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Heat with a deep impact.

THERATHERM® and SICCATHERM® –
the versatile infra-red lamps from OSRAM.

SEE THE WORLD IN A NEW LIGHT

OSRAM

Heat with a deep impact.

Lamps produce light – and heat. For many applications the latter is more important. Heat promotes a feeling of well-being in humans and animals and is a crucial factor in the production of a wide range of goods and materials.

OSRAM therefore offers two special heat lamps, THERATHERM® and SICCATHERM®, to cover a wide range of applications in the home, in agriculture and in industry. They emit most of their radiation in the short-wave infra-red range and only a small proportion of visible light. In conjunction with a special internal parabolic reflector which bundles the infra-red energy into a high-intensity beam, these heat lamps from OSRAM produce a strong deep-acting effect in the body.

Very little heat is given off to the environment because the body absorbs the infra-red radiation, converting it into heat. This means that compared to other heating methods, infra-red is a highly economical process. What's more the output of heat lamps can be quickly and precisely controlled to suit different requirements – another outstanding product benefit.

SICCATHERM® – deep-acting heat for industry and agriculture.

SICCATHERM® infra-red lamps have such outstanding properties that they are used for a wide range of industrial and agricultural applications. Because the lamps give off very little heat to the environment and heat up not just the surface but the entire substance, the drying or heating processes are extremely efficient. SICCATHERM® lamps are used in many different sectors. For example they are used for drying paints and varnishes, for various burn-in processes and for keeping food warm in restaurants.

SICCATHERM® at home.

SICCATHERM® heat lamps can be used in various ways at home. In electrical ovens, for example, they simulate the warm glow of a cosy fire and are ideal for low-fat cooking of delicate dishes such as fish.

Photo: Jörg Sellerbeck/www.raumkulinarik.de

SICCATHERM® in industry.

Pasteurisation: This process is used to extend the shelf life of food, in most cases liquids. It involves raising the core temperature of the food to between 62 °C and 85 °C for a short time. SICCATHERM® lamps are ideal for this. The benefit of this gentle process is that it kills the bacteria in the food but does not destroy the proteins, vitamins and minerals.

Polymerisation: Polymerisation is a means of producing plastics by bonding one or more monomers. When exposed to heat, dibenzoyl peroxide forms radicals that react with free monomers. This produces more radicals that in turn react with more free monomers. When heated with SICCATHERM® lamps, dibenzoyl peroxide therefore acts as an initiator for a chain reaction. This process is used for producing plexiglass, polyethylene, PVC, Teflon and other plastics.

Vulcanisation: Vulcanisation involves treating rubber with a vulcanising material such as sulphur at great heat to improve its elasticity. Vulcanisation accelerators such as zinc oxide or fatty acids are used to further improve elasticity, strength and resistance to ageing.

The heat from SICCATHERM® lamps keeps these rubber parts elastic and durable.

Distillation: In distillation, the different boiling points of different substances are used to separate out the different components of a liquid mixture. The substance with the lowest boiling point evaporates first and can then be cooled so that it condenses.

SICCATHERM® in agriculture.

Heat and health for young animals: The sun-like radiation from SICCATHERM® lamps creates the ideal conditions for raising poultry, pigs, calves, foals and puppies. The warming rays act directly on the animal's body without affecting the climate in the stall. This means that the stalls can be supplied with constant fresh air without any risk to the health of the animals.

Thanks to their deep-acting effect, SICCATHERM® lamps do not just heat the surface of the skin but the tissue and muscle layers underneath. This leads to excellent thermal regulation in the organism. The blood and lymph vessels expand, resulting in greater blood flow and better supply of nutrients to the cells. This promotes healthy growth of animals and increases their resistance to disease. SICCATHERM® are also ideal for keeping animals in terrariums.

Intensive drying of agricultural products: SICCATHERM® infra-red lamps are perfect for drying cereals, fruit and vegetables. Here too the deep-acting effect of infra-red radiation brings clear benefits. It penetrates the surface, warms up the inside of the substance and therefore accelerates the drying process considerably.

SICCATHERM® – the versatile and economical heat source:

- High-quality extremely effective heat lamps
- High intensity thanks to the parabolic internal reflector
- Low heat emission to the surroundings
- Deep-acting effect for strong healthy animals
- Efficient drying/heating of products and substances
- Extremely long life for impressive economy
- Wide range of products

Comfortable heat from THERATHERM®.

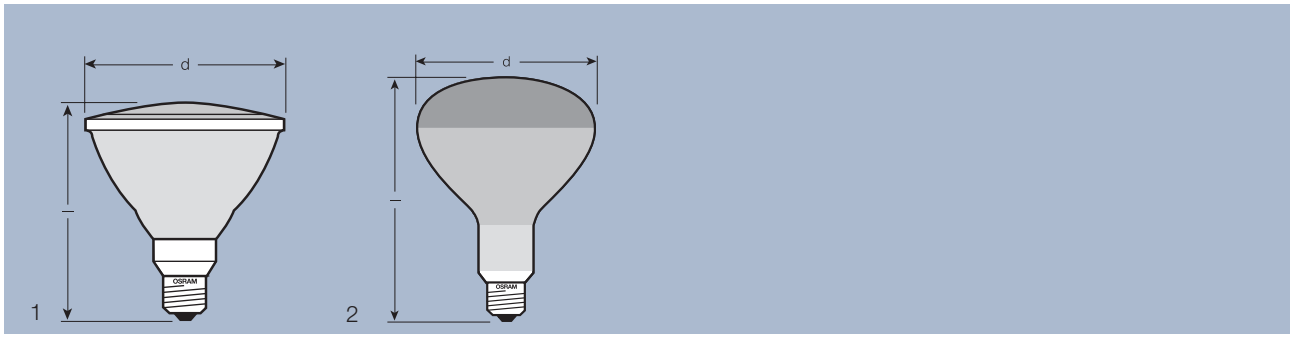
Like natural sunlight, the light from THERATHERM® lamps not only provides pleasant warmth and a feel-good atmosphere, its intensive infra-red radiation stimulates the cells and organs in the body. These lamps are therefore ideal for beauty treatments at home or in clinics.

Nice and relaxing.
Thanks to their deep-acting heat, THERATHERM® lamps open up the vessels in our bodies so blood flow through the entire organism is improved. The absorbed heat is physiologically distributed throughout the body. Metabolic waste is broken down faster and antigens in the body are mobilised more quickly. The skin takes on a fresh and healthy colour. THERATHERM® lamps therefore not only play an effective role for beauty treatment, they relax and refresh the body. The majority of the infra-red energy penetrates the skin and the epidermis without being absorbed so there is very little impact on the skin itself. Provided the lamp is placed at least 50 cm away there is little or no risk of local overheating.

With their outstanding performance THERATHERM® lamps are used with great success for cosmetic beauty treatment and also as heat sources over relaxation areas in swimming pools and saunas. THERATHERM® lamps are also popular for home use because they provide a source of uniform warmth for tired bodies and create a warm cosy atmosphere.

THERATHERM® – the feel-good lamp:
- Comfortable warmth and pleasant light
- High intensity thanks to the parabolic internal reflector
- Deep-acting for effective beauty treatment
- Kind to the skin
- Instant full thermal output
- Consistent high quality thanks to high-grade filter
- Long life

TECHNICAL DATA



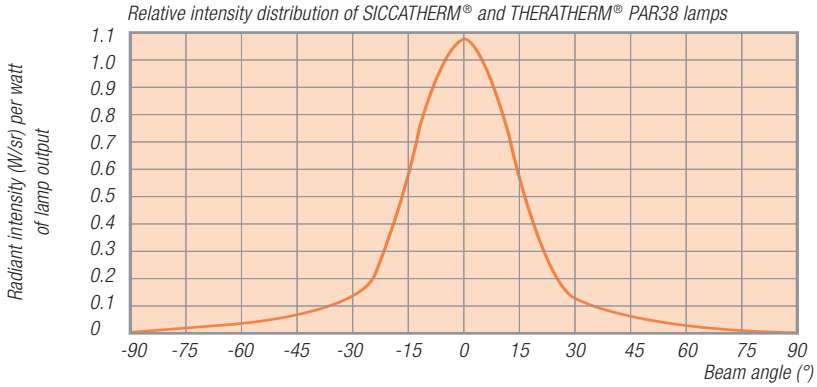
Product reference	EAN	Wattage (W)	Average life (h)	Diameter d max (mm)	Length l (mm)	Bulb shape	Base	Fig. no.	Glass
SICCATHERM®									
SICCA RED 100W 240V PAR38	4008321**392145**	100	5000	122	136	Red filter	E27	1	Pressed glass
SICCA RED 175W 240V PAR38	4008321**392190**	175	5000	122	136	Red filter	E27	1	Pressed glass
SICCA RED 150W 240V HG	4008321**502094**	150	5000	125	180	Red filter	E27	2	Hard glass
SICCA RED 250W 240V HG	4008321**507013**	250	5000	125	180	Red filter	E27	2	Hard glass
SICCA FR 250W 240V HG	4008321**507037**	250	5000	125	180	Frosted	E27	2	Hard glass
SICCA CL 250W 240V HG	4008321**507051**	250	5000	125	180	Clear	E27	2	Hard glass
SICCA CL 275W 240V HG	4008321**507075**	275	5000	125	180	Clear	E27	2	Hard glass
SICCA CL 375W 230V HG	4008321**206912**	375	5000	125	180	Clear	E27	2	Hard glass
THERATHERM®									
THERA RED 150W 240V PAR38	4008321**392213**	150	5000	122	136	Red filter	E27	1	Pressed glass
THERA RED 250W 240V HG	4008321**507099**	250	5000	125	180	Red filter	E27	2	Hard glass

E27 base to IEC/EN 60061-1, Sheet 7004-21, maximum base edge temperature 250 °C

Please note:

Because of the heat that these lamps generate you should use them only in suitable heat-resistant equipment.

Relative intensity distribution of SICCATHERM® and THERATHERM® PAR38 lamps



Relative spectral distribution of SICCATHERM® and THERATHERM® lamps