

# DARAY<sup>®</sup>

## Medical



# SL250

## INSTALLATION AND OPERATING MANUAL FOR CEILING MOUNTED MODELS

GAM.SL250C.1112.6



# DARAY<sup>®</sup>

## Medical

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## 1. GENERAL DESCRIPTION

The Daray Illumin8 SL250 is a powerful minor-surgery light which is available in wall or ceiling-mount versions.

The SL250 is for use during minor procedures, although it is also suitable for some major work. Each of the light heads uses a sophisticated reflector to produce a 'clean' light patch with virtually no heat in the beam. A filter in each head enhances the reflector's performance to bring the light output colour closer to that of natural daylight to ensure the colour of flesh tones is not distorted. A polycarbonate diffuser gives good shadow reduction whilst protecting the light head's components.

Overall, the light head cluster gives outstanding shadow reduction because each of the 3 heads acts as an independent source and each head has excellent shadow-reduction properties in its own right.

The 3 heads swivel, controlled by a removable, autoclavable twist handle mounted in the centre of the cluster, whilst a second, removable handle is also provided to assist with steering the light beam. The light is controlled from a wall-mounted module containing on/off and intensity controls.

The light assembly comprises 6 parts: a ceiling-mounting plate, a mains-voltage transformer which mounts on the plate, a down tube with top and bottom fittings, the wall-mounted control module, a suspension arm, and the light-head cluster.

The control module carries double fusing, a mains-isolator switch and a light switch with output variable-intensity control

## 2. SPECIFICATION

<b>Light output at 1m</b>	0 - 210,000 lux
<b>Colour temperature</b>	4,200 deg K, +/- 5%
<b>Patch diameter at 1m</b>	variable via twist control handle
<b>Power of lamp</b>	3x100W
<b>Operating voltage</b>	24V AC
<b>Input voltage</b>	230 V 50 Hz mains, class 1 (earthed)
<b>Arm reach</b>	1650 mm
<b>Quality approvals</b>	CE 0434, Medical-Device Directive 93/42/EEC EN60601-1, EN60601-1-2, EN1441, EN980, ISO8382

### Serial Number

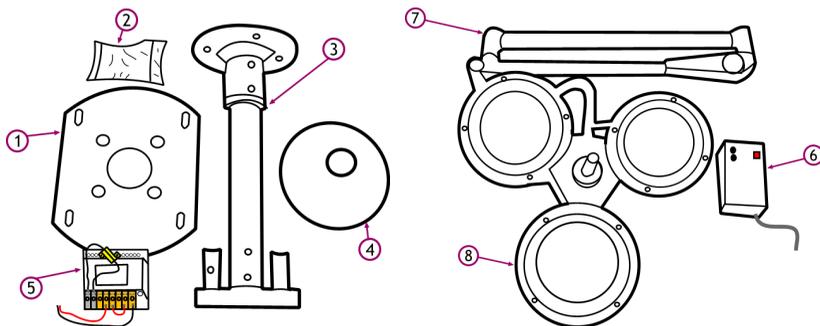
The serial number is located on the central boss of the light-head cluster.

### Product Identification

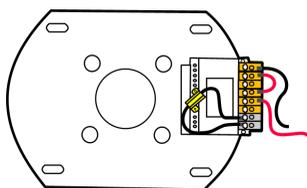
This label is located on the control module, next to the mains supply inlet.

### 3. INSTALLATION

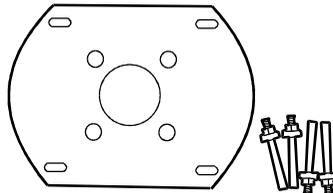
**CAUTION:** this product must be earthed.



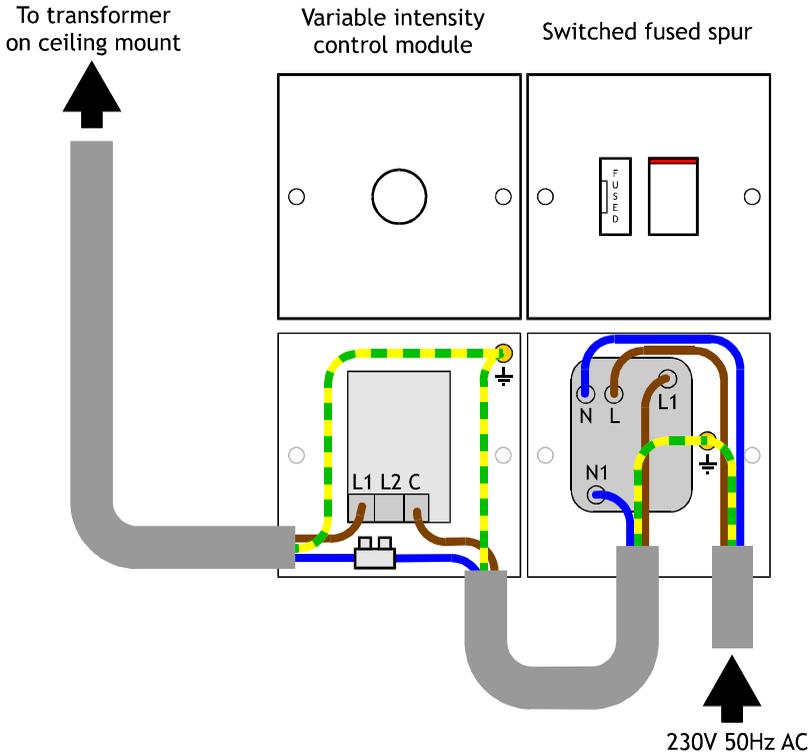
Check delivered items:		
1	Ceiling-mount plate	x1
2	Ceiling-mount bolts	x4
3	Down tube with top and bottom fittings	x1
4	Cover for false-ceiling hole	x1
5	Power-supply transformer	x1
6	Wall-mounted control module	x1
7	Arm	x1
8	Head cluster with autoclavable handle	x1



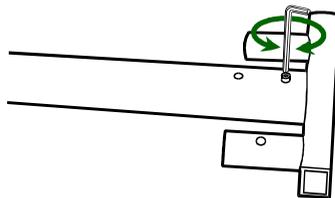
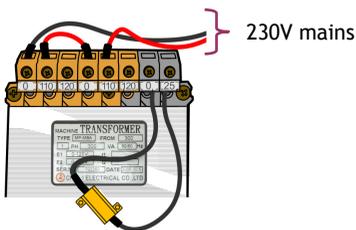
1. Fit the power-supply transformer to the mounting plate.



2. Fix the ceiling-mount plate to the ceiling slab using the 4 expansion bolts:

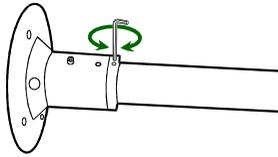


3. Fit the control module to the wall and arrange a mains-electrical feed to it via an isolating spur.
4. Arrange for a 1.5mm<sup>2</sup> 2+1 mains feed from the control module to the transformer on the ceiling mounting. The feed should be connected to the terminal block in the control module, with the live going to the dimmer output, and the CPC to the earthing point.

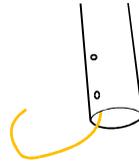


5. At the transformer end, 230V mains must be connected to terminals '0' (neutral) and '110' (live), with a link
6. Connect the CPC to one of the set screws on the ceiling-mount plate. Remove the lower fitting from the

fitted as supplied between terminals '0' and '110'.



down tube:

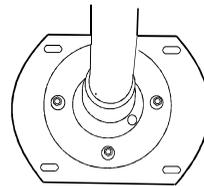


7. If necessary, cut the down tube such that its bottom end is 2.25m above the floor when the tube is fitted to the ceiling-mounting plate.

If there is a false ceiling, cut a hole in it for the down tube to pass through and remove the collar from the down tube:

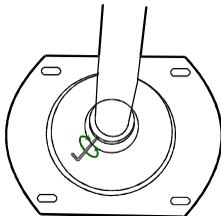


9. Insert a 'pull through' through the down tube:

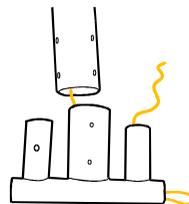


10. Fit the down tube to the ceiling-mounting plate:

Ensure the down tube is vertical in both axes by adjusting the nuts. Fit and tighten the locking nuts.



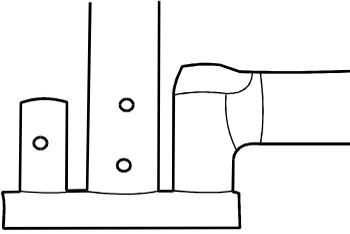
11. If there is a false ceiling, fit the cover and collar:



12. Feed the 'pull through' through the bottom fitting and rebolt the fitting to the down tube:

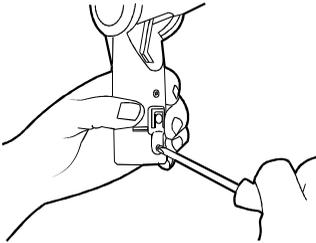
**CAUTION:** ensure the bottom fitting is orientated so the light's suspension arm will swing unimpeded through the required arc.

**CAUTION: this is a 2-person job!**

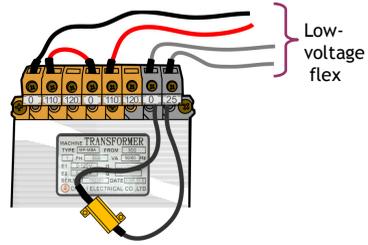


- 13.** Lightly grease the end fitting where the suspension arm fits.

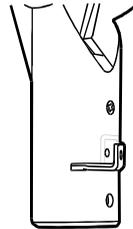
Use the 'pull through' to pull the arm low-voltage flex through the bottom fitting, down tube and top fitting, and slot the arm onto the bottom fitting:



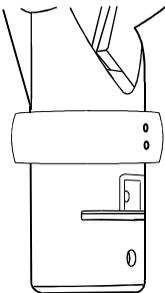
- 15.** Fit the light head:  
Remove the locking-ring clamp



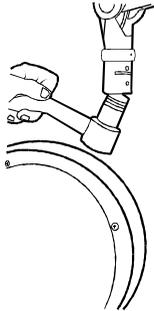
- 14.** Leaving the flex as short as practical, connect the low-voltage flex to the transformer terminals '0' and '25'.



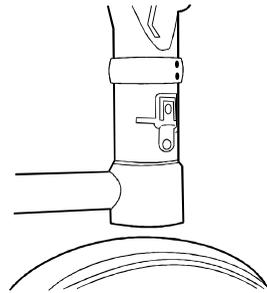
- 16.** Remove the locking ring



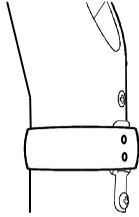
- 17.** Slide on the safety collar and hold it temporarily in place with the grub screw.



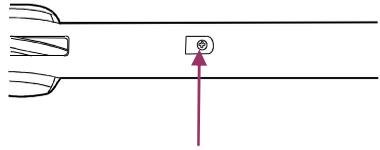
- 18.** Slide the head connector fully into the arm sleeve



- 19.** Refit the locking ring and its clamp



20. Reposition the safety collar over the clamp and tighten the grub screws.



21. Remove the arm-locking plate from the underside of the arm

**CAUTION: do not remove this plate before fitting the light head to the arm.**

Provide power to the light and test it, ensuring all the features identified in 'Operation', below work correctly.

## 4. OPERATION

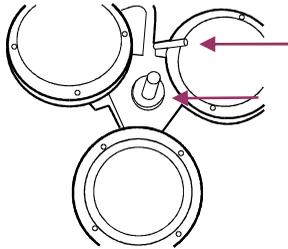
**CAUTION: do not remove the control module front cover whilst the mains supply is connected. There are no user serviceable items inside the Module; if you experience mains-related problems with the light, you should refer them to a qualified electrician.**

Turn the unit on by pressing the intensity control module.

Set the required illumination level by rotating the variable intensity control.

If the light does not illuminate, check the fuses.

**Any other fault investigatory work should be undertaken by only a qualified electrician.**



The light's patch size is adjusted by rotating the steering handle in the centre of the cluster.

The handle is removed for sterilising in an autoclave by pressing the button on its base and pulling it free

The second steering handle may be unscrewed for sterilising

## 5. MAINTENANCE

**WARNING:** do not use strong chemical cleaning agents such as 'Dettol' to sterilise the light. Do not use any abrasive materials to clean the light.

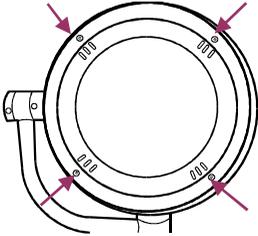
**CAUTION:** the light is not waterproof, so do not use excessive cleaning fluid amounts.

1. Suitably protect hands.
2. Wipe the light using clean tissue or soft towelling.
3. Apply to all surfaces a 1% solution of sodium hypochlorite using a soft cloth.
4. Within 10 minutes, remove the chemical from all surfaces using a damp, soft cloth. The chemical will cause corrosion of metal parts, if it is not thoroughly removed.
5. Apply isopropanol to the surfaces - this is an alcohol-based fluid which evaporates without leaving any residue and can be obtained as an impregnated-cloth applicator.

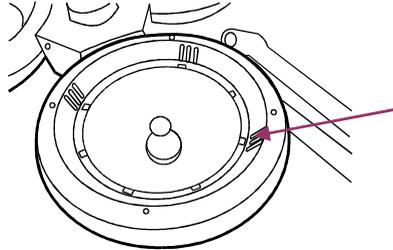
## 6. LAMP REPLACEMENT

TURN OFF the mains power.

**CAUTION:** use only LB4059 replacement lamps from Daray. These are special lamps and the use of any other type would seriously impair the performance of your light.



Remove the diffuser by undoing the 4 crosshead screws



Remove the glass filter by carefully moving back 3 of the metal lugs.

Gently move the lamp shield to one side

The shield can be refitted, if it comes out of its retaining groove, by squeezing the 2 sides of the wire holder.

Remove the blown lamp by moving it from side to side and pulling it directly out of its holder.  
**CAUTION:** the lamp may be very hot!

Holding a replacement lamp by its plastic packaging, insert the wire connectors into the lamp holder.  
**CAUTION:** do not touch the lamp quartz envelope with your fingers.

Refit the lamp shield, filter and diffuser.

## 7. FUSE REPLACEMENT

**CAUTION:** fuses normally blow for a reason. Investigate likely faults before changing fuses.

**CAUTION:** isolate the unit from the mains before accessing the fuses.

Both the live and neutral mains inputs are fused. The fuses are contained in holders on the front panel of the control module; the fuse carrier unscrews from the holder

## 8. SPARE PARTS

**CAUTION:** Use only genuine 'Daray' replacement lamps as other types may seriously impair the optical performance of the product.

ITEM NO	PART NAME	TYPE	PART NO
1	Replacement Lamp	24V, 100W	LB4059
2	Fuse	3A Anti-surge type 'T'	D13964

PLEASE REFER ANY PROBLEMS INITIALLY TO YOUR DISTRIBUTOR.

DARAY Customer Services on +44 (0) 844 375 9000

Or email [technical@daray.co.uk](mailto:technical@daray.co.uk) for help with any problems the distributor cannot solve.

# Returns Policy

**IMPORTANT!**  
**Before returning your item, you must call us on 0844 375 9000**

We want you to be completely satisfied with your purchase. If you need to return goods purchased from DARAY Ltd, please read the following information carefully.

The DARAY Ltd returns policy provides guidance on when you can return goods we have supplied, and what you can expect from us once you do. To see our detailed returns policy and procedure visit [www.daray.co.uk/returns](http://www.daray.co.uk/returns)

TYPE OF RETURN	REMEDY
<b>DAMAGED GOODS OR DOA*</b> Goods which are physically damaged on delivery, or which do not function.	We must be notified within 24 hours of receipt.
<b>GOODS DEVELOPING A FAULT</b> Goods which have developed a fault within the warranty period.	Within 14 days of delivery we will replace the item as DOA*. If the fault develops after 14 days, but within the warranty period, we will initiate the returns procedure.
<b>NON WARRANTY</b> Goods which have developed a fault outside the warranty period.	If a fault develops outside the warranty period, we will initiate the returns procedure.
<b>OTHER</b> Any situation which is not covered by the above.	We will try to help, but we cannot normally offer a refund.

\*DOA - dead on arrival

For additional clarification, please refer to our terms and conditions at [www.daray.co.uk/terms](http://www.daray.co.uk/terms).

In a small number of cases, we may determine that a replacement would not work any better than the original product we supplied. In such cases we will only offer a refund rather than a replacement for qualifying returns.

Replacement bulbs are not eligible for returns, unless they are faulty or damaged.

Spare parts ordered on our website or from supplied part codes are not be eligible for credit. We will accept returns and exchange for the correct item.

If you purchase an item incorrectly you can return it within 14 days and it can be exchanged for another product of equal or high value, excluding transportation charges incurred.

If you send us goods that do not qualify for return, you will invalidate your claim to any refund, and you will be obliged to compensate DARAY Ltd for the cost of return postage and any other reasonable costs incurred processing the goods.

**Your statutory rights are not affected.**

# WARRANTY

## TERMS AND CONDITIONS OF WARRANTY

1. To qualify for this warranty you must register on [www.daray.co.uk](http://www.daray.co.uk) or return to Daray Ltd (Daray) the duly completed warranty-registration form accompanying the product.
2. Daray warrants this product (excluding lamp) against faulty material and workmanship during the period of the warranty. The period of warranty is the period stated on your warranty card and commences on the date of purchase of the product. In the event that the product is not in good working order Daray will provide, during the warranty period, a free repair service within the United Kingdom. The warranty is subject to proof of purchase being provided; therefore, you should retain your original receipt.
  - 2.1 The repair service consists of the provision of spare parts and/or replacement products (at Daray's discretion) which will be provided on an exchange basis and will either be new, equivalent to new or reconditioned. All replaced spare parts and products shall become the property of Daray.
  - 2.2 Daray's only obligation under this warranty is the provision of the service as set out above.
  - 2.3 All products are returned to Daray at the customer's cost and risk. Products to be returned should be adequately packed. For the address to send returns to please visit [www.daray.co.uk](http://www.daray.co.uk)
3. Daray's arrangements for providing service provided under this warranty may include the use of sub-contractors.
4. This warranty does not cover damage or defects in the Product caused by or resulting from:
  - Wilful neglect or negligence by anyone other than Daray;
  - Improper use, storage or handling of the product;
  - Use of non-Daray approved parts (such as replacement lamps) not compatible with the Product;
  - Fire, accident or disaster;
  - Use of non-Daray modifications other than in accordance with Daray's instructions;Attachment of fittings and accessories not approved by Daray;  
Repairs, modifications carried out by service personnel not approved by Daray;
  - Damage caused by chemical corrosion from cleaning agents not approved by Daray.
  - Failure to use or install the product in accordance with the manufacturer's instructions.
5. Nothing in this warranty shall have the effect of restricting or excluding the liability of Daray in respect of:
  - a) Death and personal injury caused by the negligence of Daray, or for fraud;
  - b) Under the *Consumer Protection Act 1987* to a person who has suffered damage caused by a defective product or to a dependant or relative of such a person;
  - c) Direct damage to your property caused by the proven negligence of Daray.
6. This agreement does not give any rights other than those expressly set out above and in particular, Daray will not be responsible for any loss of income, profits or contracts or any direct or indirect consequential loss, damage caused to or suffered by the purchaser as a direct result of this agreement.
7. This warranty is offered (subject to these terms and conditions) in addition to, and does not affect your statutory rights.
8. Daray may disclose your details and other personal information to companies within the Daray group including any subsidiary company or sub contractor of Daray for the purposes of performing our obligations hereunder.
9. You must not resell outside the UK any products supplied by Daray and covered by the *Export of Goods (Control) Order 1992* (or any law that replaces it) without obtaining all necessary licences. You also agree not to sell the product in the UK if you know or think that the person buying the product intends to export it without getting the necessary licences. You agree to impose similar conditions to these on anyone you sell the product to.
10. These conditions shall in all respect be governed and construed in accordance with English law and the exclusive jurisdiction of the English courts.



# DARAY<sup>®</sup>

WARRANTY REGISTRATION  
TO VALIDATE YOUR WARRANTY  
PLEASE COMPLETE IN BLOCK CAPITALS  
AND RETURN IN A WINDOWED DL ENVELOPE  
TO OUR FREEPOST ADDRESS

**ALTERNATIVELY REGISTER ONLINE AT [WWW.DARAY.COM](http://WWW.DARAY.COM)**



## 3 YEAR AFTERCARE PLAN

NAME:	
COMPANY:	
EMAIL:	
PHONE:	
FAX:	

ADDRESS:

PURCHASED FROM:

DATE OF PURCHASE:

Freepost Plus RRAS-YGXE-SLBC  
Daray Ltd  
Marquis Drive  
SWADLINCOTE  
DE12 6EJ

Occasionally DARAY would like to send you information about our special offers and promotions. If you do not wish to receive such information, please tick here:

Privacy statement: DARAY will not pass on your details to any third party.

PRODUCT:
SERIAL No:







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