



Efficient lighting for wine storage

Sylvania's Helios Gold



Innovation rooted in research.

Sylvania has been bringing lighting products to market since 1924. Today we continue to create innovative lighting solutions to meet our clients specific needs.



Specialist expertise

Sylvania has a dedicated research and development center of excellence in Europe. This allows us to develop next-level steps in product quality, innovation and performance.



A focus on Quality

We pride ourselves on providing premium lighting solutions with focused application. We don't make any compromise when it comes to product quality.



Collaboration

We work closely with you to ensure we provide the best product and solution for your business.

Research and development expertise

For superior products and the best results

At the heart of our company lies a strong commitment to research and innovation.

With over 600m² of dedicated testing facilities in Belgium, we combine cutting-edge technology with decades of expertise to develop, test, and refine the lighting solutions of tomorrow.

This laboratory is part of our overall European R&D and quality structure, which also includes specialised local teams in France and Germany.

SpeciaLITE®



Our SpeciaLITE® R&D Innovation Laboratory, Solutions Lab, and Compliance Testing Centre are equipped to handle everything from product design to full-scale validation.

From custom machinery design and construction to advanced optical and electrical testing, every detail of our products is verified against the highest industry standards.

Our team of internationally recognised experts has shaped the history of horticultural lighting – pioneering innovations such as the Helios lamp, the Gro-Lux® HPS, and the original Gro-Lux® light spectra. Today, they continue to drive breakthroughs in plant lighting, supported by state-of-the-art technology

This infrastructure is not only dedicated to our own product excellence but is also available to our partners. We offer access to our facilities, knowledge, and technology, enabling customers to collaborate with us on next-generation lighting solutions and beyond.

With us, you can be sure: every product is tested, proven, and built to meet the latest global standards - backed by the innovation power of one of the world's leading R&D centers in horticulture lighting

Committed to sustainable lighting solutions

Each time we develop a new product and service we engage sustainable practices to deliver optimal lighting solutions while minimising our environmental impact. We employ comprehensive waste and energy conservation protocols that involve everyone in the business and extend to all areas of our operations.

We believe a responsible business is a healthy one and the prosperity of business and society is closely connected. Our mission is to bring technology, creativity, and innovation together through our products, services, and people to enhance energy efficiency, improve sustainability, increase connectivity, and promote wellbeing.

By mobilising our collective strength and strategic commitments to focus on creating healthy communities and a healthy environment, we can achieve long-term value and have a positive impact on society.



Recognised for our contribution

Sylvania Group is a business with a culture that places its people at the centre of all it does. We provide a professional, inclusive environment that helps our employees excel at everything they do, with policies in place to ensure we continue to evolve and adapt to the world around us. We want a career with Sylvania to be challenging, rewarding, and fulfilling, where our people can reach their potential both personally and professionally. We are a progressive and innovative global business dedicated to delivering excellent products and services to our customers and an inclusive work environment for our employees. We value our people, their experience, their ideas, and their contribution and we thrive on empowering each other so we can grow and develop together.

Intelligent lighting for the future

Sylvania Group invests in delivering advanced solutions that enhance people's lives and help create better environments. Innovations such as SylSmart® and 360 services offer so much more than quality lighting solutions, they represent the foundations on which future innovation can be built and deliver sustainable cost and energy efficiencies.

Our approach to create an inclusive and sustainable business is recognised through our silver certification from Ecovadis, one of the world's most recognised business sustainability ratings. This measures non-financial management systems and sits alongside our internal metrics, which we evaluate against industry best practices in a global context and employ continuous improvement principles to ensure we remain ahead in our market.



TERRA is the Sylvania Group's initiative focused on sustainable lighting solutions, launched in response to the urgent need to address climate change and environmental issues. The Terra collection emphasises reducing ecological impact and promoting responsible consumption through innovative and efficient designs. It features eco-friendly manufacturing processes, using recycled materials and minimising waste. TERRA also upholds high durability and reliability standards, contributing to a circular economy by conserving and reusing resources. This initiative reflects Sylvania Group's commitment to sustainability and environmental consciousness in lighting products.



Our sustainable management performance is above 93% of the market, with 74 points obtained in the last assessment.

Additionally, in line with our high ambitions and our SBTi commitment, we are dedicated to limiting global temperature rise to 1.5°C.



Made in Europe

Our heritage as a leading manufacturer of quality lighting solutions dates back more than 100 years and we are proud of our European production history. With manufacturing located in France and Germany and R&D facilities in Belgium, we can design, develop, and produce innovative lighting solutions and deliver them to market with pace and agility whilst significantly reducing our carbon footprint. Our European facilities are ISO9001, ISO14001, and ISO50001 certified, underlining our alignment with the principles of responsible manufacturing, and our continued commitment to reducing emissions and managing our waste.

Technology plays a critical role in increasing energy efficiency while enhancing luminaire performance and our comprehensive portfolio contains an extensive range of lighting solutions manufactured to the highest quality standards that offer extended lifetimes.

We take responsibility for managing the full life cycle of products and have plans to embrace the principles of the circular economy in our approach to sustainability on future product development projects. Placing greater emphasis on product design helps us proactively reduce emissions and manage waste. The interchangeable components of some of our products increases their lifecycle and makes them in-line with our circular economy approach.

Sylvania's ESG pledge by 2030



To become a net-zero emissions company



To electrify our company car fleet



To become the circularity role model in the industry



"We have a clear commitment as a business: to be a leader and role model not just in lighting solutions but globally as a business that prioritises sustainability in our business operations. We are focused on being recognised as Climate Champions not just by policies but by activities that make a positive and sustained difference to our carbon and environmental footprint. But also we are deeply passionate about our staff and partners throughout the supply chain and that they are treated fairly, with decency and in line with global and local standards. Sylvania Group lives and breathes our ESG values, and we want that to be clear in all of our products and services that we deliver to our customers"

Enrique Castaño - Sustainability Manager EMEA



Optimal wine storage

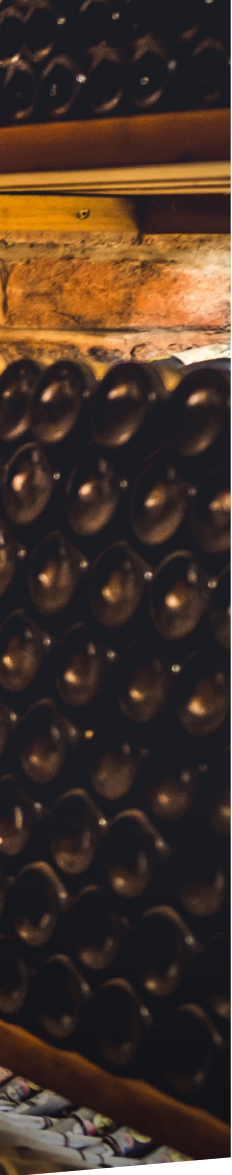


For thousands of years wine has been produced and enjoyed making it one of the most popular alcoholic beverages consumed in the world today. It is estimated that global wine consumption is 236m hectolitres in 2020*.

Wine is one of the few commodities that can improve in flavour and value with age and therefore fine wines are often set aside for long-term storage. When aged in the proper climate these wines gain complexity in terms of aromas, flavours and texture.

However, wine quality can rapidly deteriorate if kept in inadequate conditions. It is therefore essential for wineries, distributors, retailers and restaurants to ensure the correct conditions for storage.

* Global Wine Market – statistics & facts, Statista, May 2022



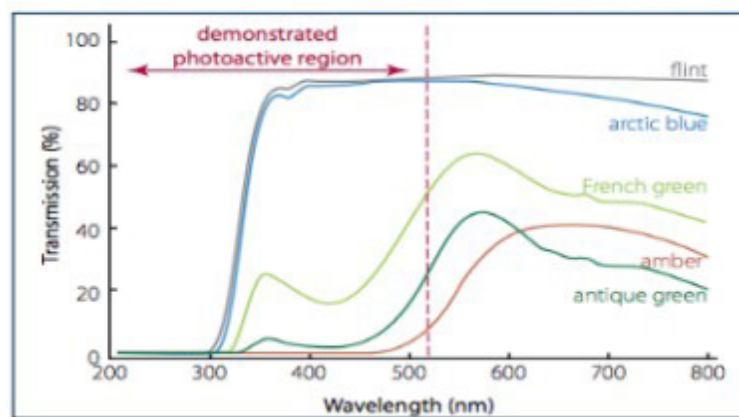
How does light affect wine?

Three factors that have the most impact on a wine's condition are light, humidity and temperature. Storing wine at a consistent and optimal humidity and temperature is one way to prevent wine faults, and is well known, another is choosing the correct lighting for the storage room.

Light, sunlight or artificial, can adversely impact the naturally occurring phenolic compounds in wine and create 'wine faults', impacting its quality.

Prevention of wine faults

For avoiding photodegradation of wine, there should be as little as possible actinic radiation at wavelengths below about 450nm. Coloured glass is partially effective to limit this, that is the primary reason why green glass is used for wine bottles and amber glass for even more sensitive beers and medicines, but as you see from the spectral transmission never drops to zero in the actinic range. Prolonged illumination in storage houses still causes degradation.

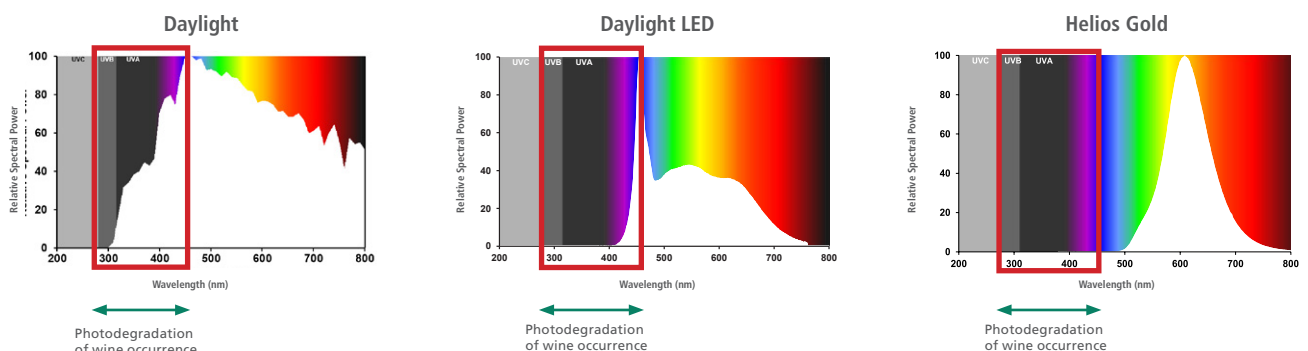


Transmission spectra of bottles with different colours (Clark et al., 2011).

Why Helios Gold?

Unfortunately almost all LEDs for general lighting rely on a 450nm blue pump to stimulate the phosphors, and a large amount of this blue is transmitted. As such, LED lighting has catastrophic effects for the storage of wine and indeed many other food and medicinal products.

However, Sylvania's Helios Gold filters out UV and blue components with wavelengths below 500nm, without compromising the illuminance. The lamps are highly efficient light sources and operate cooler than traditional LED and other lighting solutions, therefore do not impact the temperature and humidity control mechanism in the storage cellar.





Helios Gold

External driver allows full control and dimming

Filled with a mixture of heat-conductive gases that help to provide cooling



LED Filament mount assembly is hermetically sealed into a T5 glass tube

- Better lumen output
- Consistent colour temperature
- No escape of silicone vapour

LED Filaments are automatically welded to a custom metal support frame



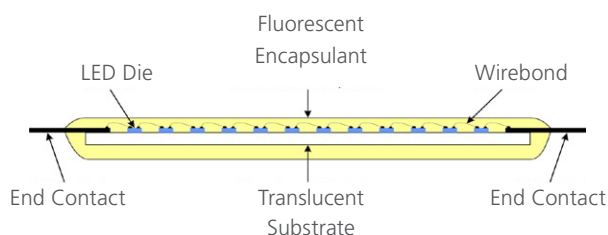
Helios is an entirely new class of linear LED light source with exceptionally high system performance.

This includes an outstanding operating efficacy of up to 153 lumens per watt, which is over twice the efficiency of current orange fluorescent lamps and HPS lamps. The unique design of Helios allows full 360° radiation and excellent optical control. These lamps operate cooler than traditional LED and HPS lamps thereby minimising impact on air conditioning and humidity within the wine storage area.

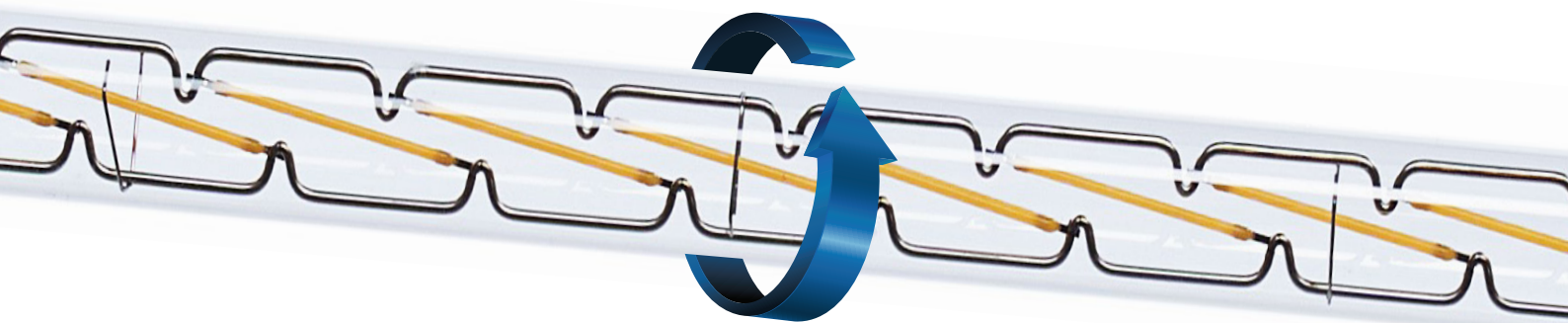
Sylvania has fundamentally changed the construction of a linear lamp with the development of Helios. This has seen a shift from surface-mounted LED emitters to gas-cooled LED filaments.



The key reason for such a change is that LED Filaments allow Helios to offer a full 360 degree light emission – a world first for a linear LED product. Filaments can achieve higher efficacy than traditional surface-mounted LEDs (>158 lm/W). They also facilitate the achievement of an improved uniformity of tube surface luminance without hot spots.



Microscope photograph of an individual LED filament



No light blocking metal heat sinks

360° radiation



Helios Gold

The perfect lighting solution to ensure the long term storage of wine. Helios Gold emits a high luminous output whilst protecting wine quality.



Helios Gold



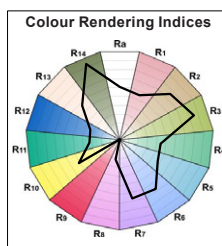
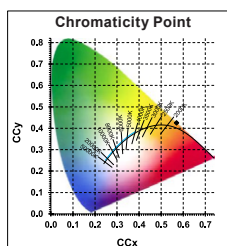
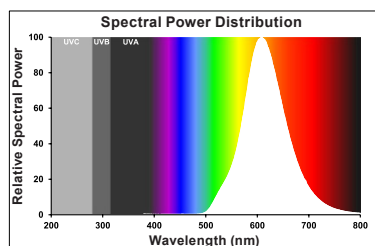
Helios Gold has many USP's for wine storage areas

- Very low actinic radiation - filters out UV and blue components with wavelengths below 500nm
- Emits a high wavelength of 590nm therefore avoiding photodegradation of wine
- Uses orange filaments therefore no coloured sleeve is needed
- Very high efficiency and output vs fluorescent & conventional LEDs
- Longer lamp and fixture life
- Uniform surface luminance
- Hermetically closed glass tubes, no escape of silicone vapour from LED's – IP68
- Operates cooler than traditional LED and other lighting solutions, thereby minimising impact on temperature and humidity control

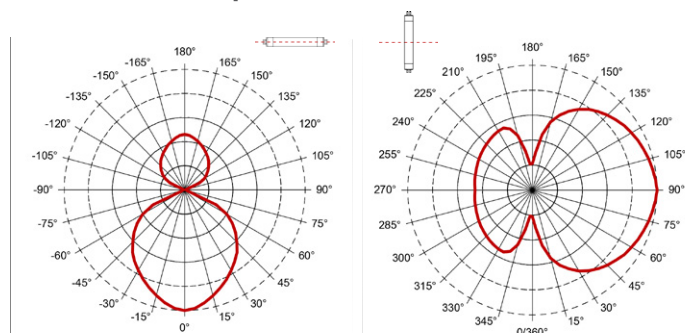
Product Information

Code	Item description	Finish	Base	Diameter (mm) D	Total Length (mm) L	Power (W)	Voltage (V) DC	Max Current (mA) DC	Beam angle (°)	Luminous Flux (lm)	Luminous efficacy (lm/W)	Spectral peak (nm)	IP	Life (h)
0085231	LED Helios T5 549mm Gold 360 Clear	Clear	G5	16	549	9,9	66	150	360	1550	157	590	68	25 000
0085331	LED Helios T5 849mm Gold 360 Clear	Clear	G5	16	849	16,3	66	250	360	2600	158	590	68	25 000
0085431	LED Helios T5 1149mm Gold 360 Clear	Clear	G5	16	1149	23,1	66	350	360	3625	157	590	68	25 000
0085531	LED Helios T5 1449mm Gold 360 Clear	Clear	G5	16	1449	29,7	66	450	360	4675	157	590	68	25 000

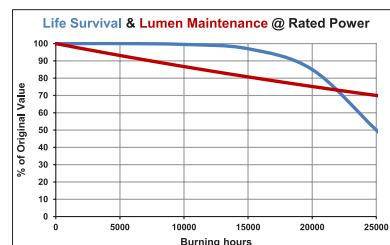
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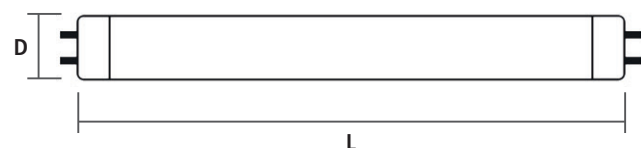
Photometric Graphics:



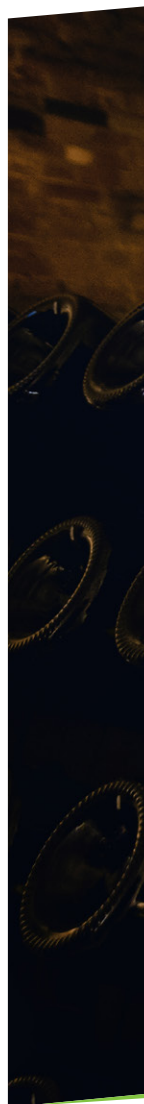
Performance Graphic:



Dimensions (mm)



SYLVANIA



Although every effort has been made to ensure accuracy in the compilation of the technical detail within this publication, specifications and performance data are constantly changing. Current details should therefore be checked with Feilo Sylvania International Group Kft.

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