This product was designed and assembled in the U.S.A. by:

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NOVA EXAM LED

Floorstand, Wall, Table and Ceiling

Instructions for Use & Maintenance

The right light

LUXO

NOVA EXAM$_{LED}$

Task & Examination Light

BASE MODEL	MOUNT	AREA
NX	**T** (table) **FL** (floor) **W** (wall) **C** (ceiling)	*BLANK* (United States, 120V) **01** (Japan, 100V) **02** (United Kingdom, 240V) **03** (Europe, 230V) **25** (Spain, 230V) **26** (Australia, 240V)

Example;
NXFL is a floor model for the US
NXC25 is a ceiling mounted model for Spain, includes a Spanish IFU

Warranty Information

For complete, detailed information on your specific product's warranty coverage, please visit:
http://www.burtonmedical.com/wp-content/themes/burtonmedical/literature/warranty.pdf

Troubleshooting Guide

Symptoms	Probable Cause	Remedy
No Light Output	Not plugged in.	Plug into a suitable hospital-grade grounded socket.
	Switch not “on” (I or II).	Turn switch on (I), left or right
	LED failed.	Replace with new LED module
	Fuses failed: Because of internal short. Because of high mains voltage, or high voltage spikes.	Replace with new fuse(s). Locate short and fix it. Put voltage regulator on line.
	Because of single occurrence of lightning strike.	Check condition of transformer and wiring.
	Break in wiring.	Locate and replace wires.
	Short or open circuit in power supply.	Determine failure mode and replace transformer.
	Switch failure	Replace switch.
Poor (low) Light Output	Loose or corroded connectors.	Check all connections; clean/replace as necessary.
		Replace power supply.
	Faulty LED module.	Replace LED module.
Light head Does Not Hold Position	Weak arm	Replace arm.
	Lever not tightened enough.	Tighten lever as required.
	Worn or missing components.	Replace as necessary.

Table of Contents

Technical Description

The NOVA EXAM LED light is a durable, attractive light designed to deliver high-quality illumination in the modern hospital or clinic for examination application. Its design offers excellent dual brightness, color rendition, large field size, and convenient positioning with easy-grip handles. Use fixture only as intended, any other use will void the warranty.

The fixture projects a beam of visible light practically devoid of infrared and ultraviolet energy, but with high intensity. It provides a 7-7.5-inch spot size at a distance of 18 inches. The light head is mounted on a spring arm system which will not sag. The light head swivels about the arm ±90°. The mounting system allows the light head to swing through a radius arc of approximately 45 inches, and project a beam on any location of a human subject. Easy-grip handles at the sides of the light head assist positioning. The light head features a cool-temperature housing.

Wall mount models can be installed on a vertical surface (wall). Floor Stand models incorporate a 4-caster, space-saving base. Table mount clamps to most table tops.

Power is supplied through a European-harmonized grounded 8-foot SJT cord, having a NEMA 5-15 hospital-grade North American plug. An On-Off-On switch operates the light at the base of the light head. The light is ETL listed and made in the USA.

Specifications

General
The light is intended for use in the modern hospital or clinic for examination applications. It is available as a floor stand, wall, table and ceiling models in input voltages varying from 90-250VAC.

This unit has been tested and classified to UL 60601-1. The exposed metal parts that screw on the head are not grounded, nor do they have to be, since the metal parts are adequately isolated from the high voltage supply. All other exposed metal is grounded.

Power to the fixture is controlled from a power supply at the base of the arm, which contains internal fuses. Effective working distance between patient and light head is from 0.2 to 0.6 meters. Two easy-grip handles at the sides of the light head assist positioning. A 3-way switch safely controls the power to the two led modules. Users have the option to have either one or two LED sources, power on, middle position is off.

There are no known contraindications to use this equipment.

There are no hazardous material in this product and it's safe to dispose of after it service life.

During transport of the floorstand the spring arm must be in a folded position and the operator must maintain contact with the upright.

Philips Burton will make available to the purchaser or their representative technical material, including circuit diagrams, parts lists, and component descriptions, which will assist the user's qualified personnel in replacing the repairing those parts of this equipment designated by Philips Burton as repairable.

2.5 Replacement Parts

5.1 Power Supply.....4000173
5.2 Handle.....5000451
5.3 Switch.....4000182
5.4 Fuse T 0.5 Amp L.....0007027
5.5 Locking Caster.....4000232
5.6 LED Module…….....6000266

3. Symbols and Warnings

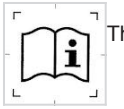
3.1 Symbols

1.1  This symbol on the power switch is "OFF". The rocker switch, when postioned to the "O" side, turns off power to the light.

1.2 This symbol on the power switch is "ON". The rocker switch, when postioned to the "I" or "II" side, turns on power to the light.

1.3  This symbol references protective "ground" or "earth" connection..

1.4  This is the international symbol for "alternating current", i.e., "AC".

1.5  This symbols refers to "Reference the manual for information"

3.2 Cautions

3.2.1 Always disconnect the equipment from the mains before starting any repair.

3.2.2 Move the light head up or down by grasping the handle.

3.2.3 Do not force the light head past its stops.

3.3 Warnings

3.3.1 To avoid the risk of electrical shock this equipment must only be connected to a supply mains with protective earth.

3.3.2 Separable plug must always be accessible.

3.3.3 Ceiling mounted equipment must have a customer provided accessible main switch on the wall.

3.3.4 Failure to properly follow installation and preventive maintenance in instructions may result in mechanical failure.

3.3.5 No modifications of this equipment allowed.

3.3.6 Do not use this fixture in the presence of flammable anesthetics or in an oxygen rich environment.

3.3.7 If EMC or RF interference is shown with this equipment to effect some sensitive equipment, move the light further away or turn the light off before proceeding.

2.3 Preventive Maintenance Checklists

Check	Corrective Action
Weekly Check overall operation of the fixture: Do the switch and LED's operate properly? Does the light head stay in position (no drift) when the arm is moved up and down or to the sides? Do all components appear secure (light head, arm attachment points)?	If the answer to any of these questions is NO, do not use the product. Consult with your maintenance personnel before operating the light.
Monthly Check the arm to mount for "wobble". If loose...	Table: tighten clamp. Floor: tighten the screw under the base casting. Wall: tighten screws to wall. Ceiling: tighten plate to ceiling structure. Tighten tube to plate.
Annually Check same items as for weekly and monthly maintenance, plus inspect the power cord for external abrasion. Lightly pull and twist the cord at the inlet strain relief to test for internal conductor breakage when the light is energized. Check electrical connectors for evidence of overheating (charring, discoloration) and chafed insulation.	Any flickering is indicative of an intermittent break, and the cord should be replaced. Replace as necessary.

2.4 Cleaning

2.4.1 Disconnect the fixture from the mains supply.

2.4.2 Suggested cleaning technique is to use a soft cloth and mild detergent solution in water or isopropanol 70% solution. Do not let any solution run into the transformer housing. After cleansing, dry all surfaces promptly with a soft cloth or towel.

2.4.3 For especially stubborn stains, rubbing or denatured alcohol can be used.

2.4.4 External surfaces are polycarbonate, or powder painted.
Under no circumstances should organic solvents such as paint thinners, MEK, or acetone be used.

Classification
Type of protection against electric shock……..Class 1
Allowable leakage current……..does not exceed 200µa
Reliability of earth protection……..does not exceed 0.1 ohm
Mode of operation…….continuous
Protection against explosion hazards…….
.....……..not to be used in presence of flammable anesthetics
Protection against hazardous parts and ingress of liquids……...IP20
Degree of mobility…..……portable (floor stand models move on 4 casters [2 locking])…
.....(wall mount is not permanent)
Safety tests……UL 60601-1, 3:rd Edition; IEC 60601-1-2, CSA/CAN C22.2 No. 601.1;

Electrical
Input……..100V-240VAC, 50/60HZ 9W or 18W
LED.....……2 x 3 LED Modules
Power cord*…….8-ft. (2.4m), NEMA 5-15, hospital grade plug
Fuses (2)……..T 0.5A L (250V) each, located inside transformer housing
Ceiling mounted version will only have one fuse
.* International cords will be provided for specific country

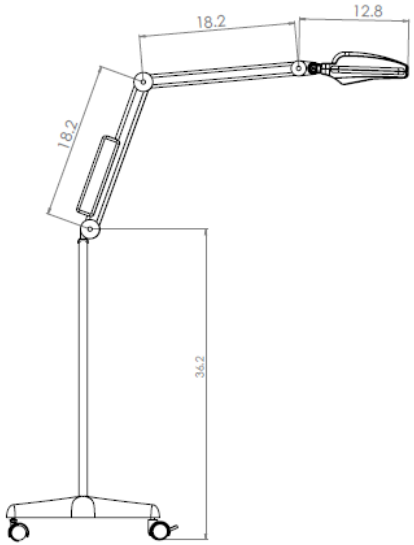
Environmental Conditions
Transport and Storage
Ambient temperature…….0°C to 70°C
Relative humidity……....10% to 75% (keep dry)
Atmospheric pressure…….500hPa to 1060hPa
Shipping Container Markings…….Fragile, Keep Dry

Operation
Ambient temperature……...10°C to 40°C
Relative humidity……..…….30% to 75%
Atmospheric pressure……...……..700hPa to 1060hPa

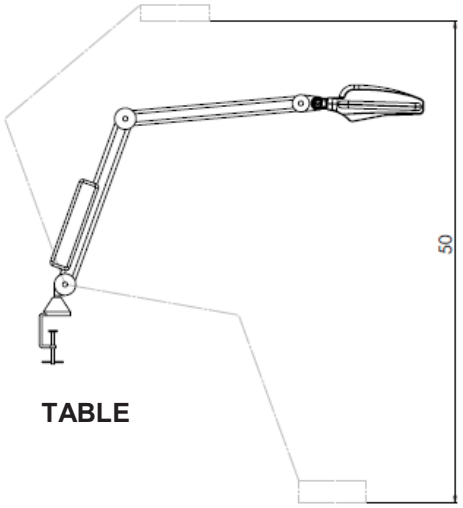
Weights and Dimension
Net weight (Light head, flexible arm, transformer housing, cord)…….……7 lbs. (3kg)
Net weight, wall mount model……..……..9 lbs. (4.1kg)
New weight, floor model…….……...28 lbs. (13kg)
Light head width, including handles…….....9 in. (23cm)
Light head length, including neck.....……....10 in. (28cm)
Arm length.....41 in. (104cm)
Effective swing radius from Pivot to front of Light head.....51 in. (130cm)
Upright.....32 in. (81cm)
Base outside dimensions……..……...18 x 18 in. (46X46cm)
Colors.....White

Optical Performance
Central Illuminance, One LED Module, Ec at 18 in. (46 cm).....25,000 Lux
Central Illuminance, Two LED Module, Ec at 18 in. (46 cm).....50,000 Lux
Central Illuminance, Ec at 1 meter.....9,000Lux (840 fc)
Total Irradiance at 1 meter …….....30W/m^2
Total Irradiance at 18 in. (46cm), …….....131W/m^2
Ultraviolet radiation.....0.02W/cm^2
Color temperature.....4600° K
CRI (Color Rendering Index.....93
LED operating life……..40,000 hrs

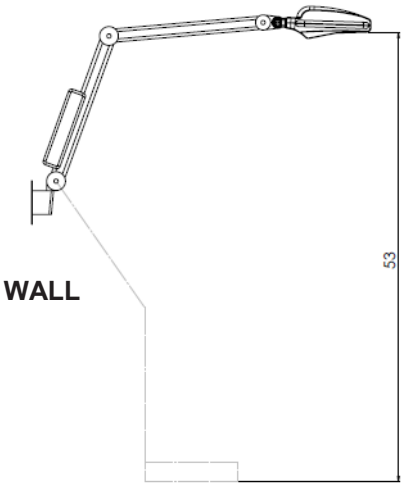
Dimensions



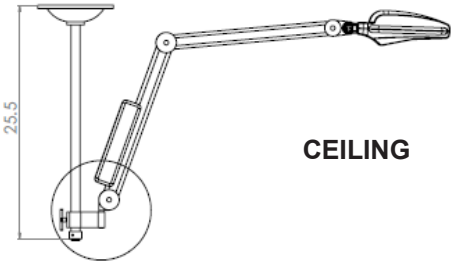
FLOOR STAND



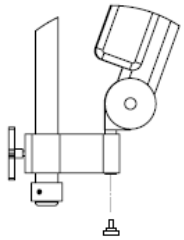
TABLE



WALL



CEILING



SECURE CEILING ARM WITH LOCK KNOB

2. Maintenance

2.1 Fuse Replacement

If this product is operated according to procedures in this manual, the fuses that are located internally at the base of the transformer housing may never need replacing. But, if one or more system abnormalities do occur, the protective current fuse(s) will fail and need to be replaced.

NOTE: Before replacing a blown fuse(s), a complete system check should be undertaken to reveal the underlying cause(s) for the failure. Appropriate corrective action should be taken to prevent future occurrences.

2.1.1 Turn the power switch off (O) and disconnect the fixture from the mains supply to avoid electrical shock.

2.1.2 Loosen the single screw on the transformer housing where the power cord enters. Remove cover by lifting this end up and away, it will naturally pivot around the clip at the opposite end.

2.1.3 Check and replace fuses located on the terminal block by pulling the black fuse holder, tab up.

2.1.4 Reverse the above procedure to restore the fixture to proper operation.

2.2 LED Replacement

Note: The LED module will outlast the life expectancy of the device (10 years) under normal conditions and it's therefore not needed to replace before this time period.

LED module replacement must be replaced by an Philips Burton appointed technician.

2.2.1 Turn the power switch off (O) and disconnect the fixture from the mains supply. If the fixture was operating just prior to LED failure, the heat sink is probably too hot to handle. Allow at least 20 minutes for it to cool.

2.2.2 Remove the arm from the mount and lay it down on a flat surface, remove the four screws on the front face of the light head and carefully separate the two halves, do not over stress the wires from the switch to the LED module.

2.2.3 Remove the broken LED module with heat sink by first removing the four screws around the heat sink, then disconnect the black and red wires from the LED board.

2.2.4 Insert the black and red wire into the new LED module and secure it to the housing with the four screws from the previous step.

2.2.5 Secure the two halves of the light head. Ensure that wires are NOT being pinched.

2.2.6 Re-attach the light to the mount.

1.5 Floor stand Operation

1.5.1 Plug the power cord into a grounded convenience socket.

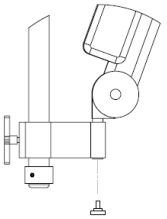
Note: Turn the light "On" by pressing the power switch located at the base of the head to either left or right depending on the intensity required and adjust the arm as required.

1.5.2 The upright is meant to remain fixed in the base; **it will not rotate within the base.** However, the head/arm can be rotated continuously and is only constrained by the cord.

1.5.5 The light head can be positioned anywhere within its travel radius.

1.6 Ceiling Assembly

1.6.1 Secure to the ceiling with appropriate back support and attach light head as shown. ⟶



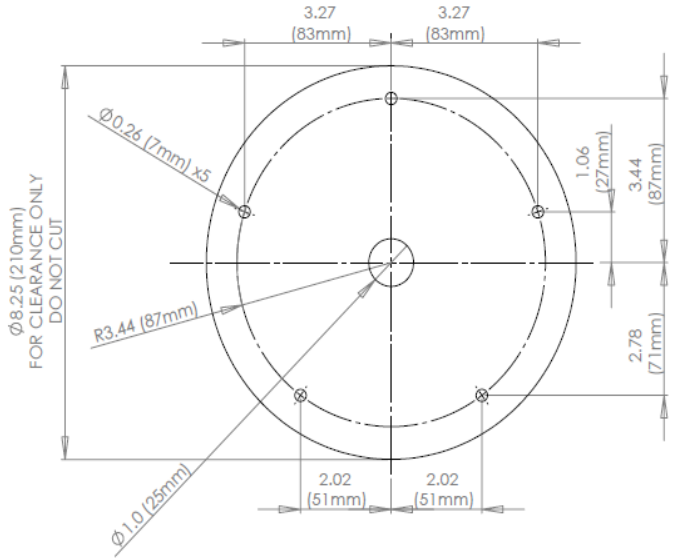
SECURE CEILING ARM WITH LOCK KNOB

If mounted to wood use #10 steel wood screws min. 2" long. Mounting to a steel support use 1/4-20 steel bolts or threaded rod with nut and lock washer backing. Max. gap between support and ceiling plate to be 2". Support to be capable to hold 100lbs.

1.6.2 Attach and connect power cord through a customer provided J-Box.

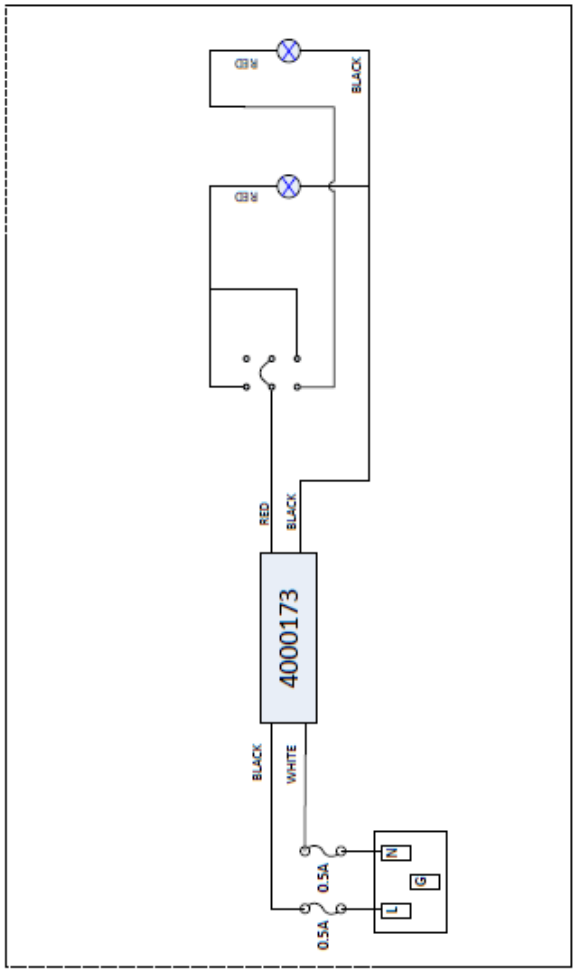
1.6.3 Power to fixture must be controlled by a customer installed accessible wall switch.

NOVA EXAM LED CEILING MOUNT HOLE PATTERN
DIMENSIONS IN INCHES (mm)



Wiring Diagram

6000261-1 A01



Floor, Wall & Table Mount
100V-240V Input

1. Set-Up and Operation

1.1 Pre-Assembly (All models)

1.1.1 Remove the product and accessories from the shipping container(s). Save the packaging in case hidden damage is revealed. If there is product damage caused during transit, contact the shipping company, not Philips Burton.

1.1.2 **Do not discard the hardware pack!** Floor stand models only: Contain (4 ea) casters with jam nuts and bolt.

1.1.3 Inspect the Head/Arm for possible damage:

- The head should be able to rotate within its stops and tighten to desired angle with the friction adjustment knob between the head and flexible arm.
- The cord should feel secure at the connection to the transformer housing.

1.1.4 Before reporting shortages:

1. Be sure you have received the correct number of boxes, cartons, etc., as shown on the bill of lading.
2. Check the entire shipment against the packing slip, which is enclosed in one of the boxes.
3. Items indicated in the column headed “Back Order” are not included in the shipment an will follow later.
4. Be sure that nothing has been removed from the cartons before they are checked by the individual in charge.

1.1.5 If a Shortage or Damage Occurs:

1. You, the receiver, not Philips Burton, is responsible for filing any claim(s) with the delivering carrier within five days after receipt of the shipment.
2. If damage or shortage occurs in transit, the delivering carrier is required by law to make notation of a shortage or damage. This notation is to be made on the bill of lading.
3. If, in your opinion, there may be concealed damage, an agent from the delivering carrier is obligated to make an inspection after the goods are unpacked.
4. Do not destroy packing material until after the agent has made out his report.
5. All claims must be made to the carrier, not Philips Burton.
6. Written authorization must be obtained from Philips Burton before merchandise can be returned.

1.2 Wall Mount Assembly

1.2.1 Philips Burton recommends a wall mounting height of 55-60 inches (140-152.4 cm) from floor plane.

1.2.2 Attach the provided Wall Mount to a suitable vertical surface, it should go into wood support that may need to be constructed. It should not be anchored to drywall alone.
Use four (4) #10 round-head wood screws, which are 1-1/2 long into wood surfaces, or 2” long through wall board into wood studs. When attaching the mount to metal, use #10 round or pan-head self-tapping or machine screws, 1” long, or as indicated by the application.

1.2.3 Make certain the applicable hole for the fixture shaft is oriented **up** to accept the light.

1.2.4 Insert the fixture into the clamp and tighten the lever at the base of the transformer housing until the head/arm remains in position.

1.3 Table Mount Assembly

NOTE: Turn the light “On” by pressing the power switch located at the base of the head to either left or right depending on the intensity required and adjust the arm as required.

1.3.1 Attach the provided C-Clamp table mount to the edge of a suitable table top.

1.3.2 Tighten the clamp adequately to with stand the forces from the spring arms.

1.3.3 Insert the arm shaft into the table clamp.

1.4 Floor stand Assembly

1.4.1 Assemble the provided casters to the steel base. First, screw the jam nuts (found on the casters) all the way down the caster studs, then screw the studs all the way into the base. Two of the casters are locking and two are non-locking. It is suggested that the locking casters be located on the same pair of legs. When all casters have been mounted to the base (hand-tight), turn the base right side up and level it on a smooth surface by adjusting the height of one or two of the casters. When the base is level, tighten the jam nuts.

1.4.2 Install the tubular upright by setting it in the center hole of the base, then tighten it with the bolt from underneath the base.

1.4.3 Insert the arm shaft into the upright.