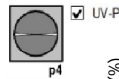
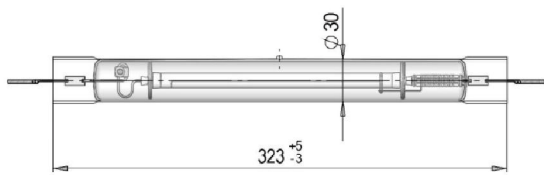


# HiLUX™ Gro AHS-DE1000W/Pro-Plus

High pressure sodium lamp for plant growth

Application	Efficient grow lighting for professional greenhouses and turf lighting.
Description	<ul style="list-style-type: none"> <li>• Spectral distribution optimized for photosynthesis efficiency</li> <li>• High red light ratio and blue output for healthy plant growth and robustness</li> <li>• Superior <math>\mu\text{mol}</math> output within the PAR spectral range (Photosynthesis Active Radiation)</li> <li>• High PAR maintenance over lifetime</li> <li>• Easy lamp change</li> </ul>

## 1. Specifications



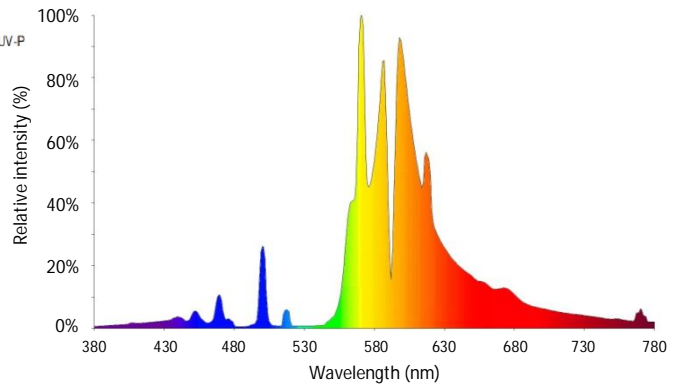
Designation	AHS-DE1000W/Pro-Plus
Part number	5002442
ILCOS-Code	ST-1000-E230/S-Litze-33,5/330

Lamp power	1 000 W
Lamp current	4,35 A
Lamp voltage	230 V
Ignition voltage	3,2 kV (peak to earth)

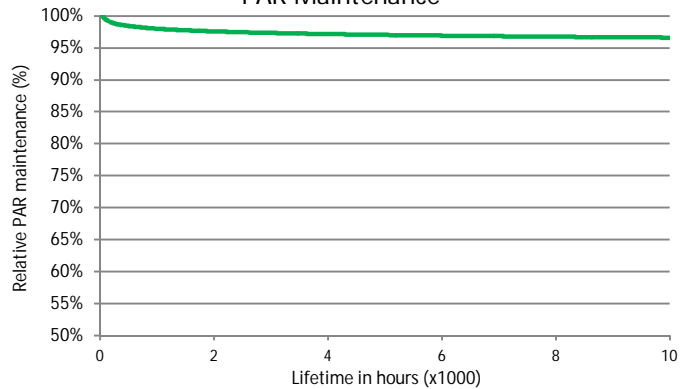
PAR	2 100 $\mu\text{mol}/\text{s}$
Service lifetime	10 000 h

Power supply (PS)	1000 W electronic / 100-150 kHz
PS output power	1 015 W
Base	cables for lamp holder K12x30S
Bulb contour	tubular
Bulb type	clear

Spectral distribution (per 5nm)

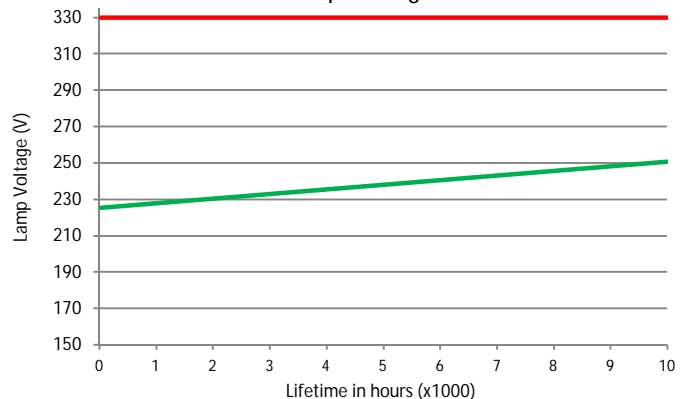


PAR Maintenance



— HiLUX Gro AHS-DE1000W/Pro-Plus (The trend line is based on tests under defined and stable laboratory conditions. Measurements are performed on naked lamps in a Ulbricht sphere with a Licor LI 190)

Lamp Voltage



— Electronic Control gear safety switch off  
 — HiLUX Gro AHS-DE1000W/Pro-Plus (The measurements are performed in a Ulbricht sphere with a Net frequency of 50Hz and a configured lamp power of 1000W)

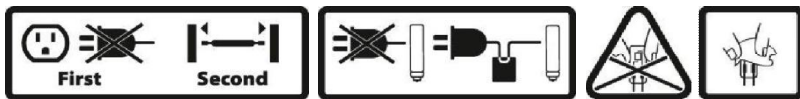
## 2. Safety instructions for the operation of lamps in luminaires



For the USA and Canada: ANSI type S\_/O for open rated luminaires according to ANSI C78.380 and C78.389

- Only operate the lamp in its designated operating position.
- Operating a lamp beyond its rated useful life is not recommended. The risk of a lamp burst increases with lamp age, temperature, improper operation and improper handling.
- Always use lamps in their intended luminaires, e.g. only in open luminaires as a closed luminaire will overheat the lamp.
- Do not use the lamp in close proximity of paper, cloth or other combustible material that can cause a fire hazard.
- Never touch the lamp when it is on, or soon after it has been turned off, as it is hot and will cause serious burns. Lamps should be allowed to cool down for a minimum of 10 minutes after the lamp is switched off.
- Do not look directly at the operating lamp for any period of time; this may cause serious eye injury.

## 3. Safety instructions for the installation



- The lamps must be installed by an expert and operated in accordance with the mounting specifications into fixtures intended for this type of lamp, along with the components intended and suitable for that purpose.
- Always turn off the electrical power before inserting, removing, or cleaning the lamp.
- Never bump, drop, apply excessive stress, or scratch the lamp. This could cause the lamp to burst! Do not operate any lamps with any traces of scratches, cracks, or physical damage.
- Affix the lamp securely in the socket. Improper installations will cause electrical arcing, overheating and short life to lamp and socket.

## 4. Safety instructions for maintenance and inspection

- Always turn off the electrical power before inserting, removing, or cleaning the lamp.
- It is recommended to replace the lamp at or before the end of its rated life. Group relamping is always recommended.
- Clean any dirt, oil, or lint away from the lamp with alcohol and a lint-free cloth or tissue. Dirt or other contaminants will affect light output and may cause the lamp to overheat and decrease lamp life.
- Electrical connections should be clean and in good condition. Replace lamp holders and sockets when needed.

## 5. Safety instructions for broken lamps



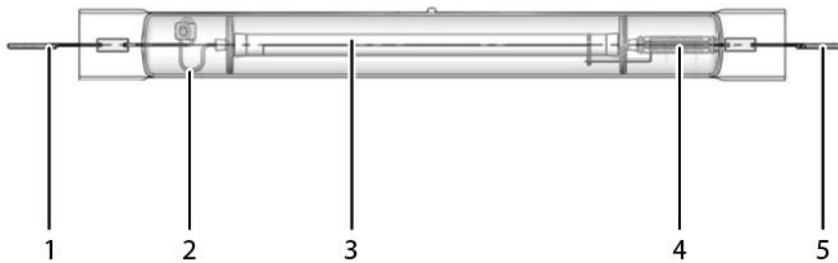
In case of broken ceramic burner, mercury can be released. Make sure in that case to properly ventilate the area and avoid contact with the substance. If the burner was cold when broken, Mercury can be recognized as small silver/black shining balls.

- Wear plastic gloves, catch the balls using a tissue paper and dispose responsibly.

- Wash your hands thoroughly after this process. It is very unlikely such small concentrations are harmful.

## 6. Installing the lamp

1. Wear protective gloves to avoid fingerprints.
2. Make sure that the lamp is correctly positioned:
  - The side of the lamp with the getter and the product stamp has to be inserted into the lamp holder where the ignition voltage is applied.
  - The side with the triple capacitor has to be inserted into the lamp holder connected to the neutral line of the PS.
  - The burner filament has to be on top facing the reflector.
3. Insert the lamp in the fixture.
4. Make sure that the lamp holders are correctly closed before operation.



- A PS (power supply)
- 1 Connection to the lamp holder where the ignition voltage is applied
- 2 Getter and product stamp on the outer bulb
- 3 Burner filament
- 4 Triple capacitor
- 5 Connection to the lamp holder connected to the neutral line of the PS

## 7. Usage and operation

- The lamp must be ignited at specified ignition voltage and operated at rated lamp power (+/- 3%).
- The electronic control gear needs to comply with the specifications set out in the datasheet. The lamp technically can dim, but is then excluded from warranty.
- The lamp must be operated with switching cycle intervals which are longer than 180 minutes