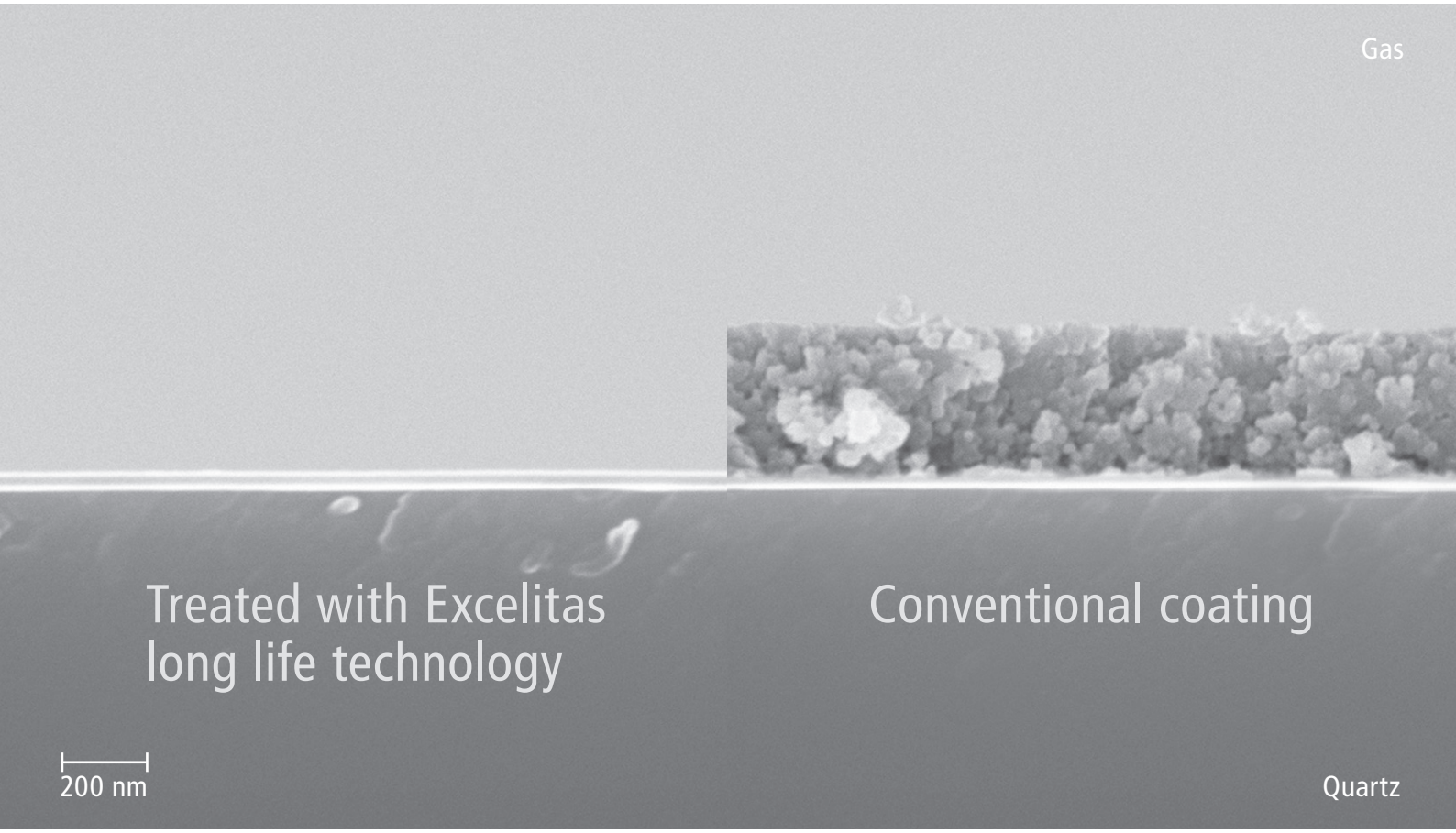
excelitas®

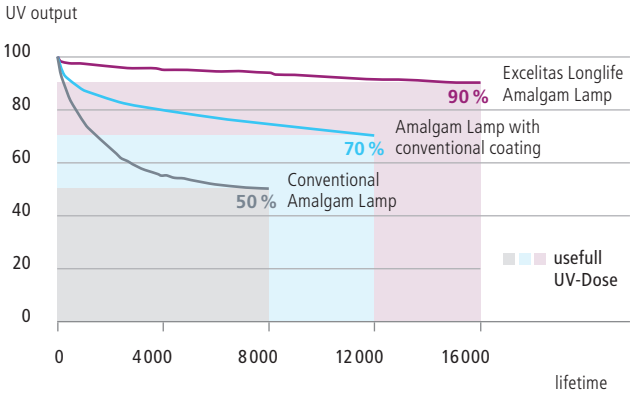
NobleLight



Longlife Technology Doubles the Efficiency of High Power Amalgam Lamps

Lifetime dependency of coating
UVC radiation has an intense bactericidal action. Microorganisms such as viruses, bacteria, yeasts and spores are effectively inactivated without the addition of chemicals. The energy of UVC radiation is sufficient to break down chemical compounds or to achieve molecular restructuring. In addition, oxidation processes and decomposition reactions of organic compounds are initiated. Amalgam UVC lamps with Longlife Technology offer a disinfection action which is virtually constant over the lamp operating life. While the UVC output of uncoated lamps drops by around 50% after 8,000 hours, the Amalgam UVC lamps with Longlife Technlogy have a reduction in UVC output of approximately 10 % at up to 16,000 hours.

Typical lifetime diagram



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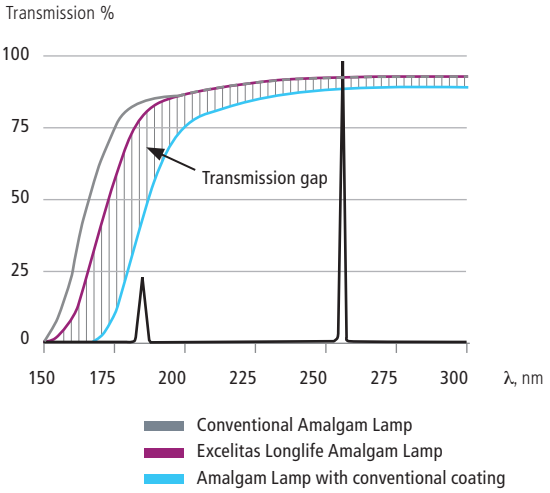
Influence on quartz transmission
Because of the higher UVC output at end of lamp life due to minimal absorption and the extended operating life, Excelitas Longlife Amalgam lamps offer disinfection systems a significant potential for savings. The benefits are fewer lamps and system consumables, less energy consumption and maintenance costs.

Compared with standard low pressure mercury lamps, the amalgam lamps offer the extremely good UVC efficiency, which is typical of mercury low pressure lamps, but with a significantly higher UVC output.

With Longlife Technology, lamps can be produced which have no discoloration and even after 16,000 hours still provide a UVC output greater than 90 % of the original output.

Transmission of coatings



Technical data of compared lamps
Excelitas Amalgam lamps offer great potential for savings in number of lamps, system components, energy consumption and service intervals – while significantly reducing the operating costs of disinfection systems.

The comparison below shows an example of different lamp types and their consumption over six years. Based on the same demand for UVC output, different numbers of lamps per system are needed.

Lamp type	Lamps/system	Quantity of lamps	Initial UVC efficiency	UVC efficiency @ end of life
Excelitas Longlife Amalgam Lamp	5	15 lamps in 48,000 h	35 %	32 %

Operation hours												
0 h	4,000 h	8,000 h	12,000 h	16,000 h	20,000 h	24,000 h	28,000 h	32,000 h	36,000 h	40,000 h	44,000 h	48,000 h
Lamp change				■				■				■

Lamp type	Lamps/system	Quantity of lamps	Initial UVC efficiency	UVC efficiency @ end of life
Amalgam Lamp with conventional coating	6	24 lamps in 48,000 h	31 %	24 %

Operation hours												
0 h	4,000 h	8,000 h	12,000 h	16,000 h	20,000 h	24,000 h	28,000 h	32,000 h	36,000 h	40,000 h	44,000 h	48,000 h
Lamp change			■			■			■			■

Lamp type	Lamps/system	Quantity of lamps	Initial UVC efficiency	UVC efficiency @ end of life
Conventional Amalgam Lamp	10	60 lamps in 48,000 h	35 %	18 %

Operation hours												
0 h	4,000 h	8,000 h	12,000 h	16,000 h	20,000 h	24,000 h	28,000 h	32,000 h	36,000 h	40,000 h	44,000 h	48,000 h
Lamp change		■		■		■		■		■		■

Lamps contain mercury. Manage in accordance with local, state or federal disposal laws.

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