

DentLight

Setting New Standards through Innovation



NANO

INSTRUCTIONS FOR USE

Nano Loupe Light (Rev 2S and 2C)

Powered by Patent-pending Optics and Teflon Nano-Wire Technology

Product Information

Description and Indications for Use

Nano Loupe Light is engineered to meet the demand for the smallest and toughest professional portable light requiring a small homogenous and well-defined spot in the dental office, physician's office, hospital, or emergency environment for any medical procedures. These operating instructions provide recommendations and guidelines for the intended use of the light. Please read them carefully.

System Components

Nano Loupe Light consists of Nano Headlamp with durable nano-engineered wire, Composite Filter, Composite Filter Flip Paddle, Wire Wrap/Clip, Wire Shirt Clip, a Loupe/Eyewear Mounting Adapter, Rechargeable Battery Pack, Battery Clip/Pouch, Lamp Wire Protection Cord, Power Adapter, and Instructions for Use.

No.	Quantity	Description
1	1	Nano Headlamp
2	1	Clip-on Composite Filter
3	1	Composite Filter Flip Paddle
4	1	Wire Wrap/Clip
5	1	Wire Shirt Clip
6	1	Articulating Arm*
7	1	L-Adapter *
8	1	Universal Clip-on *
9	1	Battery Clip/ Pouch ***
10	1	Battery Pack **
11	1	Power Adapter
12	1	Mounting Plate/Nut *
13	1	U-Adapter*
14	1	Y-Adapter*
15	1	Protection Cord
16	1	Instructions for Use



* One compatible mounting adapter per kit of user's choice.

Default kit (if not specified) is Universal Clip-on.



** 2S or 2C battery

*** 2S Clip or 2C Pouch

Product Safety Warnings and Cautions












Prior to installation and activation of the light, please read these instructions carefully and follow safety procedures as well as the specific safety comments and recommendations presented throughout the instructions for use. The manufacturer accepts no liability for any damage resulting from the improper use of this unit and/or for any purpose other than those covered by these instructions.

1.  CAUTION! Heat sink (metal ring) end of Nano Headlamp will be hot when in use for extended period of time at Level III. Do not touch with bare skin.
2.  CAUTION! Do not look directly at light emitted from the device. Eye injury may result.
3. Do not touch and open any electronics parts and circuit boards. Warranty void if seal broken.
4. Do not immerse Nano Headlamp in waters or solutions. Warranty void in case of liquid damage.
5. Charge batteries while not in use to extend the lifetime of the rechargeable battery.
 - a. Do not short circuit battery.
 - b. Do not store above 60 C (140 F).
 - c. Dispose of unserviceable batteries according to the national rules and regulations. Batteries must not be incinerated.

Glossary of Symbols

A number of symbols are used on the device, accessories and throughout this manual, it is important that the user/operator of Nano understands the meaning of each symbol to avoid possible injury to the operator or/and patient.

	Please read before using this device. Symbol is used to alert you to potential personal injuries and hazard.
	Waste Electrical and Electronics Equipment (WEEE)
	Attention, consult accompanying documents
	Manufacturer
	European Authorized Representative
	Date of Manufacturing
	Keep Dry
	For Licensed Dental Professional Use Only!
	DC Voltage
SN	Serial Number
REF	Product Number

Start Up

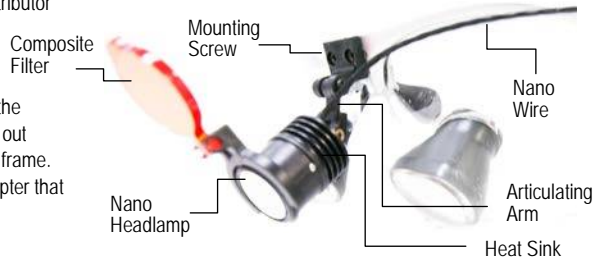
Upon receiving your Nano light, remove all components from the package and examine them. If damage is apparent, please contact your authorized DentLight distributor from whom your light was purchased.

Mounting

Cross reference your loupes/glass frame for the corresponding adapter. For TTL loupes, take out custom fixture/ logo plate at the center of the frame. Assemble light using the loupe mounting adapter that you purchased with the light kit:

a) L-Adapter

Place L-adapter at the center of the frame. Screw on Mounting Screw(s) directly or with the provided Mounting Plate/Nut(s) using a Phillips screw driver. Tighten the mounting screw(s). Adjust the light to the most comfortable position to ensure that the Nano Headlamp is positioned at a distance away from the nose pad. Direct the light to the center of your field of vision. Route the Wire by bending in an angle to conform to the frame:

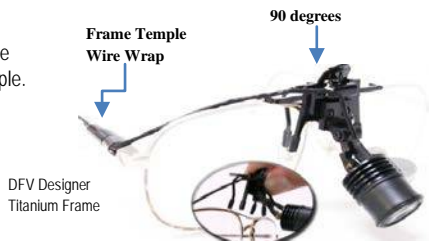


1) Orasoptic Rudy frame; 2) Orasoptic Titanium frame; 3) Zeiss EyeMag Pro; 4) Orange Adidas; 5) Surgitel metal frame; 6) Sheevisision TTL

b) Universal Clip-on Adapter

Universal Clip-on Adapter can be used on any frames with a relatively flat center bridge including most of the meta/titanium frames, prescription and safety glasses. Press thumb and index finger on the top front and back flanges to open the spring-loaded Clip-on. Slide into frame center then release for secure grip on the frame.

Route and bend the lamp wire to conform to the frame. Use Wire Wrap/clip to secure the lamp wire on the Frame Temple.



c) U-Adapter for Flip-up Loupes.

U-adapter is suitable for most flip-up loupes on the market as listed below. Slide-in the U-Adapter to the middle of the flip-up bar.

Adapter	Brand	Model	Frame
U	Orasoptic	Any frame	LEGACY
	Surgittel	FLM	Anyframe
	PeriOptix	Any frame	LEGACY, PANORAMIC, Prismatic
	Rose Micro	Any frame	Flipup
	Sheervision	FLIP-UP	Any frame
	Keeler		Flipup



d) Y-Adapter

Y adapter mounts to curved frames with center bridge thickness from 4 to 10 mm. It comes with the corresponding number of Articulating Arms to fit onto your custom loupes. OPEN THE VARIABLE CENTER SPACING enough to slide into the frame center bridge from a direction as shown in the illustration below. Tighten adjustment screw for secure mount.

Adapter	Brandname	Model	Frame	# of Arms
Y	DFV	Skylon, Skyview, Sports	Nike	2
	Surgittel	Half Jacket, Radar	Oakley	
	DFV	Yoeman	Aluminum	0
		Pounce, Revolve,	Nike	
	Sheervision	Under Armour	Plastic	
	Sheervision	Del Rey	Plastic	



Mounting Summary: The light mounting instructions above provides general guidance to light assembly steps. Consult with DentLight for detailed instructions on custom loupe assembly and loupe adapters. A washable Soft Headband option is available for general purpose and universal use of the light.

RUN: Turn on Nano by pressing the raised ON/OFF button. Adjust power levels by PRESSING AND HOLDING ON/OFF button for 2 seconds. Turn off anytime by pressing the ON/OFF button again. Light will remember the last power setting



when turning on the next time. Battery Indicator shows the status of the battery when the light turns on or off. In case no lamp is connected, the battery beeps and turns off automatically after a few seconds.

At low battery, an audible beep alarms 1 minute before the light goes off. To recharge, simply plug in Power Adapter (5V) cord to the male DC connector. The battery charge indicator turns on while charging and turns off automatically when it is fully charged.

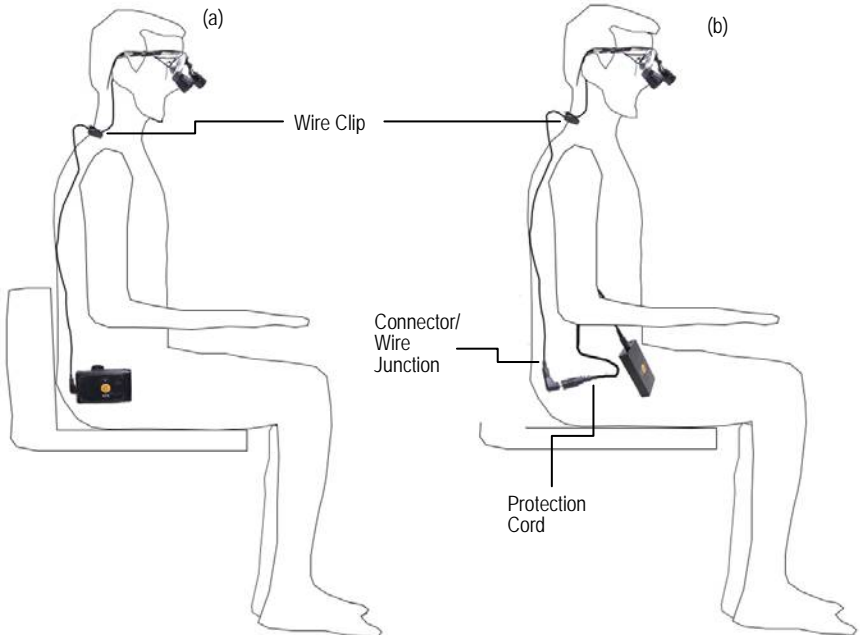
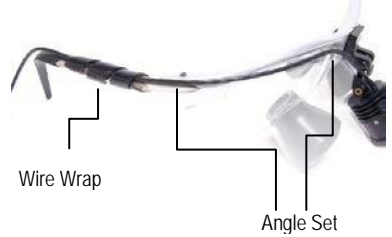
WIRING:

Angle set the lamp wire coming out of the Nano Headlamp to conform to the contour of your loupe frame. Use Wire Wrap/Clip to attach lamp wire to frame temple/leg. Use Shirt Wire Clip to fix the lamp wire on the collar of scrub on the back of your neck.

Use Protection Cord to protect the lamp wire and extend the service life. Minimize wire stress at the battery connection junction. Avoid bending wire close to 90 degrees at the lamp wire to Protection Cord or Battery connection.

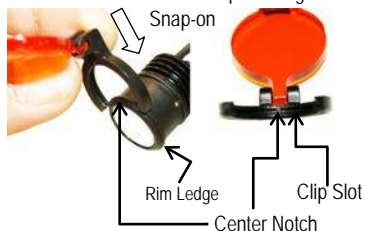
Place battery in one of the following configurations:

- (a) Position Battery Pack with the Battery Clip/Pouch on the waist or belt of your scrub/pocket rim. Route the wire straight up from your back. Route the wire with minimum tension or stress at the Connector/Wire Junction to extend wire lifetime. Avoid bending 90 degrees at the junction.
- (b) Place Battery Pack directly in your scrub pocket. **Make sure that Protection Cord is used.** Route the lamp wire with minimum tension or stress at the Connector/Wire Junction to extend lamp wire lifetime. Avoid bending 90 degrees at the Connector/Wire Junction.



COMPOSITE FILTER:

Align the slot of the Composite Filter Clip to the Rim Ledge close to the front end of the Nano Headlamp housing. Further align the Center Notch on the Headlamp to that of the Filter Clip. Snap on the Filter Clip for a secure fit.



TIPS

Wire routing –Route lamp wire to minimize stress. **DO NOT ROUTE OR BEND WIRE 90 DEGREES AT THE WIRE CONNECTOR JUNCTION!**

Use Protection Cord all the times to extend service life.

Battery – Charge Battery Pack while not in use to extend battery life.

Cleaning and Disinfecting

- Clean and disinfect Headlamp and Battery Pack with a soft cloth or tissue dampened with cleaning solution including: Cavicide, Lysol, Isopropyl or Ethyl alcohol and equivalent. **⚠ Do not spray, soak, or autoclave.**
- Use Q-tips to clean lens and electrical contacts by slightly dampening the tip (do not soak) with Isopropyl alcohol.
- Machine wash Soft Headband.

Product Specification

Type of information		Specifications	
Color Temperature (K)		5000- 6500	
Light Intensity (±15% lux)*	Level I	16000	
	Level II	20000	
	Level III	40000	
Power Adapter		Input: 100-240V - 50/60Hz; Output: 5V DC 2A	
Beam Size (inch)		2.8 @ 14 inch distance	
Battery performance (hours)		Nano 2S	Nano 2C
	Level I	24	10
	Level II	14	6
	Level III	10	4.5
Battery		Lithium Ion (2S) and Lithium Polymer (2C). Recharging time 3 hrs. LED indicator on during charging and off when fully charged.	
Overcurrent Protection		Auto	
Lamp Dimension (mm)		18 (diameter)	
Service Lifetime		Life time of the device is two years in normal office use based on the life of the battery. Replace the battery for continued use after that.	
EMC Compliance		IEC 60601-1-2	
Battery Dimensions (mm)		45x76x15 (2C); 46x74x21mm (2S)	

Weight (grams):	Lamp: 6; Battery: 85 (2C), 140 (2S)
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Limited Life-time WARRANTY

Register your Nano light at www.dentlight.com. DentLight Inc. extends a Life-time warranty on the LED bulb and one-year warranty on the rest of the components including battery, lamp and protection cord against defects in material and workmanship to the original purchaser of this product. This warranty is valid providing factory inspection indicates that any such defect was developed during normal and proper use. DentLight shall under no circumstances be liable for incidental, special, consequential damages and damage from misuse including the following expressed or implied:

- Improper operation, accident or neglect, misuse or abuse, such as physical damage (drops, cuts, scratches, etc.);
- Liquid, water, rain, extreme humidity, ultrasonic, autoclaving;
- Tampering, improper repairs or modifications that have not been carried out by a certified Service Center;
- Use of other spare parts and accessories other than from the manufacturer such as incorrect power adapter;
- Other acts which are not the faults of DentLight.

For service, call 1-800-763-6901 (in US) to obtain RMA number. Fill out RMA form online and return as instructed. In case of a warranty claim, the complete apparatus must be returned. Alternatively, contact your dealer for service return.

Troubleshooting Guide

Problem	Error Indication	Possible Solutions
Light will not turn on	<ol style="list-style-type: none"> 1. No Battery Bar or no battery power indicating beep. 2. Battery full but beeps when lamp is connected. 3. Wire/connector broken. 	<ol style="list-style-type: none"> 1) Charge Battery Pack overnight. 2) Bad connection between the lamp and the battery. Replace battery or lamp or have it sent back for service. 3) Replace wire or return to manufacturer for component service.
Battery will not charge	<ol style="list-style-type: none"> 1. Broken pins in battery DC plug; 2. Battery out of capacity. 	Replace battery pack or return to manufacturer for service.

Reorder and Optional Item Codes

REF	Description	REF	Description
8600113	Nano 2S	8500024	L-adapter
8600112	Nano 2C	8500021	U-adapter
8600020	Nano Headlamp	8500223	Soft Headband
8600130	Nano 2S Battery Pack	8500040Y*	Power Adapter
8600230	Nano 2C Battery Pack	8501012	Protection Cord

* Y: US, EU, UK, AU (Australia)

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