

OUTDOOR LIGHTING – RECESSED GROUND LUMINAIRE INSTALLATION LEAFLET

PLEASE READ THESE INSTRUCTIONS CAREFULLY BEFORE INSTALLATION

LEAVE A COPY FOR THE USER / MAINTENANCE ENGINEER FOR FUTURE REFERENCE











USING THIS INSTRUCTION LEAFLET

This instruction leaflet has been designed as a general installation guide to help you install your particular outdoor luminaire. Please pay particular attention to how your luminaire is wired. If you require any guidance or any further information regarding your outdoor luminaire, please contact us via the details below or visit our web site www.aurora.eu.com

IMPORTANT INSTALLATION INFORMATION

- Installation should be carried out in accordance with the latest edition of the I.E.E. Wiring Regulations (BS7671) and taking into consideration the latest Building Regulations. If in doubt, consult a qualified electrician.
- Before commencing any installation or maintenance work, ensure electricity is switched off at the mains.
- Please take note of the maximum rated voltage for your luminaire.
- Please take note of the IP (Ingress Protection) rating of your luminaire when deciding location.
- Always allow sufficient slack in the supply cable in order to remove the luminaire from its position for any future maintenance.
- Please take note of the maximum lamp wattage for your luminaire as detailed on the product label.
- Ensure that ALL electrical connections are tight with no loose strands, including factory made connections.
- Care must be taken for installations where the lens or bezel may come into contact with bare skin.
- All luminaires run HOT. It is the installer's responsibility to consider fire & safety risks and take appropriate precautions.
- Please take note of the nearest illuminated surface as detailed on the product label.

LABEL SYMBOLS EXAMPLES

-  Luminaire can be mounted on a normally flammable surface e.g. a material based on wood.
-  Luminaire can not be mounted on normally flammable surfaces.
-  Double insulated – does not require an earth connection.
-  Luminaire must be earthed.
-  Complies with Class 3 – SELV (Safety Extra Low Voltage) less than 50VAC.
-  Nearest illuminated surface in front of the luminaire.
-  Indicates a non-replaceable LED (Light Emitting Diode) lamp.
-  IP44 - Protected against splashing water.
-  IP65 – Protected against low pressure jets of water.
-  IP68 – Protected against submersion in water.

IMPORTANT USER INFORMATION

- Always switch off mains supply before installation, servicing, fitting or changing the lamp.
- Replace failed lamps immediately. Allow the lamp and fitting to cool before replacing lamp. Check that the correct lamp type and wattage is fitted. Dispose of failed lamps correctly.
- HID (High Intensity Discharge) lamps must not be touched by bare hands- use a cloth or glove.
- HID, LED and most Fluorescent luminaires are NOT dimmable. See brochure for further details.
- Replace any cracked protective glass immediately and use only original parts to do this.
- It is recommended to clean every two to three months to preserve the finish of this product. Do not use solvents or aggressive cleaning agents.

IP (Ingress Protection) RATING

FIRST DIGIT

Protection Against ingress of foreign bodies e.g. tool, dust, finger, etc

SECOND DIGIT

Protection against ingress of liquids i.e. IP44 is protection against solid objects greater than 1mm and water sprayed from all directions

Fig.1.

FOREIGN BODIES First Digit	LIQUIDS Second Digit	No Protection	0	1	2	3	4	5	6	7	8
Protection against solid objects greater than 50mm (e.g. accidental touch by hands)	Protection against vertically falling drops of water (e.g. condensation)	Protection against direct sprays of water up to 15 degrees from the vertical	Protection against solid objects greater than 2.5mm (e.g. tools and wires)	Protection against dust, limited ingress (e.g. no harmful deposits)	Protection against high pressure jets of water from all direction – limited ingress permitted	Protection against dust, limited ingress (e.g. no harmful small tools and wires)	Protection against water sprayed from all direction – limited ingress permitted	Protection against low pressure jets of water from all direction – limited ingress permitted	Protection against high pressure jets of water from all direction – limited ingress permitted	Protection against the effects of immersion between 15cm and 1m	Protection against long periods of immersion under pressure

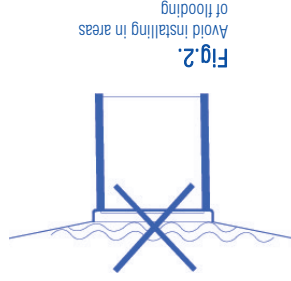


Fig.2.

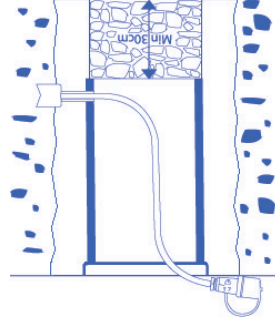


Fig.3.

Environmental Protection (W.L.E.) – Aurora's WEEE Reg.No. WEE/BG0130YX

Waste Electrical & Electronic Equipment Regulations (WEEE) requires that any of our products showing this marking (left) must not be disposed of with other household or commercial waste. Aurora does not levy any WEEE disposal charges to its customers for affected WEEE related products. To prevent possible harm to the environment or human health from uncontrolled waste disposal, please separate any such product from other waste types and recycle it responsibly at your local facilities. Check with your Local Authority, Recycling Centre or retailer for recycling advice. If, when you purchased any Aurora product, your supplier included a WEEE disposal fee, you should then contact your supplier for advice on his takeback of the product for the correct disposal.



GUARANTEE

This product is guaranteed in the UK for a period of 1 year from the date of purchase, unless otherwise stated in current company literature. The guarantee is invalid in the case of improper use, installation, tampering, removal of the Q.C. date label, installation in an improper working environment or installation not according to the current edition of the I.E.E. Wiring Regulations (BS7671). Should this product fail during the guarantee period, it will be replaced free of charge, subject to correct installation and return of the faulty unit. Aurora does not accept responsibility for any installation costs associated with the replacement of this product. Your statutory rights are not affected. Aurora reserves the right to alter specifications without prior notice.

GENERAL INSTALLATION - SAFETY

When positioning your luminaire, please take note that outdoor electrical installations should be installed by qualified electricians. Electrical equipment in the garden can be lethal if incorrectly installed or if inadequate provisions have been made in the event of an equipment fault. Water is the main threat. It can seep in through joints and gaskets; it can be drawn into electrical enclosures by capillary action; and it can penetrate ageing materials which corrode, crack or are damaged by wildlife, pets, children, careless gardening or just time. Water conducts electricity and as the ground is usually damp to some extent, the contact of human feet with the ground is all that is needed to provide a fatal route for electrical current. Proper circuit protection for all exterior electrical services should include a residual current device (RCD), also known as an earth leakage circuit breaker (ELCB). This simple device ensures that the power is cut off immediately; it detects a leakage of current to earth, which indicates an electrical fault which is potentially threatening to life. Observe these few simple rules and keep your outdoor electrical installation safe.

GENERAL INSTALLATION – LAYING CABLE

Laying electrical cables in the ground may be subject to specific regulations. The aim is to ensure that the cables are buried deeply enough in the ground to avoid any disturbance which is likely to occur. Where armoured cables can be buried at adequate depth to avoid being damaged by any reasonable foreseeable disturbance of the ground, they can be laid in a buffer layer of sand and covered with cable warning tape. Where it is not possible to bury the cables deeply enough because of the presence of tree roots or unsuitable ground conditions, extra mechanical protection around the cables will be required. This is usually in the form of plastic ducts or conduits through which the cables are run.

INSTALLATION - RECESSED GROUND – WALK AND DRIVE OVER LUMINAIRES

- When positioning your luminaire, please take note of:
 - The IP rating (See IP rating table Fig.1.)
 - Beware of existing water pipes and electric cables when preparing the site.
 - The drive over weight at specific speed for drive-over luminaires is normally: 2000kg at 30kph.
- Always switch off mains supply when installing or re-positioning your luminaire.
- When dismantling your luminaire, take note of the orientation and position of key components.
- Never install your luminaire in a dip in the ground or in an area of localised flooding. This is to avoid pooling of water over the top of the glass. (see Fig.2)
- All of our larger ground recessed luminaires come supplied with a mounting sleeve. When installing the mounting sleeve of the luminaire into the ground, always prepare a minimum of 30cm of gravel under the sleeve housing to allow for drainage (See Fig.3). Check that drainage is adequate by filling the sleeve with water and confirming that the water has completely drained in 30 minutes. To avoid any water damage to this luminaire, it may be necessary to add further drainage (e.g. a drainage tube).
- Secure the mounting sleeve into position using concrete or cement. Ensure sleeve is not distorted by the concrete or cement, it must remain round.
- Some smaller ground recessed luminaires can be installed into decking. First remove the plastic mounting sleeve and then remove the front bezel fixing screws. The body can now be fitted into an appropriate cut-out and fixed to the decking with fixing screws (not supplied).
- Always allow sufficient slack in the supply cable in order to remove the luminaire from its mounting sleeve or position for any future maintenance. It may be possible to use an IP68 connector (available from Aurora AU-CK01. See Fig.3).
- NOTE. Please refer to the wiring reference section for extra information on wiring your luminaire.
- Use 3-core 0.75mm² rubber insulated cable for connection (H05RN-F). NOTE some luminaires feature two cable glands for loop-in, loop-out wiring. If using only one entry gland, the other gland must be sealed from the environment.
- Always use an appropriate IP rated connector when connecting your luminaire to the mains supply. Supply connections are as follows:
 - LIVE – (Red or Brown) to terminal marked 'L'.
 - NEUTRAL – (Black or Blue) to terminal marked 'N'.
 - EARTH – (Green & Yellow) to terminal marked '⊕'.
- Install the required lamp. Confirm lamp type and maximum wattage on label of product.
- Check all seals and glass are intact and seated correctly. When securing the bezel back on top of the luminaire, tighten the first screw and then the opposite screw to distribute even pressure.

- If you have a submersible rated product (IP68), confirm that all cable entry points and bezels are sealed. Use extra silicon sealant around these points if required.
- Wipe clean surfaces, turn on mains supply and test luminaire.

WIRING REFERENCE SECTION

MAINS VOLTAGE WIRING REFERENCE

- Luminaires requiring mains voltage supply have either mains voltage lamps or an integral voltage controller (LED controller, HID ballast or low voltage transformer).
- Please follow the above wiring instruction.
- All mains voltage luminaires are wired in two different ways (see symbols on page 1 for reference):
 - EARTHED – Luminaires with an earth terminal must be connected to earth
 - DOUBLE INSULATED - Luminaires which are marked with the double insulated symbol do not require an earth connection.

LOW VOLTAGE WIRING REFERENCE

- Low voltage luminaires require a low voltage transformer to operate. IP68 transformers available from Aurora are: AU-IP68/60 - 60VA, AU-IP68/105 - 105VA, AU-IP68/50T - 50VA, AU-IP68/150T - 150VA and AU-IP68/300T - 300VA
- Some Low Voltage Luminaires already have a built in transformer and require a mains voltage connection. This can be confirmed by referencing the luminaire label, 240V - MR16 (mains voltage connection but a Low Voltage lamp).

HIGH INTENSITY DISCHARGE (HID) WIRING REFERENCE

- HID luminaires require a HID ballast to operate. You must use the correctly rated ballast for the lamp wattage.
- Some luminaires which use HID lamps already have integral HID ballasts – refer to brochure.
- Replace failed lamps immediately. Replacing lamps, prior to failure, should be carried out on a “planned maintenance” basis (with reference to the approx. lamp life of the lamps used) in order to prevent possible damage to the control gear. Ensure that the replacement lamps are of the same type, wattage and size.
- Please note: HID lamps have a warm-up/re-strike time <5minutes. Therefore these should be used in conjunction with other luminaires that will provide sufficient lighting until the metal-halides reach their full brightness.

FLUORESCENT WIRING REFERENCE

- Fluorescent luminaires require a ballast to operate. You must use the correctly rated ballast for the lamp wattage.
- Some luminaires which use fluorescent lamps already have integral ballasts – refer to brochure
- Replace failed lamps immediately. Replacing lamps, prior to failure, should be carried out on a “planned maintenance” basis (with reference to the approx. lamp life of the lamps used) in order to prevent possible damage to the control gear. Ensure that the replacement lamps are of the same type, wattage and size.

LED WIRING REFERENCE

- Mains Voltage LED Luminaires
 - Confirm your LED luminaire is mains voltage driven by reading the label on the product '240V'
 - Wire your product as detailed above in the installation instructions.
- Constant Current LED Luminaires
 - Confirm your LED luminaire is Constant Current driven by reading the label on the product '350mA'.
 - These luminaires require a Constant Current LED Controller AU-LED09T or AU-LED09IP (sold separately).
 - This controller has a single 350mA Output – Constant Current LED luminaires MUST be wired in SERIES. Correct polarity must be observed in order for the LED luminaire to operate.
 - Please see Constant Current LED Controller instructions for further details.
- Constant Voltage LED Luminaires
 - Confirm your LED luminaire is Constant Voltage driven by reading the label on the product '12VDC'.
 - These luminaires require a Constant Voltage LED Controller AU-LED16T or AU-LED16IP (sold separately).
 - This controller has multiple 12V DC Outputs – Constant Voltage LED luminaires MUST be wired in PARALLEL. Correct polarity must be observed in order for the LED luminaire to operate. Please see Constant Voltage LED Controller instructions for further details.