



PLANET
LIGHTING



MEDICAL LIGHTING
INSTALLATION MANUAL

ULED & ULEDPlus
EXAMINATION LIGHT

1.0 INTRODUCTION

Please read this manual carefully before proceeding to correctly install the Product, so as to protect “the Service Personnel” and “the Operator” from any injury. The manual contains the drawings relating to each installation task.

This appliance is a Class 1 Medical Device pursuant to AS/NZ standards 3200-2-41 (IEC 60601-2-41) as amended and integrated and certifies such conformity by affixing the SAA marking.

CONFORMITY

The manufacturer declares that this Product is in compliance with AS/NZ Standards 3200-2-41 (IEC 60601-2-41) as amended and integrated and certifies such conformity by affixing the SAA marking.

VALIDITY OF MANUAL

This installation manual is valid for the following models:

- ULED - wall and extended wall mount
- ULED - ceiling mount
- ULED - twin: please refer supplementary

CUSTOMER SERVICE

The Planet Lighting after-sales service is at your disposal for any further details you might require regarding the Product, its packaging, its transport and its installation and for any requests for technical and electrical diagrams:

Planet Lighting
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Bellingen NSW
2454
Australia
Ph: +61 2 6659 5600
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TRANSLATIONS


The original language of this manual is English. For all other translations, reference must be made to the original manual

1.1 GLOSSARY OF TERMS

TERM	DEFINITION
PRODUCT	THE EM (Electro-Medical) EQUIPMENT to which this manual refers is the Planet Model ‘ULED’ examination/Minor procedure light. For ease of description, in this manual this EM EQUIPMENT will be called “Product”.
OPERATOR	Person handling the equipment (e.g., professional health personnel, nonexpert person assisting the patient).
RESPONSIBLE ORGANIZATION	Entity accountable for the use and maintenance of an EM equipment or an EM system (e.g., a hospital, an individual doctor or a non-expert person). Preparation and training are included in use.

TERM	DEFINITION
SERVICE PERSONNEL	<p>Individuals or entities accountable to the responsible organisation that installs, assembles, maintains or repairs the equipment. In certain circumstances, the safety of such persons depends on their knowledge and training and ability to take appropriate precautions when gaining access to hazardous parts of The Product assembly. By way of example only, the following professional figures are deemed as SERVICE PERSONNEL:</p> <p>Construction Engineer, Draftsman, Building firm duly registered in the professional Register, (for the building works)</p> <p>Electrical Engineer, or other Electro-technical expert qualified to work as an electrician (for the electrical works)</p> <p>For the installation phase, as regards assembly operations only, a qualified person is deemed whosoever has attended a course organised by Planet Lighting or, alternatively, whosoever has carefully read the manual.</p>

1.2 WARNINGS AND SAFETY NOTICES

WARNING	This manual is an integral part of the Product as indicated by AS/NZ standards 3200-2-41 (IEC 60601-2-41 and subsequent amendments and supplements. Read and keep this manual close to the Product.
WARNING	The Product is not suitable for use in premises where explosion risks exist. The Product is not suitable for use wherever there are inflammable mixes of anaesthetics with air, oxygen or nitrous oxide N ₂ O.
WARNING	Planet Lighting disclaims all liability for any injury to persons or damage to things caused by the Product having been installed by persons who are not “SERVICE PERSONNEL”.
WARNING	The RESPONSIBLE ORGANIZATION is entirely responsible for Product installation activities; no costs or responsibilities relating to the installation and/or commissioning of the Product may therefore be traced back and/or in any case attributed to Planet Lighting.
WARNING	The ceiling or wall masonry works for Products to be installed on ceilings or walls, and the electrical works for supplying power to the Product shall be carried out in a workmanlike manner by SERVICE PERSONNEL to ensure these are sturdy and safe.
WARNING	<p>The electrical system in the premises must conform to the applicable local standards, and any national regulations. A master switch must be installed with fuse or thermal magnetic circuit breaker to be able to interrupt power to the Product.</p> <div>  <div> DANGER – Electric shock risk </div> </div> <p>To avoid any risk of electric shocks, the Product must only be connected to mains supplies with earth protection.</p>

2.0 GENERAL INFORMATION

This installation manual describes how to install, maintain and operate the Planet Model “ULED” Examination/Minor procedure light (referred to throughout this document as the ‘Product’). Prior to installation carefully read through all the instructions enclosed in this manual.

The Product complies with AS/NZ Standards 3200-2-41 (IEC 60601-2-41)

2.1 PRODUCT DEFINITION

The Product is a state of the art Minor procedure/Examination light which utilises cutting-edge Solid State Lighting technology. Designed and manufactured in Australia by Planet Lighting (established 1911) an R&D driven, exporting designer and manufacturer with over 10 years experience in the design, manufacture and supply of Solid State Lighting devices worldwide.

The Product provides an improved working environment, significantly reducing ongoing maintenance, with low operational costs and offers a “greener” alternative to similar products.

The Product allows the accurate positioning of the lamp head above any work surface. It is designed to be mounted on a wall or ceiling and be pulled down from above when required, remaining there until repositioned.

At Planet we take great pride in the design and production of our lights and we are sure you will derive satisfaction from owning and using our products. When installed and maintained in accordance with the instructions contained in this service manual, this product will provide many years of trouble-free operation.

Should you have any enquiry, comment or special lighting need we would like to hear from you. We back our products with pride, service and a five year warranty.

2.2 OPERATOR QUALIFICATION

The following qualification requirements are based on the definitions given under the ‘Glossary of Terms ‘ section on page 1. The qualification requirements for various tasks relating to the Product are as follows :

Installation:	SERVICE PERSONNEL
Use:	OPERATOR
Cleaning:	OPERATOR
Routine maintenance:	SERVICE PERSONNEL
Special maintenance:	SERVICE PERSONNEL
Disposal:	RESPONSIBLE ORGANISATION and SERVICE PERSONNEL

2.3 ENVIRONMENTAL CONSIDERATIONS

2.3.1 PACKAGING

Cardboard boxes containing Product. Dispose of these in compliance with national directives applicable for waste disposal.

2.3.2 TRANSPORT

Product transport is done by land, sea or air according to the following characteristics:

Temperature (°C): -15 / +60

Humidity: 10 / 75 %

Atmospheric pressure (hPa): 500 / 1060

2.3.3 STORAGE

The packaged Product must be stored (warehoused) in dry premises having the following characteristics:

Temperature (°C): -15 / +60

Humidity: 10 / 75 %

Atmospheric pressure (hPa): 500 / 1060

2.3.4 PLACE OF INSTALLATION

The premises where the product is started up must have the following characteristics:

Temperature (°C): +10 / +40

Humidity: 30 / 75 %



2.3 RECYCLING

Design of the Product takes into account the materials used in the manufacture of components. This is to ensure when it reaches its end-of-life, the disposal method with the lowest or least negative impact, on human health and the environment is selected.


Unlike the sources of traditional light, LED’s do not contain mercury, toxic gases, filaments or fragile parts. Due to the fixture being over 95% recyclable and there being no Bulbs/Globe changing during the Product life of 50,000+ hours, your environmental footprint will be significantly reduced.





When your Product reaches the end of its life, contact Planet lighting or our local agents to learn about recycling options. The Product light must be disposed of properly according to local laws and, regulations.

2.4 GRAPHIC SIGNS AND SYMBOLS USED IN THE INSTALLATION MANUAL

The following safety measures must be put in place during Product installation, use and servicing.




To emphasize their importance, a number of safety precautions are repeated throughout the manual. Follow the safety precautions before using or repairing the Product. Carefully abiding by the safety precautions improves the ability to use the Product safely and correctly and helps prevent incorrect maintenance which could be hazardous and cause damage. The safety measures are approximate and not exhaustive; the Operator, the Responsible Organization and the Service Personnel must develop their capacities to upgrade and integrate them.

Indications such as DANGER, WARNING and CAUTION, preceded by the symbol  indicate the level of risk to which the SERVICE PERSONNEL, the RESPONSIBLE ORGANIZATION and the PRODUCT could be exposed.

-  DANGER: indicates an immediately hazardous situation which could result in death or serious injuries.
-  WARNING: indicates a potentially hazardous situation that could result in death or serious injuries.
-  CAUTION: indicates a potentially hazardous situation which could result in moderate or light injuries and Product damage.
-  This triangular symbol together with the explanation alongside (shown above) indicates the type of hazard to be dealt with.





2.5 GRAPHIC SYMBOLS USED ON PACKAGING

The following table lists the common symbols used by planet lighting on our packaging.

DESIGNATION	SYMBOL	DESCRIPTION
THIS SIDE UP		Package must always be transported, handled and stored with the arrows always pointing upwards.
FRAGILE		The cargo is easily broken or damaged. Cargoes marked with this symbol should be handled carefully and should never be tipped over or slung.
TWO PERSON LIFT		Cargo with this symbol weighs in excess of 20kg. For personal safety these items should only be lifted mechanically, or by two or more people.

2.6 GRAPHIC SYMBOLS USED ON THE PRODUCT

Below are the symbols to be found on the Product:

DESIGNATION	SYMBOL	DESCRIPTION
POSITIVE	+VE	Connect positive wire here
NEGATIVE	-VE	Connect negative wire here.
ACTIVE/LIVE	L	Connect active/live wire here
NEUTRAL	N	Connect neutral wire here
EARTH		Connect earth wire here
DATE OF MANUFACTURE		Date of manufacture (Month/Year)
MANUFACTURER		Manufacturers address
READ OPERATING MANUAL		Compulsory to read the operating manual

2.7 WARRANTY AND LIABILITIES

Planet Lighting disclaims all liability with regard to unreliable Product operation in the following cases:

Installation, authorised modifications and repairs have not been performed by SERVICE PERSONNEL

The Product has not been used for its intended purpose and in conformity with the operating instructions (see operation manual).

The premises have not been approved for healthcare activities

The premises are not built in conformity with the law and applicable regulations

The electrical system in the premises is not in compliance with appropriate requirements

2.8 STRUCTURAL CHANGES OR VARIATIONS

No arbitrary structural changes or variations to the Product are admitted. Any modifications must have the prior written authorisation of Planet Lighting. In case of the Product having been tampered with, the warranty shall be invalidated and the manufacturer disclaims all liability for any injuries or damage caused to the OPERATOR, the RESPONSIBLE ORGANISATION and the SERVICE PERSONNEL.



3.0 PLANNING

3.1 PREPARING THE PREMISES STRUCTURALLY



WARNING – SAFE BUILDING WORKS

The masonry works for preparing the ceiling to install the Product must be sturdy and safe and completed in a workmanlike manner, according to applicable building regulations.

By way of example only, the professional persons charged with completing the building works could be: Construction Engineer, Structural engineer, or a Builder, duly registered in the respective professional register.



DANGER – WRONG WALL PERFORATION

In case of wrong perforation of the Product supporting wall (e.g., the breakage of a reinforced-concrete ceiling/wall iron) always inform the building manager as this could affect the stability of the building.



WARNING – CEILING AND WALL STRUCTURAL CAPACITY

Following are the structural loadings and approx product weights. The listed weights and loads are static only, and as such do not include any dynamic loads or externally applied loads such as operator handling. For similar detail, you may also refer to Fig. 8.

Structural load - Ceiling Mounted

Total Mass - structural ceiling fitting only: 10.6kg

Mass - arm only: 6.3kg

Torque (at mounting plate): 63Nm

Structural capacity requirements - Wall Mounted

Total Mass - structural ceiling fitting only: 10.22kg

Mass - arm only: 6.3kg

Torque (at mounting plate): 69Nm

The Product installation premises must conform to local building standards.

After making sure the premises used for medical purposes are in conformity with the above requirements, proceed to mechanically anchor the ceiling and wall plate, assessing the type of building and making all consequent adaptations.

THE SERVICE PERSONNEL have all technical, civil and legal responsibilities relating to correctly and suitably performing Product anchoring and installation operations in an adequate manner.



3.2 CORRECTLY WIRING UP THE PREMISES



DANGER – SAFE WIRING INSTALLATIONS

The premises used for medical purposes must be safely wired up in a workmanlike manner by SERVICE PERSONNEL to power the Product.



DANGER – ELECTRICAL ENVIRONMENT IN COMPLIANCE WITH THE LAW

Before installing the Product, the SERVICE PERSONNEL must make sure the following conditions exist:

The wiring system of the environment (premises) in which installation is made must conform with regulations for premises used for medical purposes and with applicable national laws and/or regulations.

The electrical system must have a certificate of conformity issued by whosoever installed it.

The earth system must be certified as required by applicable regulations.

4.0 INSTALLATION

The Planet Model ULED arm is designed to be mounted above the immediate work area. Standard mounting fixtures for Planet Model ULED are: Ceiling Mount & Wall Mount (specialised mountings are available on application). In all cases the suggested mounting height (measured at swivel head) is two metres from floor level. (refer Fig. 1)

To ensure correct balance of the Model ULED movement the lamp must be mounted with the stem, around which it rotates, vertical at all times. (refer Fig. 1)

Figure 2 refers to wall mount options, Figure 3 refers to ceiling mount options, Figures 4 - 6 refer to maintenance procedures.



WARNING

The qualified electrician who is responsible for the installation of the ULED must include an isolation switch(all -pole disconnection) in the fixed wiring of the ULED and a cable tie near the terminal block of the primary(240V) wiring (Phase and Neutral) to secure the cables.

5.0 WALL MOUNT



WARNING

Ensure before commencing the installation, that the MAINS power circuit is isolated (off).


CHECK AND ENSURE THE FOLLOWING BEFORE COMMENCING INSTALLATION:

1. You have the appropriate mounting template.
2. You have appropriate tools for the job.
3. Confirmed mains cable entry is located appropriately.
4. The mounting structure is suitable.
5. The structural loadings and approx product weights (refer Fig. 8)
6. You have appropriate fixing attachments. e.g. Dyna bolts, large screws

5.1.0 Using appropriate wall template mark mounting holes and mains cable entry. Make sure the bottom of the template wall mount is 2000mm from the floor to maintain 2000mm clearance at the bottom of the swivel. (ref Fig. 1)

5.2.0 Drill 4 mounting holes as shown on template.




 **WARNING** Take care to remove any dust during the drilling and make sure not to damage any existing cabling.

- 5.3.0 Remove cover from the wall mount (ref Fig. 2) ①, feed mains cable through the larger bottom hole ②, place correct wall mount into position and attach to wall using appropriate fixings ③.

5.4 ELECTRICAL CONNECTIONS


- 5.4.1 Connect mains cable to appropriate locations on terminal block (L and N) (ref Fig. 2) ④
- 5.4.2 Connect the Earth (yellow/Green) cable to the Earth Lug (ref Fig. 2) ⑤
- 5.4.3 Attach fitting to wall mount: Connect wall mount plug to the socket in the swivel boss ⑥; then insert the swivel boss into the wall bracket tube ⑦; and fix into position with the locking screw ⑧

 **WARNING** Replace cover ensuring the cables do not get caught/pinched and attach with the screws located at the bottom and top ① (ref Fig. 2)

6.0 FINAL INSPECTION


- 6.1.0 The mount is firm, has no movement and is level (ref Fig. 1)
- 6.2.0 The light head moves through its full range of movements
- 6.3.0 The assembly of light and mount is clean and free of any marks
- 6.4.0 Energise circuit and test the light fixture for normal operation, that is the green led on the bottom of the power

7.0 CEILING MOUNT

 **WARNING** Ensure that before commencing the installation, the MAINS power circuit is isolated (off)

CHECK AND ENSURE THE FOLLOWING BEFORE COMMENCING INSTALLATION:

1. You have the appropriate mounting template
2. You have appropriate tools for the job
3. Confirm mains cable entry is located appropriately
4. The mounting structure is suitable
5. The structural loadings and approx product weights (refer Fig. 7)
6. You have appropriate fixing attachments. e.g. Dyna bolts, large screws

 **WARNING** Take care to remove any dust during the drilling and make sure not to damage any existing cabling.

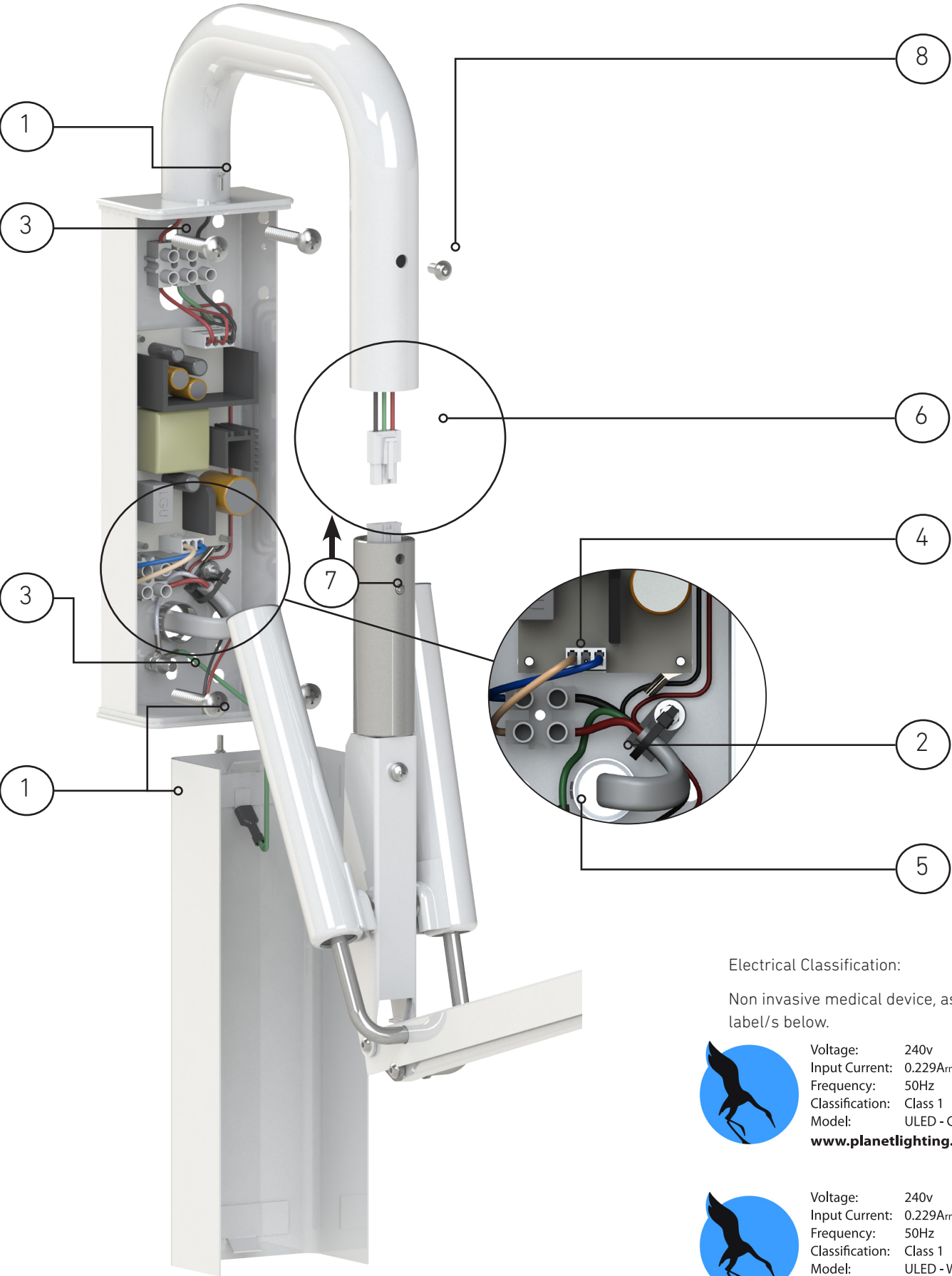
RETRO MODELS AND EXISTING CEILING MOUNTS ONLY (SEE FIG 4)

IF your existing ceiling tube ① has a swivel boss see Fig 4 ①⑦, then please remove swivel boss locking screw ①③ and slide out and discard the swivel boss, and locking screw from the old ceiling tube. Use existing wires in the ceiling tube to pull through the new wiring loom supplied in plastic bag ①⑧. After running the new wire loom,

- 7.1.0 Take ceiling mount ① and, using template if required, mark holes, drill and attach mount to surface making sure to use appropriate fixings, ② take care and feed 240V mains cables through entry hole if applicable ③.
- 7.2.0 Remove from the packaging the box containing the electronic power supply and ceiling cover. Take the Electronic power supply mounted on the tray and clamp to the Ceiling mount ④.



FIG. 2



Electrical Classification:

Non invasive medical device, as per label/s below.



Voltage: 240v
Input Current: 0.229Arms
Frequency: 50Hz
Classification: Class 1
Model: ULED - Ceiling
www.planetlighting.com



Voltage: 240v
Input Current: 0.229Arms
Frequency: 50Hz
Classification: Class 1
Model: ULED - Wall
www.planetlighting.com



7.3 ELECTRICAL CONNECTIONS

- 7.3.1 Connect 240V mains cables to appropriate locations on terminal block L and N ⑤.
- 7.3.2 Connect the Earth (yellow/Green) cable to the Earth Lug on ceiling mount ⑥.
- 7.3.3 Connect 24V cables (located in Ceiling tube) to secondary side of Electronic power supply terminal block (red to red, Black to Black) ⑦.
- 7.3.4 Remove Ceiling cover from the packaging ⑮ carefully slide the cover up the ceiling tube, and connect the LED power indicator ⑧ plug to the matching connector coming from the electronic power supply. Continue to slide the ceiling cover up over the electronic power supply and associated wiring making sure the cover is pushed up against the ceiling. Tighten the two locking screws on the collar ⑨ to secure the ceiling cover. ⑮
- 7.3.5 Remove the Light and arm from the packaging, remove the swivel boss locking screw ⑬. Connect the two electrical plugs together ⑪ and carefully slide the swivel boss up into the ceiling tube ⑫. Locate/line up the fixing hole ⑬. Tighten the locking screw securely.

8.0 FINAL INSPECTION, PLEASE ENSURE


- 8.1.0 The ceiling mount is firm and has no movement
- 8.2.0 The light head moves through its full range of movements
- 8.3.0 The assembly of light and mount is clean and free of any marks
- 8.4.0 Energise circuit and test the light fixture for normal operation, that is the green LEDs on the power supply cover ⑭ are working, and the switch on the light head is working (refer Fig. 5)

9.0 OPERATING INSTRUCTIONS

9.1 GENERAL OPERATION

The general operation sequence is as follows:

1. Switch light on
2. Adjust dimming as required
3. Using the handle, position the head of the fitting and direct the light at the target location
4. Perform task
5. Reposition for other tasks if required
6. Turn light off after use

 **WARNING:** DO NOT direct the lighting beam into your eyes or another person's eyes during operation. Looking directly into this light may cause permanent eye damage.

9.1.1 SWITCH AND DIMMING OPERATION

The Products lighting functions are controlled via the use of the membrane switch located on the head of the fitting. The controls (shown below) offer a simple on/off switch and an additional up/down dimming control. The dimming control allows the user to set the brightness level of all LED's in the head together.

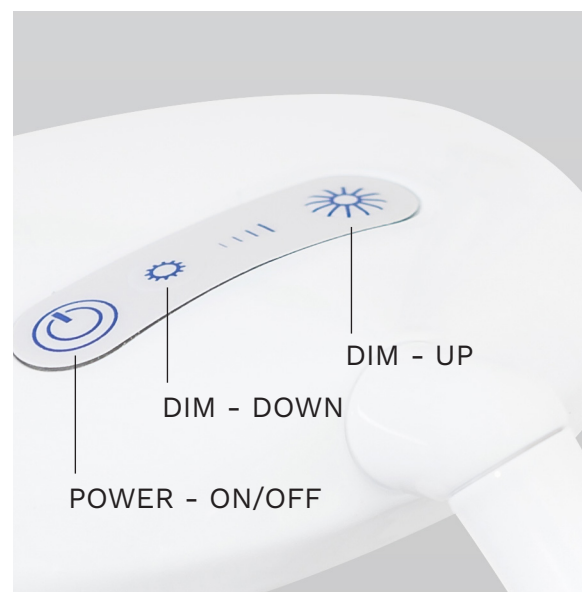
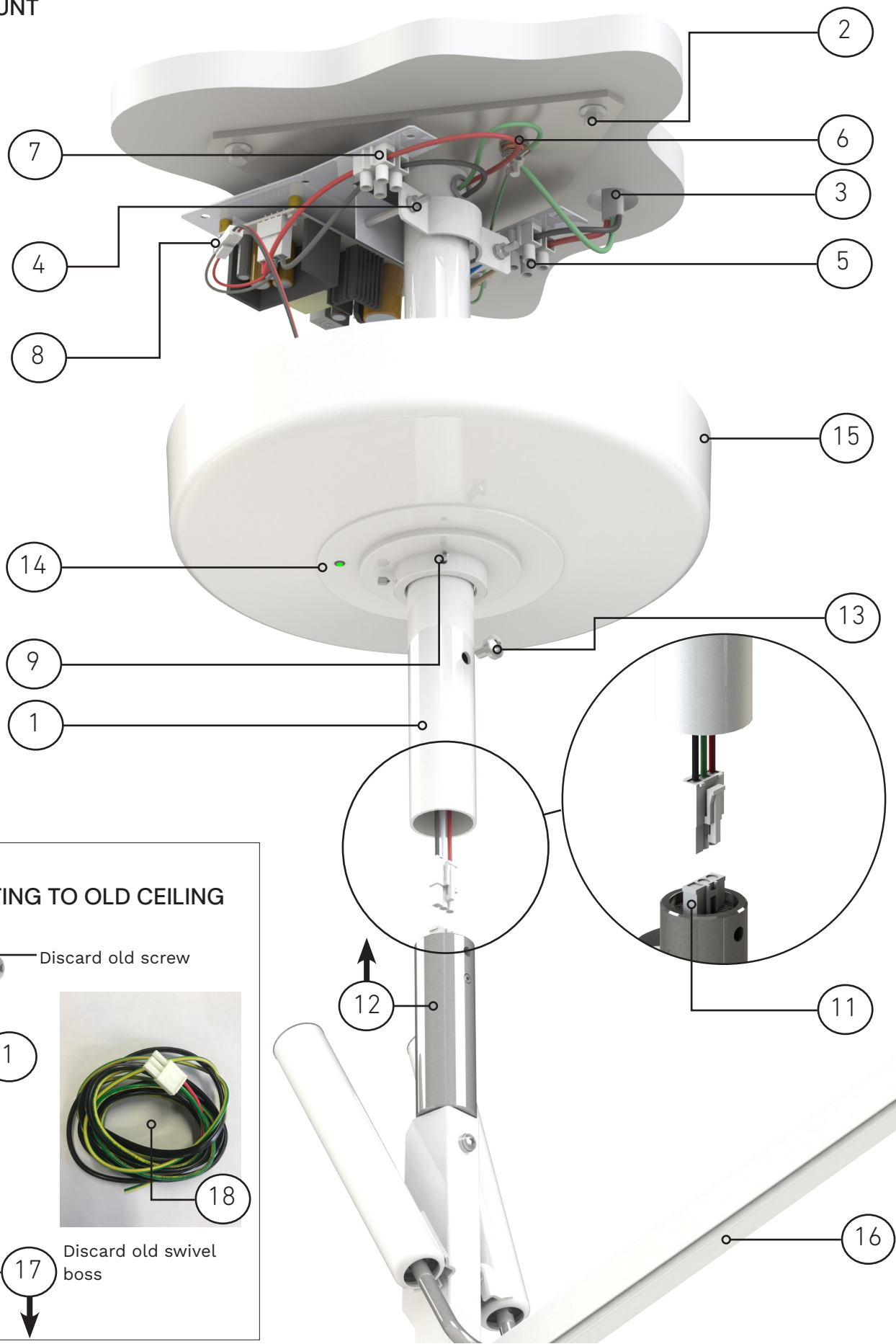



FIG. 3
CEILING MOUNT



10.0 MAINTENANCE

 **WARNING** Only appropriately qualified personnel should carry out maintenance on Planet light fixtures.

MAINTENANCE TASKS SCHEDULE

TASK	DESCRIPTION	FREQUENCY
Clean/disinfect Product	Using a suitable disinfectant, wipe down all exterior surfaces of the fitting.	As per site specific requirements
Lubricate arm	Lubricate the arm at 3 points as described in 10.3 and shown in Fig. 5	Once per year or as required
Adjust balance and friction	Adjust the spring tension and friction settings as per instructions in 10.5, 10.6 and Fig. 7	Only as required


Planet Lighting recommend that if there is a technical fault with one of our ULED lights, the product is returned to our factory to be repaired. If a qualified technician is available to repair the fixture, circuit diagrams, parts lists, and descriptions will be made available to assist in this process.

The following maintenance procedures, performed as required, should ensure your Product provides many years of effective service.

10.0.1 MAINTENANCE TASKS SCHEDULE


Observe the periodic maintenance tasks presented in the table above which are recommended for both the Wall, and Ceiling mounted Products.

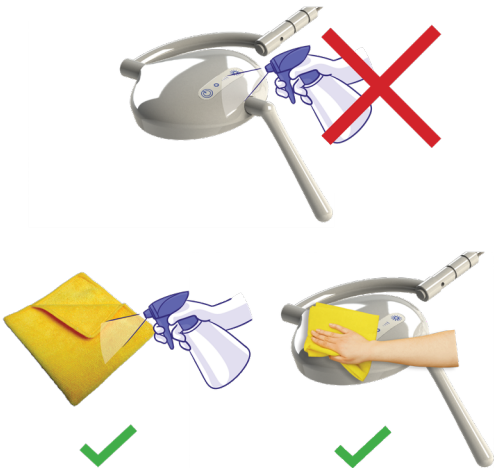
10.1 CLEANING

 **WARNING:** Turn off the light and allow the Product to cool before commencing any cleaning.


Please use the following procedures and precautions during the cleaning process:

- Let the light cool down. Only disinfect and clean the light and body (including any cables) when it is cold.
- Make sure that excess water/cleaning agent has been removed from cleaning cloth before commencing.
- Use a damp cloth. DO NOT use a wet cloth.
- Use alcohol/detergent having medium alkaline level but no active chlorine.

 **WARNING:** Do not use abrasive products, petrol, paint thinners, alkaline detergent, acidic cleaning agents or aldehydes. Make sure the proportions of the detergents/ cleaning agents are accurate based on manufacturers instructions.



10.2 STERILISE HANDLE

 **WARNING:** Ensure you observe sterilisation procedure and policy as per the Responsible Organisation.

1. Remove the handle from the fitting
2. Sterilise or autoclave
3. Once handle is sterilised, re-attach the handle to the light fitting

10.3 HEAD REMOVAL (Refer Fig. 6)

In the unlikely event that one or more of the LED's should fail, the light head has been designed to be removed without tools for return to Planet lighting for prompt service. Our LED light head does not contain user serviceable parts.

10.4 LUBRICATION (Refer Fig. 5)

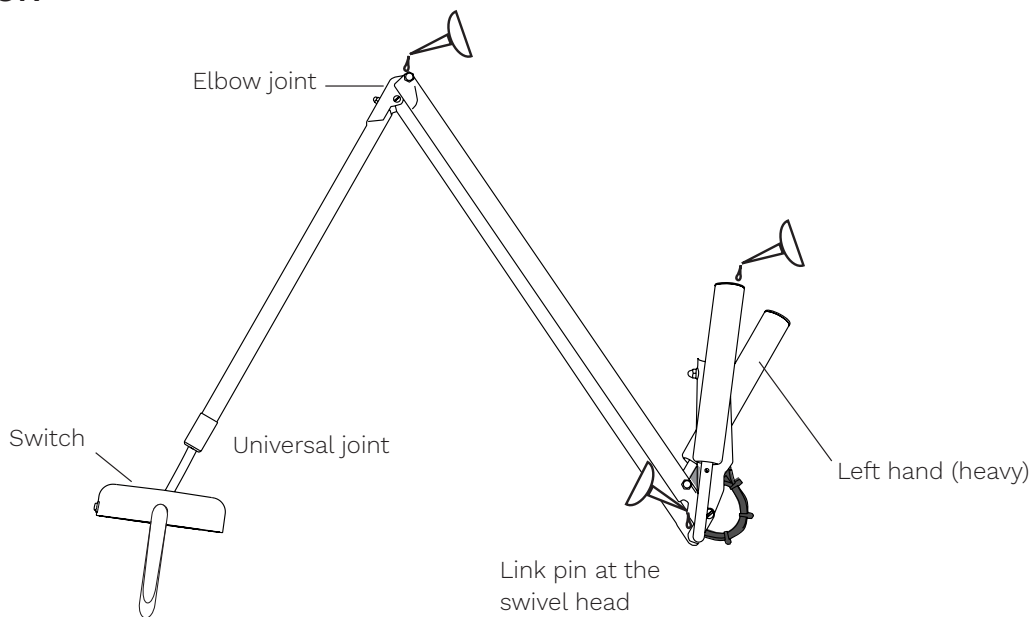
To prevent undue stiffness or joint seizure the springs of the Planet Model ULED have been pre-packed with high quality grease. The pivoting mechanisms at the main elbow joint and the link pin at the swivel head should receive regular light oiling.

10.5 LOCK NUT ADJUSTMENT (Refer Fig. 7)

Fine adjustment of the frictional inertia of the lamp movement is provided by tensioning the small lock nut on the link pin at the base of the swivel head. This nut should be tensioned so that the lamp firmly retains its position when adjusted but can be freely re-positioned under the pressure of one finger at the elbow joint. Do not attempt to correct an unbalanced movement by over-tightening this nut. (refer Fig. 7)

FIG. 5

ULED LUBRICATION



WARNING Under no circumstances should the spring tension nuts (two) be completely undone. (Refer fig. 7)

10.6 SPRING TENSIONING (Refer Fig. 7)

After extended use the main balance springs of the Model ULED arm may require tension adjustment (generally the spring on your left hand side when facing the lamp).

This may be done by carefully prising the plastic cap off the end of the spring tube to permit access to tensioning nuts. Nuts should be tightened in small increments using a 15mm hexagon tube spanner until the lamp assumes correct balance.

Do not over tighten tension springs.

11.0 TROUBLESHOOTING

The following troubleshooting guide points may help you resolve unexpected behaviour of the Product. Do NOT attempt to modify the Product or continue to use a malfunctioning product. Contact the manufacturer or your supplier.

The following troubleshooting guide points may help you resolve unexpected behaviour of the Product. Do NOT attempt to modify the Product or continue to use a malfunctioning product. Contact the manufacturer or your supplier.

FIG. 8

STRUCTURAL LOADINGS / APPROXIMATE WEIGHTS

Static weights of complete fixture (Mount, Arm and Light Head)

Wall Mount: - 5.5kg

Ceiling Mount: - 6.0kg

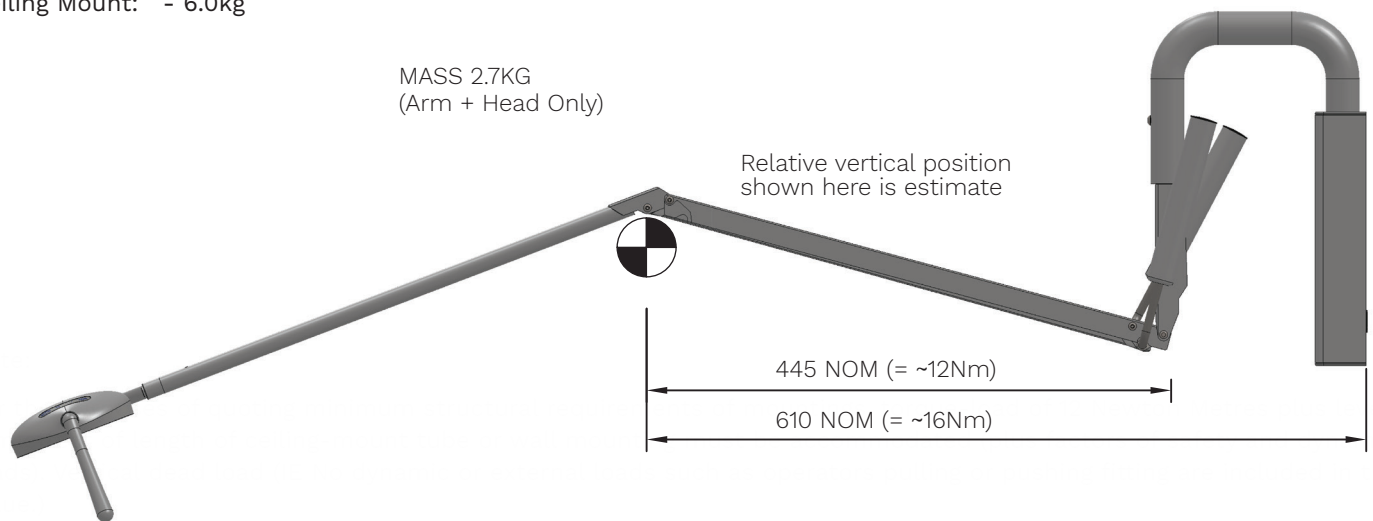


FIG. 6
HEAD REMOVAL

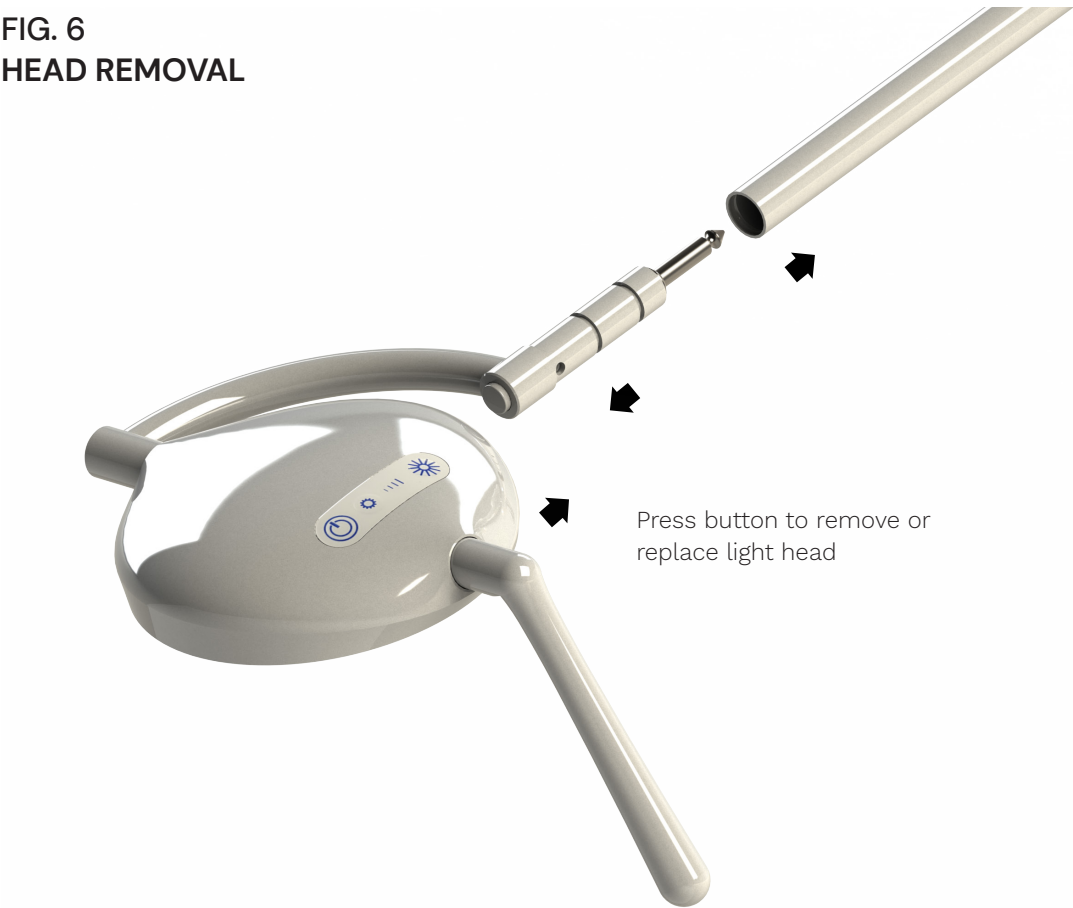
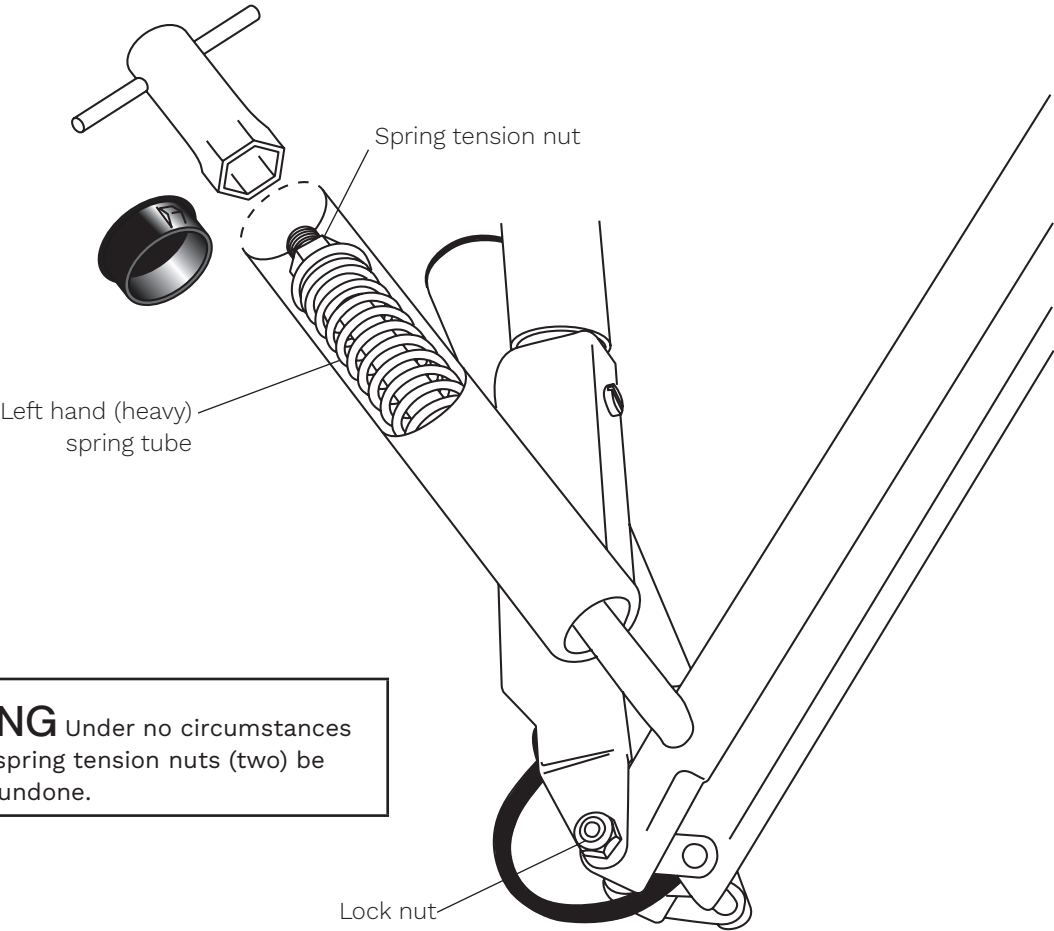



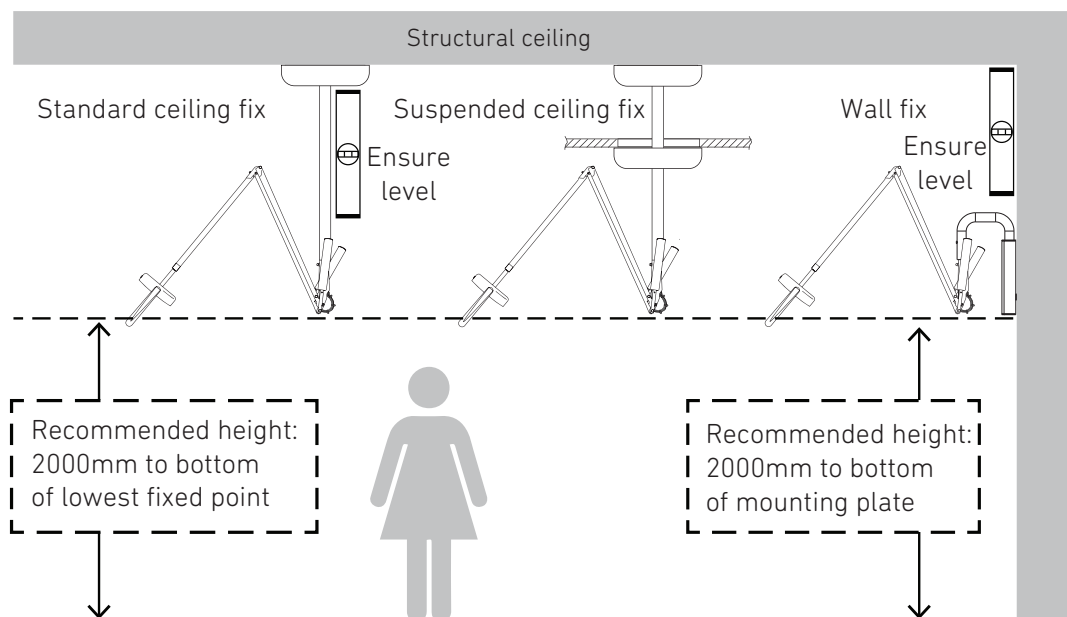
FIG. 7
LOCK NUT



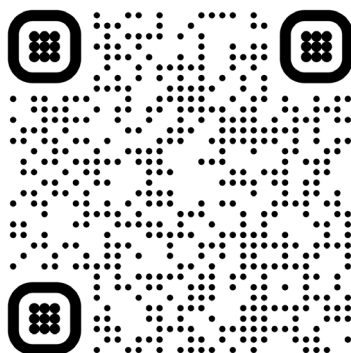


WARNING Under no circumstances should the spring tension nuts (two) be completely undone.

FIG. 1
MOUNTING HEIGHT RECOMMENDATIONS



Ceiling mount assembly video



END OF DOCUMENT

Made in Australia Exported to the World

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Phone + 61 (0)2 6659 5600
sales@planetlighting.com
www.planetlighting.com

