



UV Light for Ballast Water Treatment Medium Pressure Module from Heraeus Noblelight

Ballast water is taken onboard to trim vessel and aid steering when ships are running empty or carrying minimal cargo. This water will be admitted to ballast water tanks or the cavity between the walls of the vessel's side. Many undesired organism such as planktonic larvae, invertebrates and other species float in the ballast water tanks and get displaced into alien ecological systems. They clog flows, spread and become a major concern for oceanic habitats and people's environment worldwide. To maintain this environment ballast water treatment for ships will become mandatory by valid regulations of IMO (International Maritime Organization).

One of the approved treatment processes is the application of UV light at a radiation of 200-280nm. A low dose of UV light destroys the DNA of micro-organism cells and prevent them from reproducing. Heraeus Noblelight has developed a tailored UV-lamp module, that allows easy implementation in a UV ballast water treatment system.

The physical treatment with UV light offers several advantages:

- fast, efficient and economic technology
- simple to handle with low maintenance effort
- eco-friendly, safe and chemical free process
- no transport, storage and handling of dangerous goods
- no environmental impact

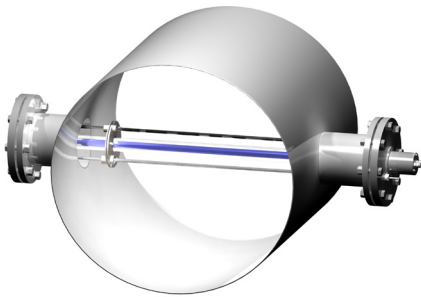
Medium Pressure Module

Heraeus Noblelight offers a complete module to install into a ballast water treatment system:

- perfectly matched module components: lamp, sleeve, power supply, wiper system (optional) and flange system
- adaption of existing products to standard flange systems
- compact design
- single and double ended medium pressure lamps
- module is easy to set up and exchange
- very flexible module, adaptable to the reactor in geometry and UV output

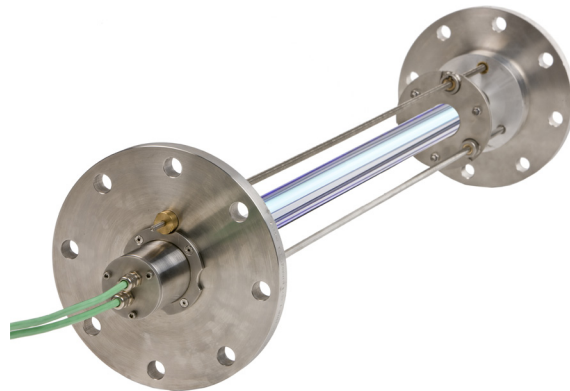
Installation information

Please contact us to get detailed installation instructions for your special treatment system.



Technical Data Standard MP Lamps for disinfection

Lamp type/technical data	Heraeus medium pressure
Spectrum	Polychromatic, effective spectral range 200-300 nm
Illuminated length (cm)	4-200
Wall temperature (°C)	600-900
Current (A)	5-25
Electrical power (W)	400-40,000
Specific electrical power (W/cm)	80-250
Specific UVC flux* (W/cm)	12-40
UVC efficiency @ 254 nm (%)	12-15
VUV efficiency @ 185 nm (%)	None
Influence of ambient temperature	Low
Lifetime (h)	1500-10000



Heraeus Noblelight - additional benefits

Heraeus Noblelight GmbH is one of the technology and market leaders in the development, production and application of UV lamps. As an original equipment supplier and partner of choice for many systems manufacturers Heraeus Noblelight is the driving force for UV lamps and modules for water, air and surface treatment.

Business partners of Heraeus Noblelight benefit also from the following advantages:

- knowledge and experience in UV technology
- consulting competence for UV system development
- innovative R&D department with high educated specialists
- application center and independent test laboratory

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