigh-power tanning lamp, available with or without a reflector, with periodical swirls or depressions on the outer tube. This revolutionary technology allows higher power input and increased UV radiation output. Current lamps use a neon component to enhance UV power, but at the expense of lamp life. The LightTech approach achieves this without the use of a special gas mixture, ensuring a longer lamp life.

Facial Tanning -The Look of Success

For facial tanning, LightSources and LightTech offer powerful metal halide high-pressure lamps for both the European and American markets with specially engineered quartz glass. These lamps provide very high UV-A intensities, typically between 340 and 400 nanometers. Special blue glass filters remove undesired UV waves, primarily UV-C (under 280 nanometers). This delivers a long-lasting, deep, and dark tan, which meets even the highest aesthetic requirements. High quality and reliability minimize risks to the user's health.

R&D is Power

Technological leadership demands a commitment to research and development. This enables Light-Sources and LightTech to stay at the forefront of developments, and to respond rapidly and flexibly to emerging tanning trends or new international standards. Against this background, LightTech/ LightSources has established a state-of-the-art research and development center in Hungary to drive forward all aspects of tanning lamp technology, and to design new products. Furthermore, LightTech is currently expanding its state-ofthe-art UV measuring laboratory, to gain accreditation. LightSources/ LightTech will also continue to offer its customers a range of high-quality parts, such as ballasts, capacitors and ignitors devices. After all, there can be no compromises in the pursuit of perfection.

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