



We provide the best warranty terms in the industry, and we maintain a growing UV-A product line, demonstrating our commitment to innovation, quality, and our customers



# LABINO NDT

We are the standard

COMPLIES WITH  
ASTM E3022-2018  
Standard

COMPLIES WITH  
Rolls-Royce RRES 90061  
Specification

COMPLIES WITH  
Airbus AITM6-1001  
Testing Method

COMPLIES WITH  
Pratt & Whitney  
Requirements

COMPLIES WITH  
The Boeing Co  
Requirements

COMPLIES WITH  
USAF  
Requirements



Labino AB  
50 Countries – 80 Distributors – 25 Service Centers – 7 Calibration Centers





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**Warm greetings** to you from the Labino team, the leading manufacturer of high quality UV Inspection lights and measurement instruments.

Labino is the only company in the world that focuses exclusively on developing UV lights. UV lights is not just another division for us. We are not distracted by manufacturing mag benches, chemicals, FPI lines, boxes or anything else. We have developed a complete product line of UV lights for NDT professionals, with one mission and one mission only, to offer the best and most durable product portfolio in the world that can be used in the toughest working conditions anywhere. We seek to continuously upgrade

(France) and U.K. All calibration centers follow a specific process proprietary to Labino, all have the same equipment, and all receive the same training. We do not allow comparison calibrations at any Labino authorized calibration center.

Labino follows closely, and its products are tested to comply with, a variety of Industry standards such as ASTM E3022-18 and ISO 3059-12, as well as PRIMES requirements such as Rolls-Royce RRES 90061, Airbus AITM6-1001, USAF, The Boeing Co., Pratt & Whitney and more.

Labino AB is an ISO 9001-2015 certified company and an accredited Calibration Laboratory as per ISO/IEC 17025.

We would like to acknowledge that “field pictures” inside

” we offer a 4-year warranty on our new stationary lights and a 2-4 year warranty on our new portable lights ”

this product portfolio with newer technologies. That is why we offer a 4-year warranty on our new stationary lights and a 2-4 year warranty on our new portable lights.

All Labino products are manufactured in Sweden with many first to market products in our portfolio such as explosion proof UV lights, waterproof UV lights, penetrant resistant UV lights, wireless UV meters and more. Our products are available in over 50 countries via a wide network of 80 distributors, 25 service centers and 7 calibration centers.

Our Apollo dual meter calibration services are now offered in Chicago (USA), Houston (USA), Edmonton (Canada), Stockholm (Sweden), Bilbao (Spain), St. Etienne de Tulmont

this catalog are the work of US Airforce. We would like to publicly thank the USAF Department of Public Affairs for granting us permission to use them.

If you have any questions, suggestions or complaints please contact me directly at [lisel.athanasiadis@labino.com](mailto:lisel.athanasiadis@labino.com). My kindest regards to you and your team,

Lisel Athanasiadis  
Managing Director



NDT Technician of the 108th Maintenance Squadron analyzes a part of the KC-135R Stratotanker aircraft using a Labino UVG5 headlight and a Labino BB 2.0 Series at Joint Base McGuire-Dix-Lakehurst, N.J., Sept. 22, 2019.



“We would like to acknowledge that “field pictures” inside this catalog are the work of US Airforce. We would like to publicly thank the USAF Department of Public Affairs for granting us permission to use them”



NDI Technician of the 5th Maintenance Squadron is testing for cracks and imperfections on B-52H Stratofortress parts and aircraft support equipment with a UVG3 UV light at Minot Air Force Base, N.D., Jan. 25, 2019.



## NDT Industries

We find solutions to your specific needs:



### AEROSPACE

All PRIMES have a choice of a Labino UV light that complies with their respective internal requirements



### MARITIME

Durable and waterproof products tested to function in extreme weather conditions



### DEFENSE

Products build to comply with military specifications and standards



### PIPELINES

All Labino handheld lamps have a battery option for field inspections



### AUTOMOTIVE

Light and compact lights used 24 x 7 in a serial production environment



### OIL & GAS

Explosion proof products keep your personnel and physical assets safe

# Labino LED Lamps

We thoroughly investigate the specific needs of every industry and design unique products that address them.

**Labino offers** a wide range of LED lamps, equipped with a variety of features, to satisfy the needs of UV light users in all industries engaging with magnetic particle and liquid penetrant inspections. Labino products are especially designed to offer convenience without compromising performance. The key characteristic of all Labino LED products is that they weigh less than many comparable products on the market today and they are extremely durable.

All our LED products have been tested against industry standards such as ASTM E3022-18, EN ISO 3059-12 and specifications of PRIMES such as Rolls-Royce RRES 90061 and Airbus AITM6-1001.

### New LED Products

The NDT world now has Cosmos, a dedicated UV light for wash stations. A single Cosmos light covers with UV an area of 7 x 7 feet (2 x 2 meters). Ideal for large aerospace users.

BB 2.0 Series is now penetrant resistant and has an Ingress Protection 68 (IP68 Waterproof). The beam profile is probably the largest and smoothest from any portable UV light on the market today. Depending on the model, the beam diameter is 10-11 inches / 26-28 cm. BB 2.0 Ikaros and BB 2.0 Helios maintain the existing intensities of  $\approx 4\,000\ \mu\text{W}/\text{cm}^2$  and  $\approx 9\,000\ \mu\text{W}/\text{cm}^2$ , respectively, with improved battery running times of 7 hours and 6 hours, respectively. BB 2.0 Artemis is the most powerful handheld UV LED light in the world with UV intensity in excess of  $22\,000\ \mu\text{W}/\text{cm}^2$ .

UVG3 2.0 is now penetrant resistant and has an Ingress Protection 68 (IP68 Waterproof). Depending on the model, the beam diameter is 3-5 inches / 8-12.5 cm. The floodlight model has been tested to comply with ASTM E3022-18, Airbus AITM6-1001 and Rolls-Royce RRES 90061.

UVG5 2.0 is the only UV headlight worldwide in compliance with Rolls-Royce RRES 90061. Five different models offer users plenty of battery life and white light options.

MB 3.0 now comes with higher UV intensities as well. Selene and Atlas have UV intensities in excess of  $9\,000\ \mu\text{W}/\text{cm}^2$ . Zeus and Hermes maintain intensities of  $4\,500\ \mu\text{W}/\text{cm}^2$ .

Don't miss the Inspector Kit, a combination of 3 UV lights (MB 3.0, UVG3 2.0, UVG5 2.0) and 1 UV meter (Apollo 3.0).

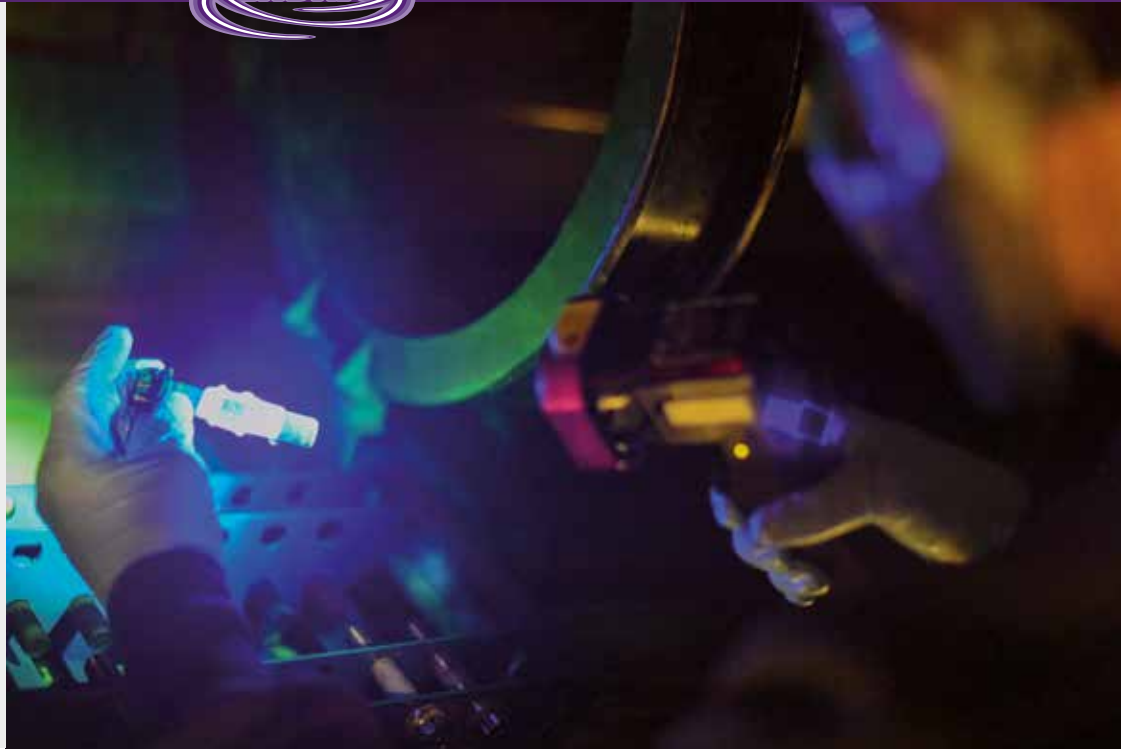
### Warranty Policy

All stationery GX Orion models carry a 4 year warranty. All portable models, namely Hercules EX, BB 2.0 Series, UVG3 2.0 Series, UVG5 2.0 Series and MB 3.0 Series carry between 2-4 year warranty.





NDI Technician of the 100th Maintenance Squadron performs a magnetic particle inspection on a sample part, at RAF Mildenhall, England, Feb. 7, 2019 using a Labino MB 2.0 Series UV light. Magnetic particle inspections are used to identify stress fatigue fractures on a high variety of parts, varying from bolts, tow bars and other supporting aerospace ground equipment.



NDI Technician of the 5th Maintenance Squadron non-destructive inspection journeyman, shines a Labino UVG3 UV light during a fluorescent penetrant inspection at Minot Air Force Base, N.D., Oct. 18, 2016. The UV light helps locating cracks and imperfections on parts of the B-52H Stratofortress and aircraft support equipment.



NDI Technician of the 108th Maintenance Squadron looks at cracks seen on a KC-135 Stratotanker part using a Labino BB 2.0 Series UV light, during a training session at Joint Base McGuire-Dix-Lakehurst, N.J., April 22, 2017.



Compliance with relevant ASTM and ISO Standards as well as Industry Engineering specifications

Labino AB LED UV Lights	Built in White Light LED	UV Intensity at 38 cm (15") (µW/cm <sup>2</sup> )	COMPLIES WITH ASTM E3022-2018 Standard	COMPLIES WITH Rolls-Royce RR590061 Specification	COMPLIES WITH Airbus A1746-1001 Testing Method	COMPLIES WITH Pratt & Whitney Requirements	COMPLIES WITH The Boeing Co Requirements	COMPLIES WITH ISO 3039-12 Standard	COMPLIES WITH USAF Requirements
<b>GX SERIES – OVERHEAD LIGHT</b>									
<b>GX Orion REMOTE</b>	✓	1 500-7 000	✓	-	-	-	-	✓	-
<b>GX Orion UV &amp; WH</b>	✓	≈ 7 000	✓	-	✓	✓	-	✓	-
<b>GX Orion UV</b>	-	≈ 4 500	✓	✓	✓	✓	✓	✓	✓
<b>BB 2.0 SERIES – HANDHELD LIGHT</b>									
<b>BB 2.0 Helios</b>	-	≈ 9 000	✓	-	✓	✓	-	✓	✓
<b>BB 2.0 Ikaros</b>	-	≈ 4 000	✓	✓	✓	✓	✓	✓	✓
<b>BB 2.0 Artemis</b>	-	≈ 22 000	✓	-	-	-	-	✓	-
<b>MB 3.0 SERIES – HANDHELD LIGHT</b>									
<b>Hercules Ex</b>	-	≈ 4 000	✓	✓	✓	✓	✓	✓	✓
<b>MB 3.0 Zeus</b>	✓	≈ 4 500	✓	✓	✓	✓	✓	✓	-
<b>MB 3.0 Zeus with Athena</b>	✓	≈ 4 500	✓	✓	✓	✓	✓	✓	-
<b>MB 3.0 Hermes</b>	-	≈ 4 500	✓	✓	✓	✓	✓	✓	✓
<b>MB 3.0 Hermes with Athena</b>	-	≈ 4 500	✓	✓	✓	✓	✓	✓	✓
<b>MB 3.0 Selene</b>	✓	≈ 9 000	✓	-	✓	✓	-	✓	-
<b>MB 3.0 Selene with Athena</b>	✓	≈ 9 000	✓	-	✓	✓	-	✓	-
<b>MB 3.0 Atlas</b>	-	≈ 9 000	✓	-	✓	✓	-	✓	✓
<b>MB 3.0 Atlas with Athena</b>	-	≈ 9 000	✓	-	✓	✓	-	✓	✓
<b>MB 2.0 SERIES – FLASHLIGHT / HEADLIGHT</b>									
<b>UVG3 2.0 Spotlight</b>	-	≈ 80 000	✓	-	-	-	-	✓	-
<b>UVG3 2.0 Midlight</b>	-	≈ 9 000	✓	-	✓	✓	-	✓	✓
<b>UVG3 2.0 Floodlight</b>	-	≈ 4 000	✓	✓	✓	✓	✓	✓	✓
<b>UVG5 2.0 Spotlight</b>	Optional	≈ 80 000	✓	-	-	-	-	✓	-
<b>UVG5 2.0 Midlight</b>	Optional	≈ 9 000	✓	-	✓	✓	-	✓	✓
<b>UVG5 2.0 Floodlight</b>	-	≈ 4 000	✓	✓	✓	✓	✓	✓	✓

PLEASE NOTE: The above models are in compliance with the above ASTM and ISO standards as well as industry specifications as indicated on the table above irrespective of the power source (Battery or Mains).





UVG3 2.0 Floodlight (PN: L136)  
 UVG3 2.0 Midlight (PN: L135)  
 UVG3 2.0 Spotlight (PN: L134)



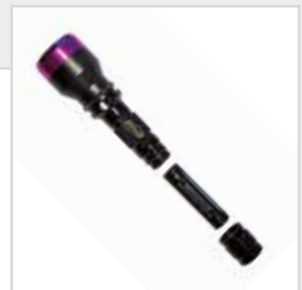
2 Year warranty

Powerful, penetrant resistant and with an Ingress Protection 68 (IP68 Waterproof). The beam profile is probably the largest and smoothest from any UV-A torch light on the market today. Depending on the model, the beam diameter is 3-5 inches / 8-12 cm and with intensities that vary from  $\approx 4\ 000$  to  $80\ 000\ \mu\text{W}/\text{cm}^2$ ! Selected models have been tested to comply with ASTM E3022-18, Rolls-Royce RRES 90061 and Airbus AITM6-1001. Battery running times are up to 6 hours.



**ONE UV LED WITH WHITE LIGHT BLOCK FILTER**

A high quality UV LED with respective high quality white light block filter that does not suffer from solarization.



**BATTERY POWERED**

Powered by a battery that can be recharged either by a cigarette outlet in a vehicle or a wall outlet. Both chargers are supplied with each unit.



**BELT HOLSTER**

Each UVG3 2.0 torch is supplied with a belt holster.



**RUBBER BUMPER**

Protects your light from mechanical impacts and prevents it from rolling.



**ON/OFF SWITCH**

On/Off switch is positioned at the back to prevent accidental activation.



**OLYMPUS MEASUREMENT STAND**

Perform daily checks and confirm compliance with pledged standards using Olympus stand (PN: A542).





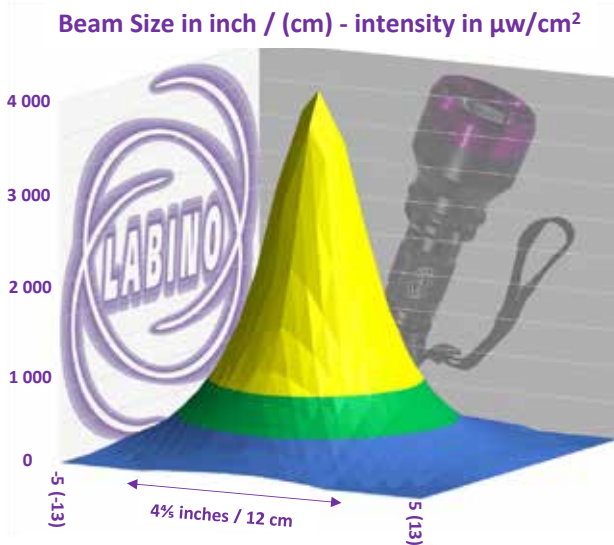
**UVG3 2.0 Series products** are small and compact UV-A lights with a powerful output, a convenient tool for quick inspections. The UVG3 2.0 torch weighs just 211 grams (7.4 oz). The UVG3 2.0 Series has been specifically designed to meet the ASTM E3022-18 and ISO 3059-12 standards as well as Rolls-Royce RRES 90061, Airbus AITM6-1001 and other requirements set by the PRIMES.



**UVG3 2.0 Floodlight (PN: L136)**

UVG3 2.0 Floodlight has been tested to comply with ASTM E3022-18 and ISO 3059-12 standards as well as with Rolls-Royce RRES 90061 and Airbus AITM6-1001. It generates an intensity of approximately 4 000  $\mu\text{W}/\text{cm}^2$  at 38 cm (15 inches). The battery running time is 6 hours.

**Beam profile > 1 000  $\mu\text{W}/\text{cm}^2$  measured at 15 inches/ 38 cm of UVG3 2.0 Floodlight:**



**FACTS ABOUT UVG3 2.0 FLOODLIGHT**

Output Characteristics	UVG3 2.0 Floodlight
Intensity	$\approx 4\,000\ \mu\text{W}/\text{cm}^2$
Visible light	$< 1.5\ \text{lux} / 0.1\ \text{fc}$
Beam > 1 000 $\mu\text{W}/\text{cm}^2$	$\varnothing 4.8\ \text{inches} / 12\ \text{cm}$

At a distance of 38 cm (15 inches)



**UVG GOOSENECK ARM**

UVG3 2.0 torches can be mounted on a Labino UVG Gooseneck arm (PN: A532).



**UVG3 2.0 KIT (DOUBLE) PACKAGE INCLUDES:**

Two lamps, Car Charger, Three Batteries, UV Block Goggles, External Charger for wall outlet, carrying case, two belt holsters, two wrist bands, 2 rubber bumpers.



**UVG3 2.0 KIT (SINGLE) PACKAGE INCLUDES:**

Lamp, Car Charger, Two Batteries, UV Block Goggles, External Charger for wall outlet, carrying case, belt holsters, wrist band, rubber bumper.





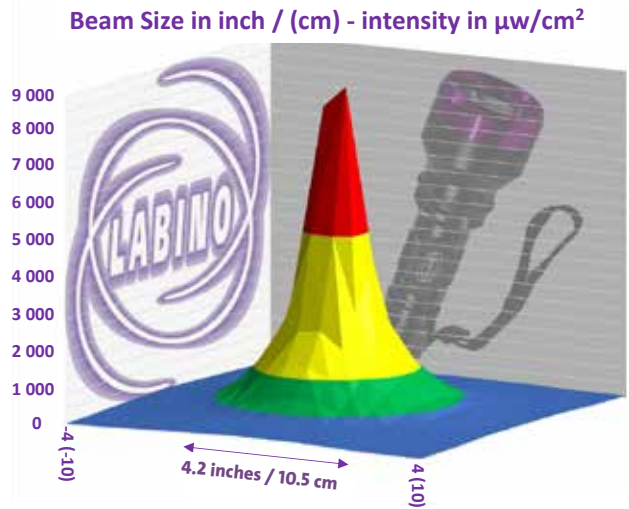
**UVG3 2.0 Spotlight (PN: L134)  
UVG3 2.0 Midlight (PN: L135)**

UVG3 2.0 Spotlight and UVG3 2.0 Midlight have been tested to comply with both ASTM E3022-18 and ISO 3059-12 standards. UVG3 2.0 Midlight also complies with Airbus AITM6-1001 at a working distance of 21 inches (53 cm). They generate intensities of approximately 80 000  $\mu\text{W}/\text{cm}^2$  and 9 000  $\mu\text{W}/\text{cm}^2$  at 38 cm (15 inches), respectively. The battery running time is 4 hours for the Spotlight and 6 hours for the Midlight. NDT Technicians at US Airforce should ask for UVG3 2.0 Midlight (PN: L135). UVG3 2.0 Spotlight (PN: L134) is not in compliance with USAF.

**TECHNICAL DATA**

UVG3 2.0	
UV LED:	1
Wavelength:	365 nm (peak) +/- 5 nm
Estimated LED life:	30 000 hours
UV-B:	100% free from UV-B
Filter:	White light block filter
Power supply:	Battery
Weight UVG3 2.0:	211 grams (7.4 oz)

**Beam profile > 1 000  $\mu\text{W}/\text{cm}^2$  measured at 15 inches/  
38 cm of UVG3 2.0 Midlight:**



**FACTS ABOUT UVG3 2.0 Spotlight and UVG3 2.0 Midlight**

Output Characteristics	UVG3 2.0 Spotlight	UVG3 2.0 Midlight
Intensity	$\approx 80\,000\ \mu\text{W}/\text{cm}^2$	$\approx 9\,000\ \mu\text{W}/\text{cm}^2$
Visible light	< 20 lux / 2 fc	< 3 lux / 0.3 fc
Beam > 1 000 $\mu\text{W}/\text{cm}^2$	$\varnothing 3.0$ inches/7.6 cm	$\varnothing 3.8$ inches/9.5 cm

At a distance of 38 cm (15 inches)

**FACTS ABOUT UVG3 2.0 SERIES**

Part Number	Model	Battery Run Time	UV Intensity	Beam Size
L134	UVG3 2.0 Spotlight	4 hours	80 000 $\mu\text{W}/\text{cm}^2$	$\varnothing 3$ inches / 7.6 cm
L135	UVG3 2.0 Midlight	6 hours	9 000 $\mu\text{W}/\text{cm}^2$	$\varnothing 4.2$ inches / 10.5 cm
L136	UVG3 2.0 Floodlight	6 hours	4 000 $\mu\text{W}/\text{cm}^2$	$\varnothing 4.8$ inches / 12 cm



# UVG5 2.0

COMPLIES WITH  
ASTM E3022-2018  
Standard

COMPLIES WITH  
Rolls-Royce RRES 90061  
Specification

COMPLIES WITH  
Airbus AITM6-1001  
Testing Method

COMPLIES WITH  
USAF  
Requirements

**3 Year warranty**

Extremely durable! Compact, powerful and adjustable headlight that frees your hands during inspections. White light is optional. The beam profile is probably the largest and smoothest from any UV-A headlight on the market today. Depending on the model, the beam diameter is 3-5 inches / 8-12 cm and with intensities that vary from  $\approx 4\ 000$  to  $80\ 000\ \mu\text{W}/\text{cm}^2$ ! Selected models have been tested to comply with ASTM E3022-18, Rolls-Royce RRES 90061 and Airbus AITM6-1001. Battery running times are up to 14 hours!



**ADJUSTABLE LIGHT**

The lamp can be adjusted to three different angles.



**BATTERY POWERED**

Powered by two lithium batteries that can be recharged either by a cigarette outlet in a vehicle, a wall outlet or a PSU charger (without removing the batteries).



**ONE UV LED WITH WHITE LIGHT BLOCK FILTER AND OPTIONAL FOUR WHITE LIGHT LEDS**

A high quality UV LED with respective high quality white light block filter that does not suffer from solarization. Two different white lights: (a) a strong "search" white light for use in dark and tight spaces such as pipes and tanks and (b) a visual inspection white light.



**ON/OFF SWITCH**

On/Off switch is positioned at the back to prevent accidental activation.



FACTS ABOUT UVG5 2.0 SERIES

Part Number	Model	White Light	Battery Run Time	UV Intensity	Beam Size
L127	UVG5 2.0 Spotlight	YES	8 hours	80 000 $\mu\text{W}/\text{cm}^2$	Ø 3 inches / 7.6 cm
L128	UVG5 2.0 Midlight	YES	14 hours	9 000 $\mu\text{W}/\text{cm}^2$	Ø 4.2 inches / 10.5 cm
L129	UVG5 2.0 Midlight	NO	14 hours	9 000 $\mu\text{W}/\text{cm}^2$	Ø 4.2 inches / 10.5 cm
L130	UVG5 2.0 Floodlight	YES	10 hours	4 000 $\mu\text{W}/\text{cm}^2$	Ø 4.8 inches / 12 cm
L131	UVG5 2.0 Floodlight	NO	10 hours	4 000 $\mu\text{W}/\text{cm}^2$	Ø 4.8 inches / 12 cm

UVG5 2.0

UVG5 2.0 Spotlight, Midlight and Floodlight have been tested to comply with both ASTM E3022-18 and ISO 3059-12 standards. The UVG5 2.0 Floodlight also complies with Rolls-Royce RRES 90061 and Airbus AITM6-1001. The Spotlight, Midlight and Floodlight generate intensities of approximately 80 000  $\mu\text{W}/\text{cm}^2$ , 9 000  $\mu\text{W}/\text{cm}^2$  and 4 000  $\mu\text{W}/\text{cm}^2$  at 38 cm (15 inches), respectively. The battery running time is approximately 8 hours for the Spotlight,

10 hours for the Floodlight and 14 hours for the Midlight. Charging time is 3 hours. Three models (Spotlight - L127, Midlight - L128 and Floodlight - L130) come with white light. There are two different white lights you can operate the UVG5 2.0 with, (a) a strong “search” white light for use in dark and tight spaces such as pipes and tanks and (b) a visual inspection white light. NDT Technicians at US Airforce should ask for Part Number UVG5 2.0 Midlight (PN: L129).



NDI Technician of the 108th Maintenance Squadron, analyzes a part of the KC-135R Stratotanker aircraft at Joint Base McGuire-Dix-Lakehurst, N.J., using a Labino UVG5 headlight.





# MB 3.0 Zeus

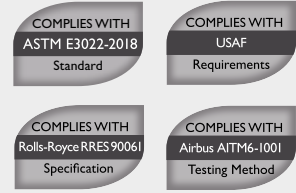
(Mains model PN: L119, Battery model PN: L118)

# MB 3.0 Hermes

(Mains model PN: L121, Battery model PN: L120)

# MB 3.0 Selene (Mains model PN: L139, Battery model PN: L138)

# MB 3.0 Atlas (Mains model PN: L125, Battery model PN: L124)



**2 Year warranty**

This compact light is simply Genius! A combination of smart mechanics and efficient electronics, designed to survive extreme temperatures and harsh working conditions, 24 x 7. Penetrant resistant, with acoustic battery indicator and certified with an ingress protection marking of IP68. Depending on the model, the beam diameter is 8-9 inches / 20-22 cm and with intensities that vary from  $\approx 4\ 000$  to  $9\ 000\ \mu\text{W}/\text{cm}^2$ . Zeus and Selene are equipped with a strong white light as well.



**OPTIONAL SPRAY CAN HOLDER ACCESSORY "ATHENA"**

Athena mounts on the light and can fit ALL aerosol brands that are used in NDT. Buy it factory installed or add it later (PN: A503).



**OPTIONAL MEASUREMENT ACCESSORY "OLYMPUS"**

Your daily NADCAP and/or ASTM E3022-18 checks can be carried out accurately with an Olympus stand (PN: A542) and an Apollo 3.0 dual meter (PN: M513).



**AC (MAINS) POWERED MODELS**

come with 4 meters (13 ft) cables, but length can be customized. Add a Flexible arm accessory (PN: A538) near your mag bench for convenience.



**BATTERY POWERED MODELS**

Powered by two Li-ion batteries that can be recharged either by a cigarette outlet in a vehicle, a wall outlet or a PSU charger (without removing the batteries) – 2 hours charging time.



**ACOUSTIC BATTERY INDICATOR**

gives NDT technicians warning sounds indicating the remaining battery run time of the light.



**BATTERY VERSION PACKAGE INCLUDES:**

Lamp, Car Charger, Four Batteries, UV Block Goggles, External Charger for wall outlet, Carrying Case, Belt holster, Power supply for charging batteries while operating.



**MAINS VERSION PACKAGE INCLUDES:**

Lamp with 4 meter (13 feet) cord, Power Supply Unit 100-240V AC, AC power cord, UV Block Goggles, Carrying Case. The cord can be customized to the length of your choice.

**MB 3.0 Series products Zeus, Hermes, Selene and Atlas** are lights with UV-A output. They are compact and weigh less than many comparable products but are extremely robust in nature, designed for heavy industries with very difficult operating environments. The AC (mains) operated model weighs just 650 grams (1.4 lbs) and the battery operated model weighs just 680 grams (1.5 lbs).

The MB 3.0 Series has been specifically designed to meet the ASTM E3022-18 and ISO 3059-12 standards as well requirements set by the PRIMES. The optics used in the MB 3.0 Series meet the Rolls-Royce RRES 90061 specification. The beam profile of the UV light is extremely homogenous without any footprints showing from the LEDs, shades, dark spots or other disturbing defects.



**MB 3.0 Zeus  
(Mains model PN: L119, Battery model PN: L118)  
MB 3.0 Hermes  
(Mains model PN: L121, Battery model PN: L120)**

MB 3.0 Zeus and MB 3.0 Hermes have been tested to comply with both ASTM E3022-18 and ISO 3059-12 standards as well as with the internal requirements of all PRIMES listed on page 8, including Rolls-Royce RRES 90061 and Airbus AITM6-1001. MB 3.0 Hermes is also in compliance with USAF. These UV lights generate an intensity of approximately 4 000 µW/cm<sup>2</sup> at 38 cm (15 inches) and the battery version has a running time of 3.5 hours.

Difference between Zeus and Hermes: Zeus is equipped with a strong white light LED that generates more than 1 076 lux (100 fc) for after inspection. Hermes does not have a white light LED for organizations that do not allow use of white light.

The battery versions of MB 3.0 Zeus and MB 3.0 Hermes have a useful accessory, the Athena spray can holder, which works with all aerosol brands. Get it factory installed or add one later (PN: A503).

MB 3.0 Zeus (battery) with Athena, PN: L122.  
MB 3.0 Hermes (battery) with Athena, PN: L123.

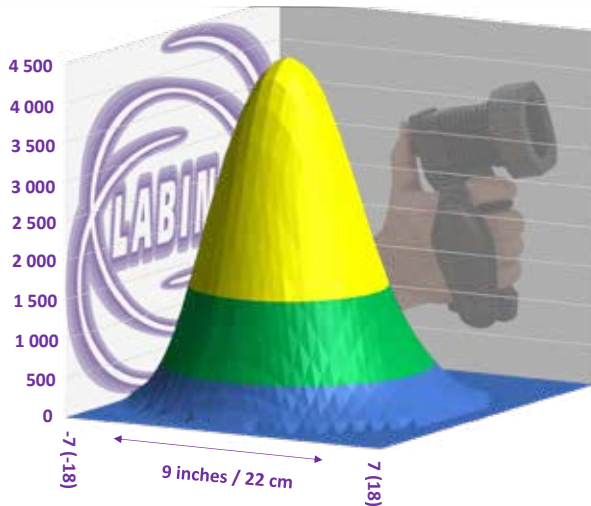
FACTS ABOUT MB 3.0 ZEUS, MB 3.0 HERMES

Output Characteristics	MB 3.0 Zeus MB 3.0 Hermes
Intensity	≈ 4 000 μW/cm <sup>2</sup>
Visible light	< 2 lux / 0.2 fc
Beam > 1 000 μW/cm <sup>2</sup>	Ø 9 inches / 22 cm

At a distance of 38 cm (15 inches)

**Beam profile > 1 000 μW/cm<sup>2</sup> measured at 15 inches / 38 cm of Zeus and Hermes:**

Beam Size in inch / (cm) - intensity in μw/cm<sup>2</sup>



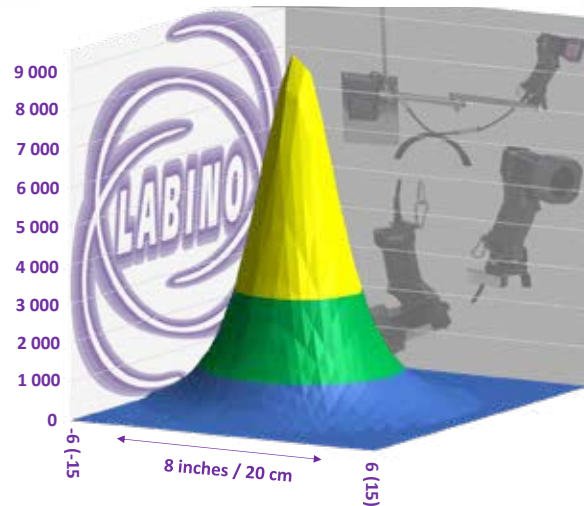
FACTS ABOUT MB 3.0 SELENE, MB 3.0 ATLAS

Output Characteristics	MB 3.0 Selene MB 3.0 Atlas
Intensity	≈ 9 000 μW/cm <sup>2</sup>
Visible light	< 4 lux / 0.4 fc
Beam > 1 000 μW/cm <sup>2</sup>	Ø 8 inches / 20 cm

At a distance of 38 cm (15 inches)

**Beam profile > 1 000 μW/cm<sup>2</sup> measured at 15 inches / 38 cm of Selene and Atlas:**

Beam Size in inch / (cm) - intensity in μw/cm<sup>2</sup>



FACTS ABOUT MB 3.0 SERIES

Part Number	Model	White Light	Battery Run Time	UV Intensity	Beam Size
L118	MB 3.0 Zeus Battery	YES	3.5 hours	4 000 μW/cm <sup>2</sup>	Ø 9 inches / 22 cm
L119	MB 3.0 Zeus Mains	YES	N/A	4 000 μW/cm <sup>2</sup>	Ø 9 inches / 22 cm
L120	MB 3.0 Hermes Battery	NO	3.0 hours	4 000 μW/cm <sup>2</sup>	Ø 9 inches / 22 cm
L121	MB 3.0 Hermes Mains	NO	N/A	4 000 μW/cm <sup>2</sup>	Ø 9 inches / 22 cm
L138	MB 3.0 Selene Battery	YES	2.5 hours	9 000 μW/cm <sup>2</sup>	Ø 8 inches / 20 cm
L139	MB 3.0 Selene Mains	YES	N/A	9 000 μW/cm <sup>2</sup>	Ø 8 inches / 20 cm
L124	MB 3.0 Atlas Battery	NO	2.5 hours	9 000 μW/cm <sup>2</sup>	Ø 8 inches / 20 cm
L125	MB 3.0 Atlas Mains	NO	N/A	9 000 μW/cm <sup>2</sup>	Ø 8 inches / 20 cm





**MB 3.0 Selene**  
**(Mains model PN: L139, Battery model PN: L138)**  
**MB 3.0 Atlas**  
**(Mains model PN: L125, Battery model PN: L124)**

MB 3.0 Selene and MB 3.0 Atlas have been tested to comply with ASTM E3022-18 and ISO 3059-12 standards. Both models comply with Airbus AITM6-1001 at a working distance of 21 inches (53 cm). MB 3.0 Atlas complies with the internal requirements of US Airforce as well. These UV lights generate an intensity of approximately 9 000  $\mu\text{W}/\text{cm}^2$  at 38 cm (15 inches) and the battery version has a running time of 2.5 hours.

Difference between Selene and Atlas: Selene is equipped with a strong white light LED that generates more than 1 076 lux (100 fr) for after inspection. Atlas does not have a white light LED for organizations that do not allow use of white light.

The battery versions of MB 3.0 Selene and MB 3.0 Atlas has a useful accessory, the Athena spray can holder, which works with all aerosol brands. Get it factory installed or add one later (PN: A503).

MB 3.0 Selene (battery) with Athena, PN: L140.  
 MB 3.0 Atlas (battery) with Athena, PN: L126.

**TECHNICAL DATA**

	<b>MB 3.0 Zeus, MB 3.0 Hermes, MB 3.0 Selene and MB 3.0 Atlas</b>
UV LED:	4 (MB 3.0 Zeus, MB 3.0 Hermes) 3 (MB 3.0 Selene, MB 3.0 Atlas)
Wavelength:	365 nm (peak) +/- 5 nm
Estimated LED life time:	30 000 hours
UV-B:	100% free from UV-B
Filter:	White light block filter
Power supply:	Battery or Mains
Weight Battery:	680 grams (1.5 lbs)
Weight Mains:	650 grams (1.4 lbs)
Zeus/Hermes Battery running time:	3.5 hours (+/- 5%)
Selene/Atlas Battery running time:	2.5 hours (+/- 5%)

Accessories for MB 3.0 Series

<b>MB 3.0 Zeus, MB 3.0 Hermes, MB 3.0 Selene, MB 3.0 Atlas</b>	
UV Block Visor (PN: S400)	
UV Block Goggles "XC" (PN: S505)	
Flexible Arm for MB 2.0 Series (PN: A538 for Mains units) (PN: A541 for Battery units)	
Friction Arm (PN: A530)	
Rubber Bumper (PN: F106)	
Protection PSU Bracket (PN: F211)	
Magnet for PSU (A601)	
Customized Carrying Case (PN: C1002) (PN: C1003 w / Athena)	
Thumb Screws for Battery Lid (F105)	





## RISK 1 – INACCURATE CALIBRATIONS OF UV AND WHITE LIGHT METERS COULD DISRUPT YOUR OPERATIONS AND BE A REASON YOU ARE MISSING AN INDICATION

**How many times** did you test several meters in your shop, each showing different values? If you are paying USD 200-250 for a calibration, wouldn't you want your light to measure correctly?

There is a large population of UV and White Light Meters in use by NDT professionals today that does not measure UV irradiance and white light illuminance accurately. Either

the design of an instrument and the components (if any) that deteriorate over time.

Labino recommends that you purchase your units from OEMs that are audited and certified for ISO 17025 (or equivalent) with scope in UV and white light calibrations and continue to calibrate with labs that carry the same qualification.

” There is a large population of UV and White Light Meters in use by NDT professionals today that does not measure UV irradiance and white light illuminance accurately ”

because the design is inadequate for this application or because the calibration was not performed properly. Lack of a valid calibration process or lack of appropriate equipment to perform the calibration are most often the reasons. This might cause your meter to overstate or understate UV and white light readings and indicate compliance or non-compliance with pledged standards, whatever the case might be.

Large user groups such as the US Airforce (10 000  $\mu\text{W}/\text{cm}^2$  irradiance limit), Rolls-Royce compliant users (5 000  $\mu\text{W}/\text{cm}^2$  irradiance limit), Pratt and Whitney compliant users (10 000  $\mu\text{W}/\text{cm}^2$  irradiance limit), all have internal procedures, including limits on the irradiance they are allowed to use. Disruption of operations occurs because technicians are not allowed to use UV lights outside the pre-specified maximum and minimum values.

Example: If manufacturer X builds a light and sets intensity at 4 750  $\mu\text{W}/\text{cm}^2$  to comply with Rolls-Royce RRES 90061 specification, a 6% error makes this light out of spec (i.e. irradiance is > 5 000  $\mu\text{W}/\text{cm}^2$ ). Those who follow the Rolls-Royce specification, measure, and document readings daily, before each shift, and stop working if their lamp shows higher than 5000  $\mu\text{W}/\text{cm}^2$  and lower than 1200  $\mu\text{W}/\text{cm}^2$ .

Traceability to NIST by itself, does not guarantee accuracy. Your meter might have been calibrated by a Master that was 10th in line. That gives you at least 30-40% error even before your unit calibrates, which invalidates traceability.

Reputable manufacturers do not just sell meters, they keep statistics as required by relevant standards, and improve

**Please note:** ANSI/NCSL Z540.3-2006 (R2013) – “Withdrawn as an active standard (October 2020) and superseded by ISO/IEC 17025:2017”.

Source: <https://ncsli.org/page/z5403>



User groups, such as NADCAP, that work with critical applications are concerned with accuracy and rightfully so:

**NADCAP AUDIT CRITERIA AC7114/1 Rev. N, Section 5.14.1.2 states:**

The ambient light level in the inspection area shall be controlled not to exceed 2 ft candles (20 lux)? YES NO

**NADCAP AUDIT CRITERIA AC7114/1 Rev. N, Section 6.2.1.2 states:**

The light meter is accurate to within  $\pm 5\%$  of the standard reading? YES NO





## RISK 2 – PROTECT AGAINST DISRUPTIONS AND MISSING INDICATIONS BY ACQUIRING A UV LIGHT TESTED TO COMPLY WITH ASTM E3022-18

**ASTM E3022-18 is the best thing** that happened to UV inspection lights. Professionals that work with critical applications, such as NADCAP, have incorporated ASTM E3022-18 in their checklists.



**NADCAP AUDIT CRITERIA AC7114/1 Rev. N, Section 3.5.1 states:**

Is there evidence from the manufacturer that the lamp meets the requirements of ASTM E3022? YES NO

This standard has increased the quality of UV LED lights exponentially. Despite this progress, there is quality and then there is “quality”. Seven years after the release of this standard, still, not all manufacturers or authorized distributors know how to certify or recertify a UV light according to ASTM E3022-18.

**NADCAP AUDIT CRITERIA AC7114/1 Rev. N, Section 5.13.1.9 states:**

The repair of the system or replacement of a LED unit needs to be carried out by the manufacturer or authorised distributor/repair center? YES NO

**NADCAP AUDIT CRITERIA AC7114/1 Rev. N, Section 5.13.1.9.1 states:**

After repair or LED replacement the unit shall be recertified by the manufacturer? YES NO

ASTM E3022-18 has now been accepted as the global benchmark in all the 50 countries Labino operates. Airbus AITM6-1001 and Rolls-Royce RRES 90061 have taken ASTM E3022-18 a step further with even stricter requirements.

### LIST OF TESTS REQUIRED FOR EVERY LAMP MODEL BY ASTM E3022-18

Maximum Irradiance	Peak Wavelength
Beam Irradiance Profile	Full Width Half Maximum (FWHM)
Minimum Working Distance	Longest Wavelength at Half Maximum
Temperature Stability	Excitation Irradiance
Maximum Housing Temperature	Current Ripple
Emission Spectrum	Filter Transmittance

The tests performed, essentially make sure that the light is stable and there are no variations observed in beam intensity, flickering or strobing. Not just when a light is powered on, but most importantly when the light is warmed up. Why is this important?

- i. Intensity is not constant; it changes due to heat. If the light generates more heat than it should, intensity can drop significantly, much below the initial intensity, without the NDT operator even noticing.

**Risk:** The more the intensity drops, the required working distance and the covered area, both decrease much more than the NDT inspector is used to (or told to expect) and there is a greater risk of missing the indication.

**NADCAP AUDIT CRITERIA AC7114/1 Rev. N, Section 7.16.3 states:**

Was the UV-A intensity at the time of this survey at least 1200 μW/cm<sup>2</sup>? YES NO

- ii. Wavelength is not constant; it shifts to higher wavelengths due to heat. If the light generates more heat than it should, the wavelength can shift above the allowable limit of 370 nm without the NDT operator ever noticing.

**Risk:** The more the wavelength moves away from 370 nm, the greater the risk of missing the indication.

**ASTM E3022-18, Section 7.6.4.7 states:**

Determine the peak wavelength (i.e. wavelength with maximum spectral irradiance). See Fig. 3. (Peak Wavelength – Switch On, Ambient, and Elevated Temperature (7.6.4.7) 360 nm to 370 nm).

- iii. The key reason why the ASTM E3022-18 standard specifically asks the tests to be performed as a single unit, taking into consideration ALL the parts that make

up the light such as the housing, filter, diodes, electronic circuit design, optical elements, cooling system, and power supply combination, is exactly that. To be able to determine the effectiveness of the cooling system on the LEDs and keep the intensity and wavelength within check.

**Risk:** If you have been solicited to buy replacement UV LED bulbs for use in Mercury UV equipment, by manufacturers in low-cost countries, with labels of compliance for ASTM E3022-18, NADCAP etc, please note that these bulbs are not in compliance with ASTM E3022-18 and are rejected by NADCAP. Support can be found in NADCAP auditor advisory (NDT – 19 – 005 UV-A LED Bulbs, dated 12/19/2019) – “The bulb does not meet the ASTM E3022 requirements as the standard addresses the certification of the entire lamp performance

including, housing, filter, diodes, electronic circuit design, optical elements, cooling system, and power supply combination”.

**ASTM E3022-18, Section 1.2 states:**

These tests are intended to be performed only by the manufacturer to certify performance of specific lamp models (housing, filter, diodes, electronic circuit design, optical elements, cooling system, and power supply combination) and also includes limited acceptance tests or individual lamps delivered to the user. This test procedure is not intended to be utilized by the end user.

All ASTM E3022-18 tests are the obligation of the manufacturer to perform. The manufacturer is obligated to have all equipment necessary to perform measurements and provide accurate certifications.

### RISK 3 – PROTECT YOUR EMPLOYEES’ LIFE BY VALIDATING THE CERTIFICATE AUTHENTICITY OF EXPLOSION PROOF PRODUCTS YOU ARE USING

If anyone offers you an explosion proof product, you should ask for:

- i. the certification number
- ii. who the auditor is

and check its authenticity online, either on the auditor’s website or on the IECEx site ([www.iecex-certs.com](http://www.iecex-certs.com)). Manufacturers are obligated to share this information in their marketing literature. All certificates can be retrieved online, which makes it easy for you to check if it is authentic or not. You do not want an uncertified product on an oil rig or a refinery. In many countries EX products fall within the jurisdiction of specific legislation not just industry standards.





## **RISK 4 – PROTECT YOUR EMPLOYEES’ HEALTH BY MAKING AVAILABLE ADEQUATE PROTECTION AGAINST UV AT THE WORKPLACE**

**Exposure to UV** should be considered with care and in accordance with IEC/EN 62471 test report of your UV lamp. Unprotected and prolonged exposure to any form of UV light, including UV-A, can result in skin injuries, cataracts and possibly cancer. Even brief exposure can be hazardous if the UV intensity is very high. It is advised to always shield the eyes and face. For maximum protection, hands and arms should also be covered with long sleeves and gloves of a non-fluorescent material as in the picture above.

Certain individuals are naturally hypersensitive to all forms of UV-irradiation and should avoid any exposure. Itching, inflammation, or other unusual symptoms occur, UV exposure should cease immediately. People using certain drugs that produce photosensitivity should avoid exposure to all UV sources. Consult a medical specialist if any symptoms arise.



# Hercules Ex

(PN: L3000)

COMPLIES WITH  
ASTM E3022-2018  
Standard

COMPLIES WITH  
Rolls-Royce RRES 90061  
Specification

COMPLIES WITH  
Airbus AITM6-1001  
Testing Method

COMPLIES WITH  
USAF  
Requirements

4 Year warranty

Designed upon request of the military, Hercules is probably the most durable and shock-proof UV light in the world today, suitable for any “heavy duty” environment. It comes with explosion proof approvals and is tested to comply with ASTM E3022-18 and all PRIMES requirements, including Rolls-Royce RRES 90061 and Airbus AITM6-1001. Accidentally dropped it, kicked it, baked it in an oven, run it over by a tank? – it will still work! – The battery is inside the light; you don’t need to worry it got smashed like ordinary lights. Zero LEDs out from day of launch, 6 years ago!



**ON/OFF SWITCH**  
On/Off switch at the back prevents accidental activation.



**FOUR UV LEDS WITH WHITE LIGHT BLOCK FILTERS**  
Four high quality UV LEDs with respective high quality white light block filters that do not suffer from solarization.



**BATTERY POWERED**  
Hercules Ex is powered with two rechargeable batteries for ease of use in field inspections and tight work spaces.



**CHARGE BATTERIES WITHOUT REMOVING FROM THE LAMP**  
A charger with an internal connector can be used to charge batteries without removing them from the lamp. Charger must not be used in explosive atmospheres.





**Hercules Ex** is an extremely durable product specifically developed for use in areas where the risk of an explosion is high. Use of explosion proof products is often required in Offshore Oil Rigs, Refineries, Aerospace, and Defense. It has successfully completed extremely tough tests, amongst them tests for thermal conditioning, Impact Tests, Drop Tests, IP tests that led to the ATEX certification (Certificate: ITS17ATEX402144X). This unique product is suitable for use in extreme weather conditions varying from 104° Fahrenheit (+ 40° Celsius) to minus 4° Fahrenheit (- 20° Celsius).

Furthermore, Hercules Ex has successfully completed all tests and audits leading to its certification for IECEx, NFPA 70 Article 500 for Class I (divisions II locations) and the United States military tests, Salt Fog Test and Explosive Atmosphere Test. It has an ingress protection marking of IP66.

This unique light is battery powered and has four UV LEDs that generate an intensity of 4 000  $\mu\text{W}/\text{cm}^2$ . A charger is supplied with each lamp enabling users to charge the batteries without removing them from the lamp. Charging of batteries should only take place outside explosive atmospheres.

Hercules Ex has been tested to comply with ASTM E3022-18, Rolls-Royce RRES 90061 and Airbus AITM6-1001. A certificate of conformity is provided with every light as well as a 4-year warranty.

**FACTS ABOUT HERCULES EX**

Output Characteristics	Hercules Ex
Intensity	$\approx 4\,000\ \mu\text{W}/\text{cm}^2$
Visible light	$< 1.5\ \text{lux} / 0.1\ \text{fc}$
Beam $> 1\,000\ \mu\text{W}/\text{cm}^2$	$\varnothing 8\ \text{inches} / 20\ \text{cm}$

At a distance of 38 cm (15 inches)

**TECHNICAL DATA**

	Hercules Ex
UV LED:	4
Wavelength:	365 nm (peak) +/- 5 nm
Estimated LED life time:	30 000 hours
UV-B:	100% free from UV-B
Filter:	White light block filter
Power supply:	Battery
Weight:	888 grams (2.0 lbs)
Battery running time:	3 hours (+/- 5%)



**EXPLOSIVE ATMOSPHERE CERTIFICATIONS**

ATEX certified for Group II, Zone II (Certificate: ITS17ATEX402144X), IECEx, NFPA 70 Article 500 for Class I (divisions II locations), Explosive Atmosphere Test as per MIL-STD-810G.



**OPERATE THE LAMP AS MAINS WHILE CHARGING BATTERIES**

A separate PSU supplied can charge the batteries. This charger can only be used outside explosive atmospheres.



**PACKAGE INCLUDES:**

Lamp, Car Charger, Four Batteries, UV Block Goggles, External Charger for wall outlet, Carrying Case, Charging Power Supply.

# TYPE-EXAMINATION CERTIFICATE

1. Type-examination Certificate (Module A)
2. Equipment or Protective System intended for use in potentially explosive atmospheres (Directive 2014/34/EU)



3. Type examination certificate Nr **ITS17ATEX402144X**

4. **Product:** MB Hercules Ex

5. **Manufacturer:** Labino AB

**Applicant:** Labino AB

6. **Address:** Fågelsångsvägen 16,  
186 42 Vallentuna,  
Swede

**Address:** Fågelsångsvägen 16,  
186 42 Vallentuna,  
Sweden

7. This product and any acceptable variation thereto are specified in the schedule to this certificate and therein referred to.
8. INTERTEK ITALIA S.p.A., certifies that the equipment or protective system has been found to comply with the essential Health and Safety Requirements relating to the design and construction of equipment and protective system intended for use in potentially explosive atmosphere, given in Annex II of the Directive.  
  
The examination and tests results are recorded in confidential technical evaluation Intertek Report Nr. 104666450LHD-001, Revision 0, Dated 28 July 2021.
9. Compliance with the Essential Health and Safety Requirements has been assured by compliance with EN IEC 60079-0:2018, EN IEC 60079-7:2015+A1:2018 N IEC 60079-15:2019 except in respect of those requirements referred to at item 16 of the Schedule
10. If the sign X is placed after the certificate number, it indicates that the product is subject to Special Conditions for Safe Use specified in the schedule to this certifica
11. This Type Examination Certificate relates only to the design and construction of the specified product. Further requirements of the Directive apply to the manufacturing process and supply of this product. These are not covered by this certificate.
12. The marking of the product shall include the following:



II 3G Ex ec nC IIC T4 Gc  
-20°C ≤ Tamb ≤ +40°C

06-Sep-2021  
**Certificate issue date**



**Paul Moss**  
Certification Officer  
Intertek Italia S.p.A.

This certificate has been issued by Intertek Italia S.p.A. on transfer from Intertek Testing & Certification Ltd. using the same issued original certificate number.



This Certificate is for the exclusive use of Intertek's client and is provided pursuant to the agreement between Intertek and its Client. Intertek's responsibility and liability are limited to the terms and conditions of the agreement. Intertek assumes no liability to any party, other than to the Client in accordance with the agreement, for any loss, expense or damage occasioned by the use of this Certificate. Only the Client is authorized to permit copying or distribution of this Certificate and then only in its entirety. Any use of the Intertek name or one of its marks for the sale or advertisement of the tested material, product or service must first be approved in writing by Intertek.

**Intertek Italia S.p.A.** Via Miglioli, 2/A - 20063 Cernusco sul Naviglio, Milano - Ital

LFT-EMEA-IT-ATEX-OP-23p (29 August 2019)

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# IECEX Certificate of Conformity

## INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification System for Explosive Atmospheres

for rules and details of the IECEx Scheme visit [www.iecex.com](http://www.iecex.com)

Certificate No.:	<b>IECEX ITS 17.0056X</b>	Page 1 of 4	<u>Certificate history:</u>
Status:	<b>Current</b>	Issue No: 2	<a href="#">Issue 1 (2018-06-11)</a> <a href="#">Issue 0 (2017-10-12)</a>
Date of Issue:	2021-09-06		
Applicant:	<b>Labino AB</b> Fågelsångsvägen 16 SE-186 42 Vallentuna <b>Sweden</b>		
Equipment:	<b>MB Hercules Ex</b>		
Optional accessory:			
Type of Protection:	<b>Equipment protection by type of protection 'n'</b>		
Marking:	Ex ec nC IIC T4 Gc -20°C ≤ Tamb ≤ +40°C		

Approved for issue on behalf of the IECEx  
Certification Body:

**Paul Moss**

Position:

**Certification Officer**

Signature:  
(for printed version)

Date:

1. This certificate and schedule may only be reproduced in full.
2. This certificate is not transferable and remains the property of the issuing body.
3. The Status and authenticity of this certificate may be verified by visiting [www.iecex.com](http://www.iecex.com) or use of this QR Code.



Certificate issued by:

**Intertek Testing & Certification Limited**  
ITS House, Cleeve Road  
Leatherhead  
Surrey, KT22 7SA  
United Kingdom



# MB PRO Zeus

(Battery model PN: L147, w/Athena model PN: L148)

# MB PRO Hermes

(Battery model PN: L149, w/Athena model PN: L150)

# MB PRO Selene

(Battery model PN: L151, w/Athena model PN: L152)

# MB PRO Atlas (Battery model PN: L153, w/Athena model PN: L154)



3 Year warranty

Introducing MB PRO, a battery powered product that combines the superior optical performance of MB 3.0 and the durability of Hercules EX. Designed to perform in extreme temperatures and harsh working conditions, 24 x 7. Made with penetrant resistant materials and certified with an ingress protection mark-ing of IP68. Depending on the model, the beam diameter is 8-9 inches / 20-22 cm and with intensities that vary from  $\approx 4\ 000$  to  $9\ 000\ \mu\text{W}/\text{cm}^2$ . MB PRO Zeus and MB PRO Selene are equipped with a strong white light as well. MB PRO comes with a 3-year warranty.



**OPTIONAL SPRAY CAN HOLDER ACCESSORY "ATHENA"**

Athena mounts on the light and can fit ALL aerosol brands that are used in NDT. Buy it factory installed or add it later (PN: A503).



**OPTIONAL MEASUREMENT ACCESSORY "OLYMPOS"**

Your daily NADCAP and/or ASTM E3022-18 checks can be carried out accurately with an Olympos stand (PN: A542) and an Apollo 3.0 dual meter (PN: M513).





- Inspector kit “Stockholm” (PN: K001)
- Inspector kit “US Airforce” (PN: K002)
- Inspector kit “Gothenburg” (PN: K003)
- Inspector kit “Malmo” (PN: K004)
- Inspector kit “Uppsala” (PN: K005)

The ultimate inspector kit to carry field inspections in a professional and reliable manner. All UV-A lights included are tested and certified to comply with ASTM E3022-18. UV-A Lights can be replaced with other models within the same series upon request.



**UVG3 2.0 MIDLIGHT**  
UV-A flashlight with rubber bumper – PN: L135.



**CARRYING CASE**  
Fits all three UV-A lights (MB 3.0 Zeus with Athena, UVG3 2.0, UVG5 2.0), Apollo 3.0 meter and accessories. Carrying case has pockets for 4 Aerosol cans (Aerosols not included).



**APOLLO 3.0**  
UV-A & White light meter calibrated by an ISO/ IEC 17025 laboratory – PN: M513.



**MB 3.0 ZEUS**  
UV-A & WH handheld light with Athena spray can holder – PN: L122.



**UVG5 2.0 MIDLIGHT**  
UV-A & WH headlight with bump cap – PN: L128.

US Airforce NDT Technicians should instead ask for Part Number K002 which includes UV-A lights MB 3.0 Atlas with Athena (PN: L126), UVG5 2.0 Midlight UV-A headlight (PN: L129), UVG3 2.0 Midlight (PN: L135) and Apollo 3.0 UV and white Light meter (PN: M513) – All in compliance with USAF internal requirements.

# Available combinations

PN: K001

NDT INSPECTOR KIT "STOCKHOLM" - (1 MB 3.0 HANDHELD, 1 UVG3 2.0 FLASHLIGHT, 1 UVG5 2.0 HEADLIGHT)



**MB 3.0 ZEUS**  
UV-A & WH handheld light with Athena spray can holder – PN: L122.



**UVG3 2.0 MIDLIGHT**  
UV-A flashlight with rubber bumper – PN: L135.

PN: K002

NDT INSPECTOR KIT "US AIRFORCE" - (1 MB 3.0 HANDHELD, 1 UVG3 2.0 FLASHLIGHT, 1 UVG5 2.0 HEADLIGHT)



**MB 3.0 ATLAS**  
UV-A & WH handheld light with Athena spray can holder – PN: L126.



**UVG3 2.0 MIDLIGHT**  
UV-A flashlight with rubber bumper – PN: L135.

PN: K003

NDT INSPECTOR KIT "GOTHENBURG" - (1 MB 3.0 HANDHELD, 1 UVG5 2.0 HEADLIGHT, 1 APOLLO 3.0 RADIOMETER)



**MB 3.0 ZEUS**  
UV-A & WH handheld light with Athena spray can holder – PN: L122.



**UVG5 2.0 MIDLIGHT**  
UV-A & WH headlight with bump cap – PN: L128.

PN: K004

NDT INSPECTOR KIT "MALMO" - (1 MB 3.0 HANDHELD, 1 UVG3 2.0 FLASHLIGHT, 1 APOLLO 3.0 RADIOMETER)



**MB 3.0 ZEUS**  
UV-A & WH handheld light with Athena spray can holder – PN: L122.



**UVG3 2.0 MIDLIGHT**  
UV-A flashlight with rubber bumper – PN: L135.

PN: K005

NDT INSPECTOR KIT "UPPSALA" - (1 MB 3.0 HANDHELD, 1 APOLLO 3.0 RADIOMETER/PHOTOMETER)



**MB 3.0 ZEUS**  
UV-A & WH handheld light with Athena spray can holder – PN: L122.



**APOLLO 3.0**  
UV-A & White light meter calibrated by an ISO/IEC 17025 laboratory – PN: M513.

# of NDT Inspector Kits

HT, 1 APOLLO 3.0 RADIOMETER/PHOTOMETER)



**UVG5 2.0 MIDLIGHT**

UV-A & WH headlight with bump cap – PN: L128.



**APOLLO 3.0**

UV-A & White light meter calibrated by an ISO/ IEC 17025 laboratory – PN: M513.

**CARRYING CASE**

Fits all three UV-A lights (MB 3.0 Zeus with Athena, UVG3 2.0, UVG5 2.0), Apollo 3.0 meter and accessories. Carrying case has pockets for 4 Aerosol cans (Aerosols not included).



HT, 1 APOLLO 3.0 RADIOMETER/PHOTOMETER)



**UVG5 2.0 MIDLIGHT**

UV-A headlight with bump cap – PN: L129.



**APOLLO 3.0**

UV-A & White light meter calibrated by an ISO/ IEC 17025 laboratory – PN: M513.

**CARRYING CASE**

Fits all three UV-A lights (MB 3.0 Zeus with Athena, UVG3 2.0, UVG5 2.0), Apollo 3.0 meter and accessories. Carrying case has pockets for 4 Aerosol cans (Aerosols not included).



OMETER/PHOTOMETER)



**APOLLO 3.0**

UV-A & White light meter calibrated by an ISO/ IEC 17025 laboratory – PN: M513.

**CARRYING CASE**

Fits all three UV-A lights (MB 3.0 Zeus with Athena, UVG3 2.0, UVG5 2.0), Apollo 3.0 meter and accessories. Carrying case has pockets for 4 Aerosol cans (Aerosols not included).



TER/PHOTOMETER)



**APOLLO 3.0**

UV-A & White light meter calibrated by an ISO/ IEC 17025 laboratory – PN: M513.

**CARRYING CASE**

Fits all three UV-A lights (MB 3.0 Zeus with Athena, UVG3 2.0, UVG5 2.0), Apollo 3.0 meter and accessories. Carrying case has pockets for 4 Aerosol cans (Aerosols not included).

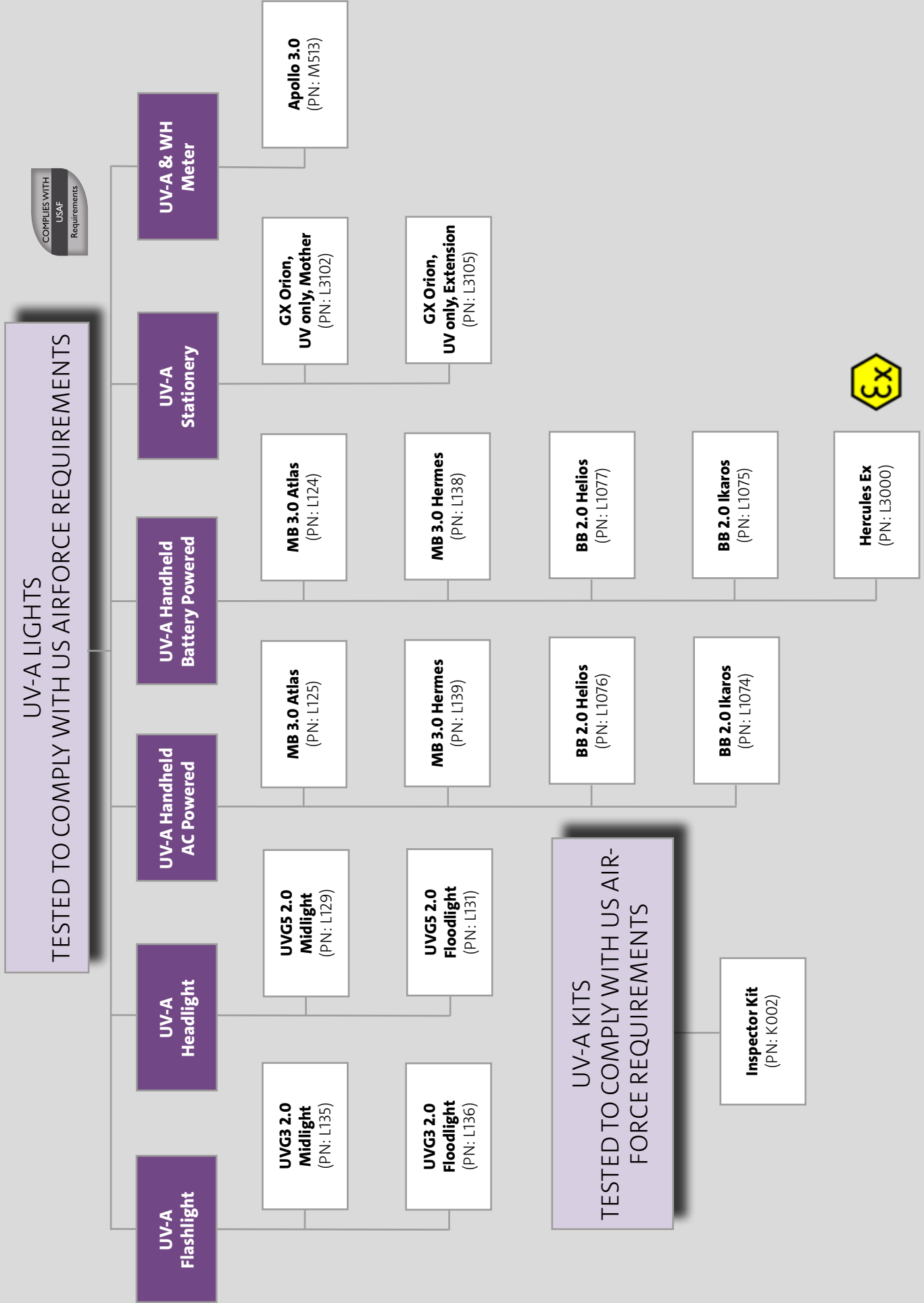


**CARRYING CASE**

Fits all three UV-A lights (MB 3.0 Zeus with Athena, UVG3 2.0, UVG5 2.0), Apollo 3.0 meter and accessories. Carrying case has pockets for 4 Aerosol cans (Aerosols not included).









## UV-A LED LAMPS



NDI Technician of the 180th Fighter Wing, uses a Labino BB 2.0 Series UV light to inspect an F-16 Fighting Falcon compressor blade for cracks during unit training assembly in Swanton, O.H.



NDI Technicians of the 20th Equipment Maintenance Squadron view a technical order at Shaw Air Force Base, S.C. Before inspecting any part, NDI Airmen read the TO, ensuring they follow any special instructions regarding the part. The Labino UV light is with them ready for use.



NDI Technician of the 108th Maintenance Squadron, analyzes a part of the KC-135R Stratotanker aircraft at Joint Base McGuire-Dix-Lakehurst, N.J., using a Labino UVG5 headlight.



NDT Technician of the 18th Equipment Maintenance Squadron checks for cracks and chips that could lead to a structural failure during a phase inspection at Kadena Air Base, Japan.



NDI Technician of the 28th Maintenance Squadron performs a magnetic particle inspection to search for any defects on a wire rope hook using a Labino 135 Series UV light at the Ellsworth Air Force Base, S.D.

NDI Technician of the 437th Maintenance Squadron checks a cracked chrome panel from a C-17 with a Labino BB 2.0 Series at Joint Base Charleston, S.C.



NDI Technician of the 28th Maintenance Squadron inspects a forward support bracket using a Labino 135 Series UV light at the Ellsworth Air Force Base, S.D.





NDI Technician of the 86th Maintenance Squadron takes a closer look at a nose landing gear wheel bolt during a magnetic particle inspection at Ramstein Air Base, Germany.

NDI Technician of the 379th Expeditionary Maintenance Squadron, deployed from Eielson Air Force Base, Alaska, inspects an aircraft pin for cracks under a Labino 135 Series UV light in Southwest Asia.



NDI Technician of the 22nd Maintenance Squadron dips a section of a KC-135 Strato-tanker's landing gear in fluorescent chemicals and inspects using a labino UVG3 2.0 UV light at McConnell Air Force Base.





# BB 2.0 Ikaros

(Mains model PN: L1074, Battery model PN: L1075)

# BB 2.0 Helios

(Mains model PN: L1076, Battery model PN: L1077)

# BB 2.0 Artemis

(Mains model PN: L1078, Battery model PN: L1079)

COMPLIES WITH  
ASTM E3022-2018  
Standard

COMPLIES WITH  
Rolls-Royce RRES 90061  
Specification

COMPLIES WITH  
Airbus AITM6-1001  
Testing Method

COMPLIES WITH  
USAF  
Requirements

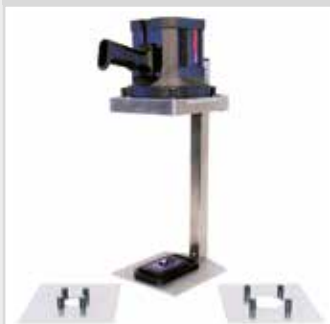
2 Year warranty

Powerful, penetrant resistant and with an Ingress Protection 68 (IP68 Waterproof). Beam profile is probably the largest and smoothest from any portable UV-A light on the market today. Depending on the model, the beam diameter is 10-11 inches / 26-28 cm and with intensities that vary from  $\approx 4\ 000$  to  $22\ 000\ \mu\text{W}/\text{cm}^2$ . Selected models have been tested to comply with ASTM E3022-18, Rolls-Royce RRES 90061 and Airbus AITM6-1001. Battery running times are up to 7 hours.



**BB 2.0 BATTERY (DUO) OR MAINS ON A FLEXIBLE ARM**

All BB 2.0 Series models can be mounted on a flexible arm with the help of a handle adaptor. The flexible arm (PN: A536) can be supplied by Labino.



**OPTIONAL MEASUREMENT ACCESSORY "OLYMPUS"**

Your daily NADCAP and/or ASTM E3022-18 checks can be carried out accurately with an Olympos stand (PN: A542) and an Apollo 2.0 dual meter (PN: M505).



**POWERED VIA BATTERY AND MAINS (DUO) OR JUST MAINS**

Powered with your choice of either battery and mains or just mains. The battery version (referred to as DUO) can also be used as mains and operate the lamp while charging the battery.



**ON/OFF SWITCH**

On/Off switch at the back prevents accidental activation.



**BB 2.0 Series products Artemis, Helios and Ikaros** are lights with a powerful and wide UV output. They provide large coverage and weigh less than many comparable products. The mains operated model weighs just 1.2 kg (2.6 lbs) and the battery operated model weighs just 1.7 kg (3.7 lbs). They are widely used for field inspections or on an MPI bench. BB 2.0 Series lamps have an ingress protection marking of IP68.

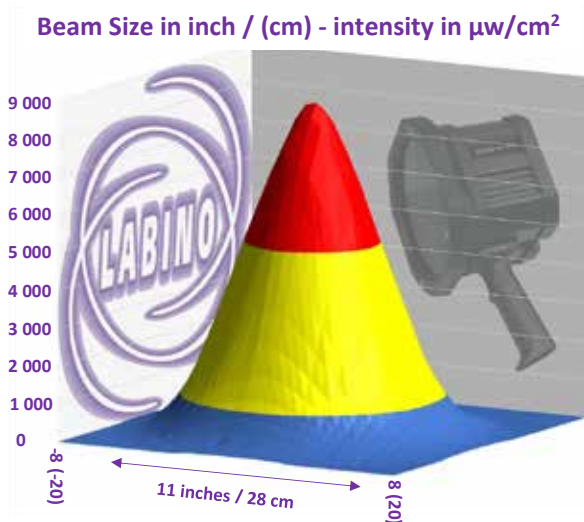
The BB 2.0 Series family of products has been specifically designed to meet the ASTM E3022-18 and ISO 3059-12 standards as well requirements set by the PRIMES. The optics used in the BB 2.0 Series meet the Rolls-Royce RRES 90061 specification. The beam profile of the UV light is extremely homogenous without any footprints showing from the LEDs, shades, dark spots or other disturbing defects.



**BB 2.0 Helios**  
**(Mains model PN: L1076, Battery model PN: L1077)**

BB 2.0 Helios has been tested to comply with both ASTM E3022-18 and ISO 3059-12 standards. It has also been tested to comply with Airbus AITM6-1001 at a working distance of 24 inches / 60 cm. It generates an intensity of approximately 9 000  $\mu\text{W}/\text{cm}^2$  at 38 cm (15 inches). The running time of the battery version is 6 hours.

**Beam profile > 1 000  $\mu\text{W}/\text{cm}^2$  measured at 15 inches / 38 cm of BB 2.0 Helios:**



**BB 2.0 Artemis**  
**(Mains model PN: L1078, Battery model PN: L1079)**

BB 2.0 Artemis has been tested to comply with both ASTM E3022-18 and ISO 3059-12 standards. It generates an intensity of approximately 22 000  $\mu\text{W}/\text{cm}^2$  at 38 cm (15 inches). The running time of the battery version is 5 hours. This very high intensity UV light is ideal for the Oil & Gas industry and pipeline related users.

**FACTS ABOUT BB 2.0 HELIOS and BB 2.0 ARTEMIS**

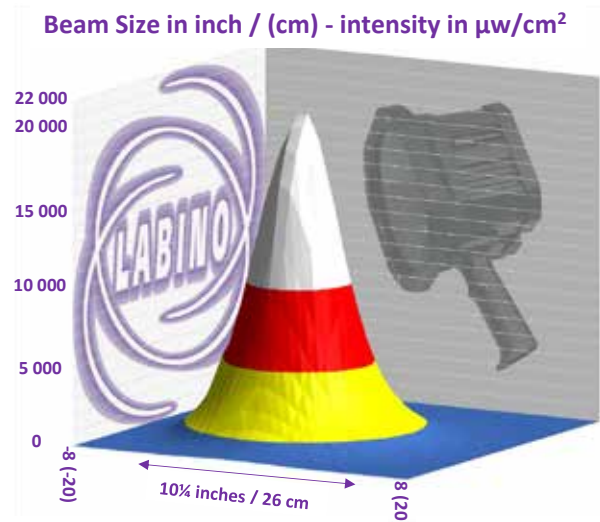
Output Characteristics	BB 2.0 Helios	BB 2.0 Artemis
Intensity	≈ 9 000 $\mu\text{W}/\text{cm}^2$	≈ 22 000 $\mu\text{W}/\text{cm}^2$
Visible light	< 3 lux / 0.3 fc	< 8 lux / 0.7 fc
Beam > 1 000 $\mu\text{W}/\text{cm}^2$	Ø 11 inches / 28 cm	Ø 10.3 inches / 26 cm

At a distance of 38 cm (15 inches)

**OUTPUT CHARACTERISTICS FOR BB 2.0 ARTEMIS AT VARIOUS DISTANCES**

Distance:	Beam diameter > 1 000 $\mu\text{W}/\text{cm}^2$	Beam diameter > 300 $\mu\text{W}/\text{cm}^2$
15 inches / 38 cm	Ø 9.1 inches/23 cm	Ø 11.1 inches/29 cm
45 inches / 114 cm	Ø 11.8 inches/30 cm	Ø 19.3 inches/49 cm
75 inches / 190 cm	Ø 11.4 inches/29 cm	Ø 21.3 inches/54 cm

**Beam profile > 1 000  $\mu\text{W}/\text{cm}^2$  measured at 15 inches / 38 cm of BB 2.0 Artemis:**











COMPLIES WITH  
ASTM E3022-2018  
Standard

COMPLIES WITH  
Rolls-Royce RRES 90061  
Specification

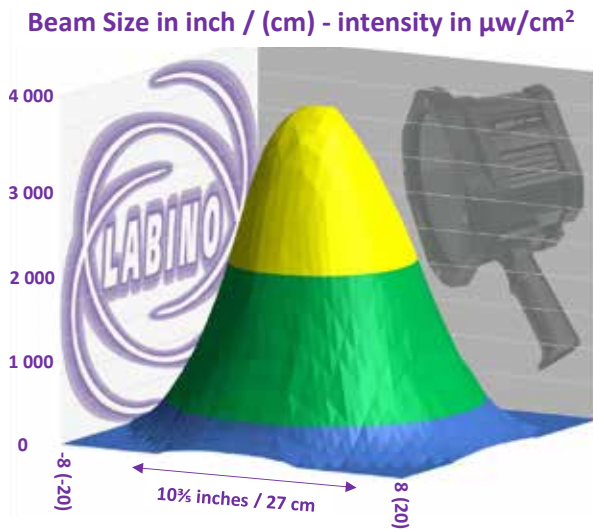
COMPLIES WITH  
Airbus AITM6-1001  
Testing Method

COMPLIES WITH  
USAF  
Requirements

**BB 2.0 Ikaros**  
**(Mains model PN: L1074, Battery model PN: L1075)**

BB 2.0 Ikaros has been tested to comply with both ASTM E3022-18 and ISO 3059-12 standards as well as with the internal requirements of all PRIMES listed on page 8, including Rolls-Royce RRES 90061 and Airbus AITM6-1001. It generates an intensity of approximately 4 000  $\mu\text{W}/\text{cm}^2$  at 38 cm (15 inches). The running time of the battery version is 7 hours. This is ideal for Aerospace users that need to comply with Nadcap related checklists.

**Beam profile > 1 000  $\mu\text{W}/\text{cm}^2$  measured at 15 inches / 38 cm of BB 2.0 Ikaros:**



**FACTS ABOUT BB 2.0 IKAROS**

Output Characteristics	BB 2.0 Ikaros
Intensity	$\approx 4\,000 \mu\text{W}/\text{cm}^2$
Visible light	$< 1.5 \text{ lux} / 0.1 \text{ fc}$
Beam > 1 000 $\mu\text{W}/\text{cm}^2$	$\varnothing 10.6 \text{ inches} / 27 \text{ cm}$

At a distance of 38 cm (15 inches)



**BB 2.0 MAINS WITH CABLE WINDER**

The mains version can be mounted on a cable winder with a 9.5 meter (31 feet) cable.



**BATTERY VERSION PACKAGE INCLUDES:**

Lamp, UV Block Goggles, Power supply for charging batteries while operating.



**MAINS VERSION PACKAGE INCLUDES:**

Lamp with 2 meter (6.6 feet) cord, Power Supply Unit 100-240V AC, AC power cord, UV Block Goggles.



TECHNICAL DATA

BB 2.0 Artemis, BB 2.0 Helios and BB 2.0 Ikaros	
UV LED:	8 (BB 2.0 Artemis, BB 2.0 Helios) 7 (BB 2.0 Ikaros)
Wavelength:	365 nm (peak) +/- 5 nm
Estimated LED life time:	30 000 hours
UV-B:	100% free from UV-B
Filter:	White light block filter
Power supply:	Battery or Mains
Weight DUO:	1.7 kg (3.7 lbs)
Weight Mains:	1.2 kg (2.6 lbs)
Battery running time:	
Ikaros	7 hours
Helios	6 hours
Artemis	5 hours

Accessories for BB 2.0 Series

BB 2.0 Helios and BB 2.0 Ikaros	
UV Block Visor (PN: S400)	
UV Block Goggles "XC" (PN: S505)	
Cable winder (PN: F175 for Mains units)	
Handle adaptor (PN: F146)	
Flexible Arm for BB 2.0 Series (PN: A536)	
Fricton Arm (PN: A530)	
Mounting Yoke and brackets for stationary mounting (PN: F800 & F801)	
Protection PSU Bracket (PN: F211)	
Magnet for PSU (PN: A601)	
Protection Clear Glass Filter (PN: F132)	
Customized Carrying Case (PN: C4200 for Mains) (PN: C4100 for Battery)	



ATKINS



GX ORION <sup>REMOTE</sup> MOTHER UNIT (PN: L3100)

GX ORION <sup>UV & WH</sup> MOTHER UNIT (PN: L3101)

GX ORION <sup>UV</sup> MOTHER UNIT (PN: L3102)

GX ORION <sup>UV & WH</sup> EXTENSION UNIT (PN: L3104)

GX ORION <sup>UV</sup> EXTENSION UNIT (PN: L3105)

COMPLIES WITH  
ASTM E3022-2018  
Standard

COMPLIES WITH  
Rolls-Royce RRES 90061  
Specification

COMPLIES WITH  
USAF  
Requirements

COMPLIES WITH  
Airbus AITM6-1001  
Testing Method

**4 Year warranty**

Modular overhead UV system that allows you to design the desired covered area by mounting together multiple units. GX Orion is the only overhead UV-A system on the market that offers all of the following qualifications: Certified with an ingress protection marking of IP68 Waterproof, classified as penetrant resistant, tested to comply with ASTM E3022-18, Rolls-Royce RRES 90061 and Airbus AITM6-1001, and carries a 4-YEAR WARRANTY.

**WITH A PLC INTERFACE**

GX Orion comes with a PLC interface which can be used to monitor the UV light from a computerized panel.



**OPERATE VIA A FOOT PEDAL OR A POWER BUTTON**  
Can be used as an on/off switch for the UV light to activate the last used intensity and the last recorded timer setting.



**OPTION 1: REMOTE CONTROLLED**

A remote control allows you to switch on/off the UV and White Light, change the intensity, and set up the timer from a distance.



**OPTION 2: WITH UV ON/OFF BUTTON ONLY**

GX Orion comes with a UV only option as well.



**OPTION 3: WITH UV AND WHITE LIGHT ON/OFF BUTTON ONLY**

GX Orion comes with a UV and white light only option as well.



**GLASS SURFACE WITH 10 UV LEDs AND 1 WHITE LIGHT**

A glass surface prevents damage of sensitive components such as filters and LEDs.





Labino’s LED overhead inspection lamp, **GX Orion**, is a modular system that can be used to cover large areas. GX Orion is certified with an ingress protection marking of IP68, the highest ingress protection class possible, making it an extremely useful tool for inspection areas with excessive liquids. There are three different models to choose from, remote controlled with multiple UV intensities, UV on/off button only, and UV and visible light on/off buttons only.

The GX Series has been specifically designed to meet the ASTM E3022-18 and ISO 3059-12 standards as well requirements set by the PRIMES. The optics used in the GX Series meet Rolls-Royce RRES 90061 specification. The beam profile of the UV light is extremely homogenous without any foot-prints showing from the LEDs, shades, dark spots or other disturbing defects.

All GX Orion models have a built-in PLC interface designed to connect to your PLC system. You can chose a “mother” or an “extension” GX Orion unit, with or without remote panel, with or without on/off power switches and still be able to monitor the unit completely through your computer via the PLC interface.

There are two types of what we refer to as “extension” units. The difference of the two is the white light. GX Orion UV & WH Extension unit (PN L3104), is used to extend the coverage of GX Orion UV & WH mother unit or GX Orion REMOTE mother unit. Both these units have white light that emits 1 076 lux (100 fc) at a distance of 12 inches / 30 cm. GX Orion UV Extension unit (PN L3105), is used to extend the coverage of GX Orion UV only as this mother unit does not have a white light.

**TECHNICAL DATA**

GX Orion	
UV LED:	10
Wavelength:	365 nm (peak) +/- 5 nm
Estimated LED life time:	30 000 hours
UV-B:	100% free from UV-B
Filter:	White light block filter
Power supply:	Mains
Weight:	GX Orion REMOTE: 2.6 kg / 5.8 lbs GX Orion UV & WH: 2.5 kg / 5.5 lbs GX Orion UV: 2.5 kg / 5.5 lbs
Dimensions (L x W x H):	GX Orion REMOTE: inch: 7.9 x 6.6 x 3.1 / cm: 20 x 16.5 x 8 GX Orion UV & WH: inch: 7.9 x 5.9 x 3.1 / cm: 20 x 15 x 8 GX Orion UV: inch: 7.9 x 5.9 x 3.1 / cm: 20 x 15 x 8



**THREE GX ORION REMOTE MOUNTED TOGETHER ON THE SHORT SIDE**

Multiple GX Orion REMOTE “Extension” units can be mounted on a “mother” unit either on the long side or the short side.



**GX ORION “MOTHER” PACKAGE INCLUDES:**

GX Orion lamp of your choice, 4 Stainless steel bars for mounting, 4 chains with snap links, Power Supply Unit, cable between PSU and GX unit, cable between PSU and wall socket.



**GX ORION “EXTENSION” PACKAGE INCLUDES:**

GX Orion lamp with UV & WH or only UV LEDs, 2 stainless steel bars and 1 cable connection for assembly short side to short side, 2 stainless steel brackets and 1 cable connection for assembly long side to long side, 4 chains with snap links.

# 5 reasons why GX Ori

1. The price of one GX Orion is between 50-70% lower than competing lights.
2. GX Orion offers the best warranty terms in the industry, 4 years.
3. GX Orion has the highest IP class possible, IP68.
4. Zero LEDs out from day of launch, 5 years ago.
5. GX Orion is stable at switch on, no waiting time.

**...affordable  
and durable!**





**on is a great choice**





**GX ORION REMOTE MOTHER UNIT (PN: L3100)**

GX Orion REMOTE has been tested to comply with both ASTM E3022-18 and ISO 3059-12 standards. It generates an intensity that can be adjusted to vary from approximately 1 500 to 7 000  $\mu\text{W}/\text{cm}^2$ , at a distance of 15 inches / 38 cm. It has a powerful white light that can illuminate 1 076 lux

(100 fc) at a distance of 12 inches / 30 cm. A remote control allows you to switch on/off the UV and white Light, change the intensity and set up the timer from up to 5 meters (16 feet) away.



**REMOTE CONTROLLED**

A remote control allows you to switch on/off the UV and White Light, change the intensity and set up the timer from a distance.

**UV LIGHT ON/OFF FUNCTION:**

Powers on / off the UV light. The lamp has a built-in memory function that repeats the last intensity used.

**WHITE LIGHT ON/OFF FUNCTION:**

Powers on / off the white light, with an illuminance of 1 076 lux (100 fc), at a distance of 12 inches / 30 cm.

**DIMMER FUNCTION:**

Display shows the dimmer function in 250 steps. The UV irradiance can be increased (+) to achieve the maximum irradiance of 7000  $\mu\text{W}/\text{cm}^2$  at step 250 or decreased (-) to achieve the minimum irradiance of 1 500  $\mu\text{W}/\text{cm}^2$  at step 1, at a distance of 15 inches / 38 cm.

**TIMER FUNCTION:**

Press + for increased time (up to 480 minutes or 8 hours) and - for decreased time (down to zero). The number of minutes the lamp is programmed to stay on before shutting down automatically is shown on the display.





**GX ORION<sup>UV & WH</sup> MOTHER UNIT (PN: L3101)**

GX Orion<sup>UV & WH</sup> has been tested to comply with both ASTM E3022-18 and ISO 3059-12 standards. It has also been tested to comply with Airbus AITM6-1001 at a working distance of 21 inches / 53 cm. It generates an intensity of approximately 7 000  $\mu\text{W}/\text{cm}^2$  at 38 cm (15 inches). It has a powerful white light that can illuminate 1 076 lux (100 fc) at a distance of 12 inches / 30 cm. This model does not have a remote, it comes with one UV and one white light ON/OFF button.

**FACTS ABOUT GX ORION<sup>REMOTE</sup> AND GX ORION<sup>UV & WH</sup>**

Output Characteristics	GX Orion <sup>REMOTE</sup> and GX Orion <sup>UV &amp; WH</sup>
Intensity (maximum)	$\approx 7\,000\ \mu\text{W}/\text{cm}^2$
Visible light	$< 3\ \text{lux} / 0.3\ \text{fc}$
Beam $> 1\,000\ \mu\text{W}/\text{cm}^2$	$\varnothing 13\ \text{inches} \times 9\ \text{inches} / 33\ \text{cm} \times 23\ \text{cm}$

At a distance of 38 cm (15 inches)

**Beam profile  $> 1\,000\ \mu\text{W}/\text{cm}^2$  measured at 15 inches / 38 cm of GX Orion<sup>REMOTE</sup> and GX Orion<sup>UV & WH</sup>:**



**THREE GX ORION<sup>REMOTE</sup> MOUNTED TOGETHER ON THE LONG SIDE**

Multiple GX Orion<sup>REMOTE</sup> "extension" units can be mounted on a "mother" unit either on the long side or the short side.



**THREE GX ORION<sup>UV & WH</sup> MOUNTED TOGETHER ON THE SHORT SIDE**

Multiple GX Orion<sup>UV & WH</sup> "extension" units can be mounted on a "mother" unit either on the long side or the short side.



COMPLIES WITH  
ASTM E3022-2018  
Standard

COMPLIES WITH  
Rolls-Royce RRES 90061  
Specification

COMPLIES WITH  
Airbus AITM6-1001  
Testing Method

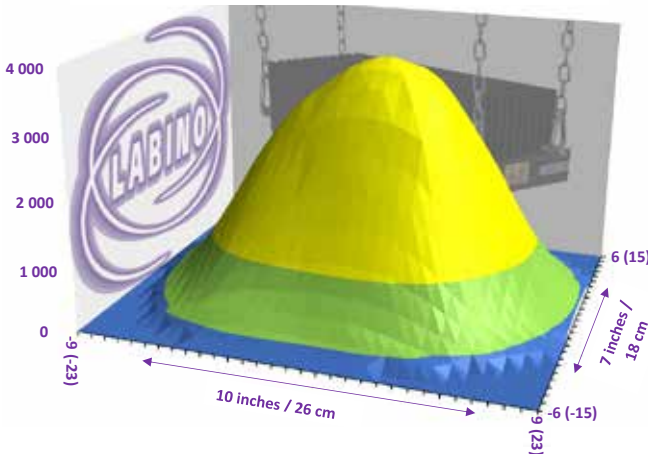
COMPLIES WITH  
USAF  
Requirements

**GX Orion<sup>UV</sup> (PN: L3102)**

GX Orion<sup>UV</sup> has been tested to comply with both ASTM E3022-18 and ISO 3059-12 standards as well as with the internal requirements of all PRIMES listed on page 8, including Rolls-Royce RRES 90061 and Airbus AITM6-1001. It generates an intensity of approximately 4 500  $\mu\text{W}/\text{cm}^2$  at 38 cm (15 inches). This model does not have a remote, it comes with one UV ON/OFF button.

**Beam profile > 1 000  $\mu\text{W}/\text{cm}^2$  measured at 15 inches / 38 cm of GX Orion<sup>UV</sup>:**

Beam Size in inch / (cm) - intensity in  $\mu\text{W}/\text{cm}^2$



**FACTS ABOUT GX ORION<sup>UV</sup>**

Output Characteristics	GX Orion <sup>UV</sup>
Intensity	$\approx 4\,500 \mu\text{W}/\text{cm}^2$
Visible light	< 1.5 lux / 0.2 fc
Beam > 1 000 $\mu\text{W}/\text{cm}^2$	$\varnothing$ 10 inches x 7 inches / 26 cm x 18 cm

At a distance of 38 cm (15 inches)



**THREE GX ORION<sup>UV</sup> MOUNTED TOGETHER ON THE SHORT SIDE**

Multiple GX Orion<sup>UV</sup> “extension” units can be mounted on a “mother” unit either on the long side or the short side.

**Accessories for GX Series**

GX Orion	
UV Block Visor (PN: S400)	
UV Block Goggles "XC" (PN: S505)	
Foot Pedal (PN: A603 for GX Orion <sup>REMOTE</sup> ) (PN: A605 for GX Orion <sup>UV &amp; WH</sup> or GX Orion <sup>UV</sup> )	
Power Button (PN: A604 for GX Orion <sup>REMOTE</sup> ) (PN: A606 for GX Orion <sup>UV &amp; WH</sup> or GX Orion <sup>UV</sup> )	

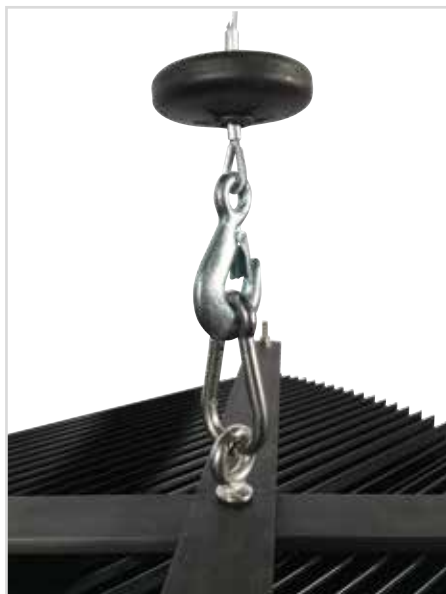
# Cosmos (PN: L3200)

**4 Year warranty**

Introducing Cosmos, a truly unique product that was missing from the NDT industry. A UV light, specifically designed to withstand the harsh conditions of a wash station and covering an area of 2 x 2 meters (7 x 7 feet) from a distance of 3 meters (10 feet) – the largest UV beam in the world! Cosmos comes with a 4-year warranty.



Waterproof.



For easy mounting.



Covers with UV an area of 7 x 7 feet (2 x 2 meters) from a distance of 10 feet (3 meters) – the largest UV beam in the world!

**Wash station areas** are often neglected. They are equipped with multiple UV tubes that require frequent replacement or with UV lights that are no longer considered suitable for use on inspection booths.

Some UV lights designated for wash stations generate

As more LEDs fail, irradiance drops, undetected. The NDT technician should control the equipment and not the equipment the NDT technician.

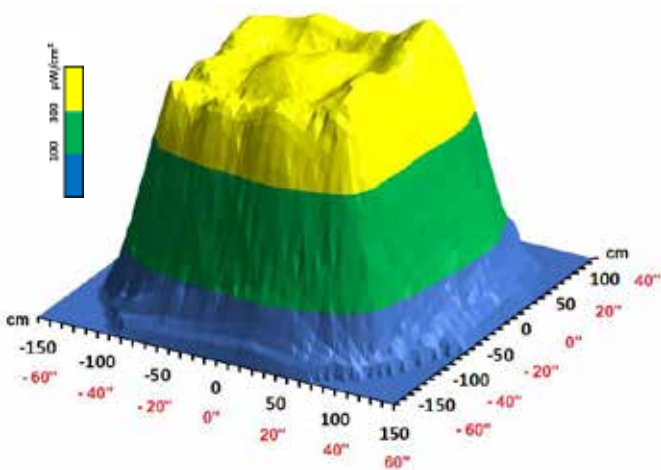
Cosmos is a UV light, specifically designed for wash stations, it has excellent heat management and allows you

” Cosmos (PN: L3200) has been specifically designed for wash stations, covering with UV an area of 2 x 2 meters (7 x 7 feet) from a distance of 3 meters (10 feet) – the largest UV beam in the world ”

excessive heat due to a common design mistake. These lights have several LEDs mounted together in a very small housing. The objective is to forcefully emit as much UV as possible, causing the LEDs to have a short lifespan. Often, you cannot see if LEDs fail because several are mounted together in the same position and unless all are out there is no suspicion of failure.

to be in control. You can visually inspect if there is a problem with any UV LED and you can maintain the light on your own as ASTM E3022-18 is not applicable for wash stations. Replacement LED parts are available for you to stock and replace onsite, if needed.

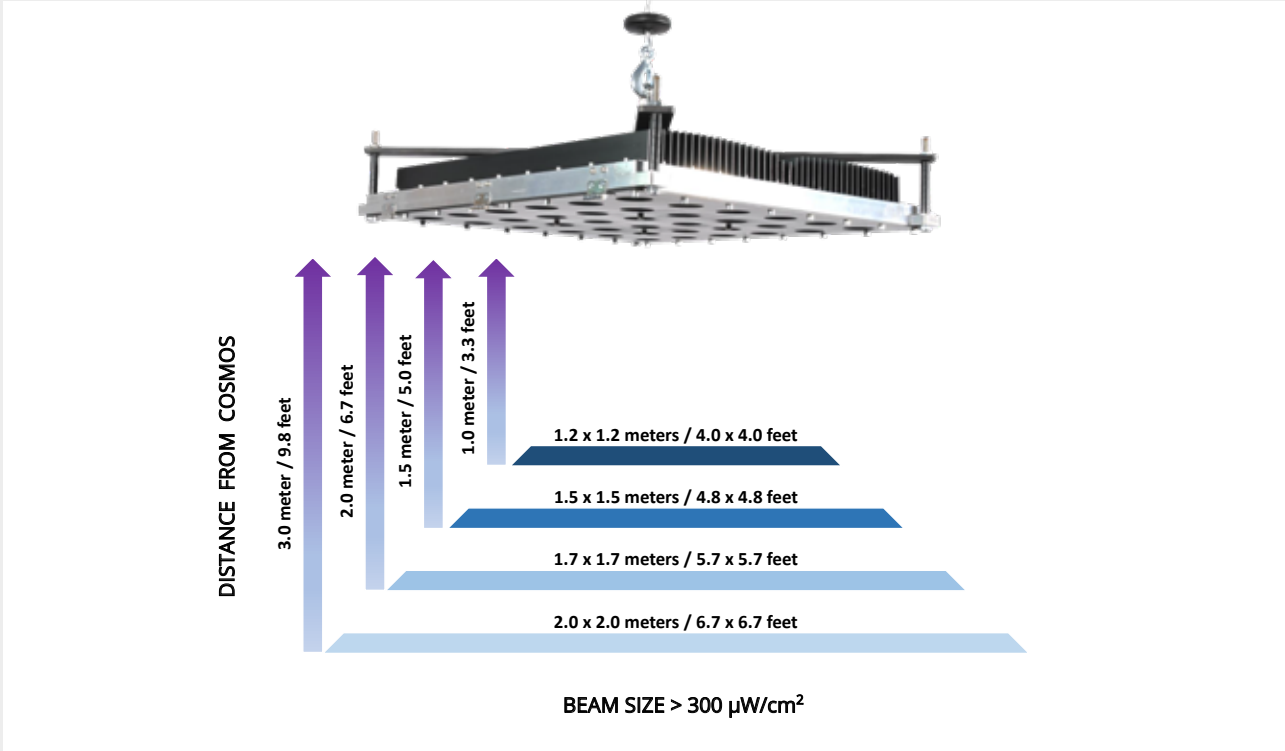
**Beam profile > 100 μW/cm<sup>2</sup> and 300 μW/cm<sup>2</sup> measured from a distance of 3.0 meters / 9.8 feet:**



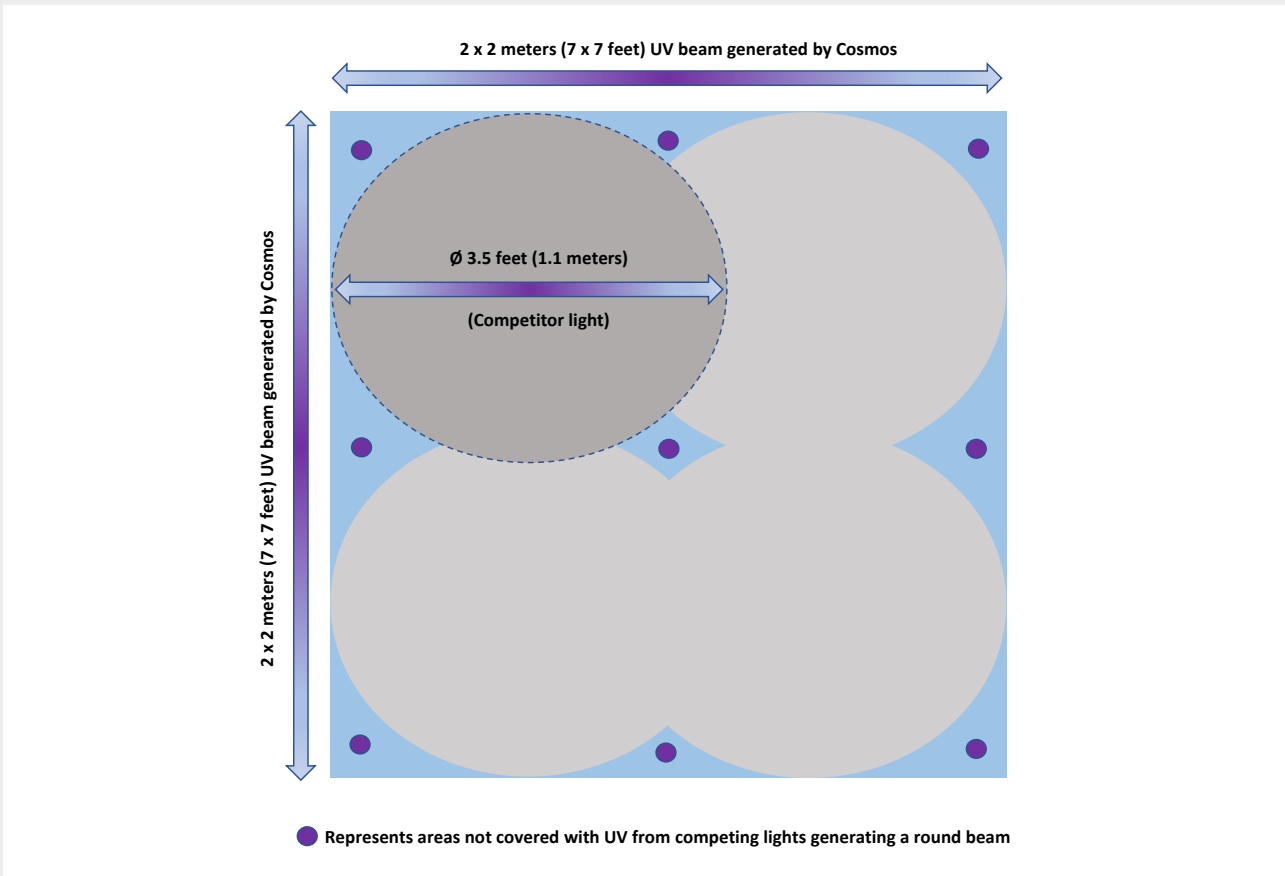
**Cosmos is more cost-effective than any other UV light designated for wash stations for the following reasons:**

1. Cosmos generates a much larger UV beam than any other UV LED light in the world.
2. The beam shape of Cosmos is a perfect square. You need at least 4 lights from the closest competing light to try and match the performance of Cosmos, and you will still have several dead spots as illustrated on the drawing below.
3. Due to the large area covered by Cosmos, the actual cost of one Cosmos unit is 25% or less than any other brand.
4. 4-year warranty – longer warranty than any other light used in wash areas.





Cosmos generates a much larger UV beam than any other UV LED light in the world.



The beam shape of Cosmos is a perfect square. You need at least 4 lights from the closest competing light to try and match the performance of Cosmos, and you will still have several dead spots as illustrated on the drawing above.



# Improvements of Apollo 3.0 and advantages over other meters



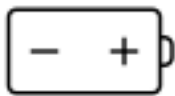
**HIGHER IP CLASS FOR ENCLOSURE**

The sensor unit of Apollo 3.0 is IP67 classified, compared to Apollo 2.0 that is IP40. Therefore, the unit is dustproof and waterproof.



**WIRELESS**

The reader unit and the sensor unit are completely wireless and communicate with one another up to 5 meters (16 feet). No loose connections, cut or worn-out cables from penetrants.



**BATTERIES ACCESSIBLE FROM THE OUTSIDE**

The batteries are accessible from the outside in the new enclosure. Therefore, the unit does not have to be opened or re-calibrated when changing batteries.



**US AIRFORCE APPROVAL**

The Apollo 3.0 has been approved for use by the United States Airforce.



**NO LITHIUM BATTERIES**

The Apollo 3.0 sensor is operated using three Alkaline batteries (3 x AAA 1.5 volt). The new batteries do not require Dangerous Goods Management (DGS) and the meter is therefore easier to ship with air freight.



**ISO 17025 LAB**

The meter comes calibrated by Labino AB, an ISO 17025 calibration lab with scope in UV and white light calibrations. SWEDAC accreditation Number 10391.



**GENERAL FATIGUE DRIFT**

The fatigue is close to non-existing. The readings drop by 0.1% after 30 minutes irradiation with 50 000  $\mu\text{W}/\text{cm}^2$ .



**ZERO DRIFT IN EXTREME TEMPERATURES**

Apollo 3.0 has close to no temperature drift within the operating temperature range. Performing UV measurements at 0°C or 40°C shows the exact same readings. (convert Fahrenheit)

## Quadruple your warranty period by using Labino authorized calibration labs

**Americas:** Berg Engineering, Chicago, Illinois –  
Tel: 847 577 3980  
Hocker Inc., Houston, Texas –  
Tel: 713 464 5829  
IR Supplies and Services, Edmonton, Alberta –  
Tel: 855 737 2689

**Europe:** Labquip NDT, Hinckley, U.K –  
Tel: 07385 107790  
Utiles y Maquinas, Bilbao, Spain –  
Tel: 944 46 62 50  
Action NDT, St. Etienne de Tulmont, France –  
Tel: 05 82 73 01 06  
Labino AB, Stockholm, Sweden –  
Tel: 08 83 90 70

**Upcoming:** Taiwan, Australia, Italy



# Apollo 3.0 (Single Kit PN: M513, ble kit PN: M514)

**1 year warranty** – extends to 4 years if recalibrations are carried only by authorized Labino calibration labs

Radiometer/photometer measuring UV and visible light via a wireless sensor. Apollo 3.0 is traceable to NIST (National Institute of Standards and Technology) and is in compliance with ISO 3059-12. We calibrate Apollo 3.0 in accordance to ISO / IEO 17025. Our accreditation has been certified by SWEDAC and carries the accreditation number 10391. Our Apollo 3.0 dual meter calibration services are now offered in Chicago (USA), Houston (USA), Edmonton (Canada), Stockholm (Sweden), Bilbao (Spain), St. Etienne de Tulmont (France) and U.K. All authorized calibration centers follow a specific process proprietary to Labino, all have the same equipment, and all receive the same training.



### WIRELESS SENSOR

Measures up to a distance of 5 meters (16 feet) from the Reader unit.



### RED OLED SCREEN

Red OLED screen for easy readings in a dark environment and a peak function to identify the highest reading.



### BATTERY POWERED

Reader unit is powered by three "AA" batteries and the sensor unit is powered by three "AAA" batteries – both can be replaced by the user.



**An instrument for accurate measurement** of UV-A irradiation and visible illuminance. Extra engineering effort is taken to make an accurate measurement of visible light emission from a UV-A lamp by incorporating a superior band pass filter containing only non-fluorescent materials. The instrument provides fast measurement as it offers auto ranging and concurrent measuring of visible light and UV-A irradiation. It is ergonomic and easy to use due to its light weight chassis, wireless sensor unit and compact size. Apollo 3.0 is traceable to NIST (USA's National Institute of Standards and Technology).

Transmission of data is done via Bluetooth. The wireless sensor enables the user to measure from a distance of up to five meters. This feature ensures that the sensor unit is stable and no movement occurs from connecting cables during measurement. Each sensor unit incorporates both the UV and white light sensor.

Apollo 3.0 comes as a single kit or as a double kit. The single kit includes one reader unit and one wireless sensor unit. A double kit includes one reader unit and two wireless sensor units. As only the sensor needs to be send for recalibration, the double kit is a convenient tool so that operations are never disrupted. Please note that Aerospace companies that are audited by Nadcap must send in both the reader and the sensor for recalibration.

The meter features hold and peak functions. The "Hold" function stores the present value measured and the "Peak" button stores the highest value measured.

### SPECTRAL SPECIFICATION APOLLO 3.0

UV Light Sensor	
Spectral Sensitivity:	320 nm to 400 nm
Operation Range:	0 to 50,000 $\mu\text{W}/\text{cm}^2$
Accuracy:	UV Light: +/- 4 %
White Light Sensor	
Spectral Sensitivity:	400 nm to 700 nm
Operation Range:	0 to 10 000 Lux (930 fc)
Accuracy:	Visible Light: +/- 3 %



**APOLLO 3.0 SINGLE KIT PACKAGE INCLUDES:**  
Reader unit, Sensor unit, Calibration certificate, Carrying case.



**APOLLO 3.0 DOUBLE KIT PACKAGE INCLUDES:**  
Reader unit, two sensor units, Calibration certificate, Carrying case.

## Accessories for Apollo 3.0

Olympos measurement stand (PN: A542)

### Apollo 3.0





# Olympos (PN: A542)

Measure the UV-A and white light output of any of your Labino UV-A LED lights with accuracy at 15 inches (38 cm) and stay in compliance with the pledged standards.



**PLATES CAN BE USED INTERCHANGEABLY**  
 Different size plates can be used interchangeably on the Olympos stand to measure any Labino UV-A light you have. For example, all BB 2.0 Series lights can make use of the same large size plate.

**ADJUSTABLE SCALE**  
 The plates that accommodate the lights can be adjusted up or down along the 20 inch / 50 cm line.



**APOLLO 3.0 READER UNIT**  
 The wireless feature allows accurate readings of the UV intensity, preventing accidental movements from connecting cables. Apollo 3.0 can provide readings from a distance of 5 meters (16 feet).



**APOLLO 3.0 SENSOR UNIT**  
 Apollo 3.0 compact wireless sensor can be placed at a fixed position on the Olympos stand, providing accurate UV readings for all handheld Labino UV lights.

**Over the last 5 years, the NDT industry** has adopted new standards for LED blacklights, authored by ASTM (i.e. ASTM E3022-18) and the PRIMES (i.e. Rolls-Royce RRES 90061, Airbus AITM6-1001), to ensure that the properties and quality of the UV lights used are suitable for NDT inspections. Labino has UV lights in its product portfolio that are tested to comply with all relevant ASTM, ISO and PRIMES requirements. These requirements as well as the various checklists of NDT Technicians, such as NADCAP compliant technicians, require frequent tests and measurements of the UV lights at a distance of 15 inches (38 cm).

Labino is proud to introduce to the market, Olympos, the first measurement stand for UV lights, especially designed to conduct such measurements and help NDT professionals to remain in compliance with the pledged standards.

Olympos measurement stand comes with four different size plates that can be used interchangeably on the stand. This enables all Labino LED blacklights (UVG3 2.0 Series, MB 3.0 Series, BB 2.0 Series) to be measured from the same distance using the Labino Apollo 3.0 UV and White light meter or any other meter.



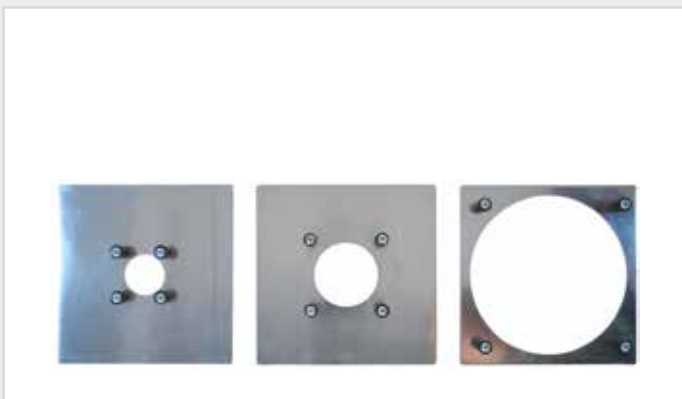
**MEASURING MB 3.0 SERIES UV-A INTENSITY WITH OLYMPOS**

Hercules, Zeus, Hermes, Selene and Atlas can all be measured using the same medium size plate.



**MEASURING UVG3 UV INTENSITY WITH OLYMPOS**

The UVG3 2.0 Spotlight, UVG3 2.0 Midlight and UVG3 2.0 Floodlight can all be measured using the same small size plate.



**THREE DIFFERENT SIZE PLATES THAT FIT ALL LABINO HANDHELD LIGHTS**

Olympos measurement stand comes with four different size plates that can be used interchangeably on the stand. This enables all Labino handheld LED blacklights (UVG 2.0 Series, MB 3.0 Series, BB 2.0 Series) to be measured with accuracy. The large plate is used to measure BB 2.0 Series lights, the medium plate is used to measure MB 3.0 Series lights and the small plate is used for all UVG 2.0 Series lights.



**MEASURING UVG5 UV INTENSITY WITH OLYMPOS**

The UVG5 2.0 Spotlight, UVG5 2.0 Midlight and UVG5 2.0 Floodlight can all be measured using the same small size plate.



## List of Part Numbers

UVG3 2.0 SERIES LIGHTS AND ACCESSORIES	
L124	UVG3 2.0 SPOTLIGHT
L125	UVG3 2.0 MIDLIGHT
L126	UVG3 2.0 FLOODLIGHT
	Contact us for select combinations of double kits
A532	UVG Variable Gooseneck Arm
F107	Rubber Bumper for UVG3 2.0 Series
UVG5 2.0 SERIES LIGHTS AND ACCESSORIES	
L127	UVG5 2.0 SPOTLIGHT with white light
L128	UVG5 2.0 MIDLIGHT with white light
L129	UVG5 2.0 MIDLIGHT without white light
L130	UVG5 2.0 FLOODLIGHT with white light
L131	UVG5 2.0 FLOODLIGHT without white light
MB 3.0 SERIES LIGHTS AND ACCESSORIES	
L119	MB 3.0 Zeus Mains
L118	MB 3.0 Zeus Battery
L122	MB 3.0 Zeus Battery w/Athena
L121	MB 3.0 Hermes Mains
L120	MB 3.0 Hermes Battery
L123	MB 3.0 Hermes Battery w/Athena
L139	MB 3.0 Selene Mains
L138	MB 3.0 Selene Battery
L140	MB 3.0 Selene Battery W/Athena
L125	MB 3.0 Atlas Mains
L124	MB 3.0 Atlas Battery
L126	MB 3.0 Atlas Battery W/Athena
A533	MB Variable Gooseneck Arm
A538	Flexible Arm for MB 3.0 Series Mains Units
A541	Flexible Arm for MB 3.0 Series Battery Units
F106	Rubber Bumper for MB 3.0 Series
F111	Rubber Bumper for MB 2.0 Series (fits Hercules Ex)
F105	Thumb screws for MB 3.0 Series (Battery only)
A504	MB 3.0 Belt holster
A507	MB 3.0 Hand grip band
HERCULES EX	
L3000	Hercules Ex

BB 2.0 SERIES LIGHTS AND ACCESSORIES	
L1074	BB 2.0 Ikaros Mains
L1075	BB 2.0 Ikaros Battery
L1076	BB 2.0 Helios Mains
L1077	BB 2.0 Helios Battery
L1078	BB 2.0 Artemis Mains
L1079	BB 2.0 Artemis Battery
A536	Flexible Arm for BB 2.0 Series Units (Mains or Battery)
A530	Friction Arm for BB 2.0 Series (or MB 2.0 Series)
F175	Cable Winder for BB 2.0 Mains
F800 & F801	Mounting yoke with brackets and screws
GX ORION LIGHTS AND ACCESSORIES	
L3100	GX ORION <sup>REMOTE</sup> MOTHER UNIT
L3101	GX ORION <sup>UV &amp; WH</sup> MOTHER UNIT
L3102	GX ORION <sup>UV</sup> MOTHER UNIT
L3104	GX ORION <sup>UV &amp; WH</sup> SLAVE UNIT (fits GX ORION <sup>REMOTE</sup> and GX ORION <sup>UV &amp; WH</sup> MOTHER UNITS)
L3105	GX ORION <sup>UV</sup> SLAVE UNIT (fits GX ORION <sup>UV</sup> MOTHER UNIT only)
A603	Foot Pedal for GX Orion <sup>REMOTE</sup>
A605	Foot Pedal for GX Orion <sup>UV &amp; WH</sup> or GX Orion <sup>UV</sup>
A604	Power Button for GX Orion <sup>REMOTE</sup>
A606	Power Button for GX Orion <sup>UV &amp; WH</sup> or GX Orion <sup>UV</sup>
APOLLO 2.0	
M513	Apollo 3.0 Single Kit (1 reader, 1 sensor)
M514	Apollo 3.0 Double Kit (1 reader, 2 sensors)
M515	Apollo 3.0 sensor unit only
M508	Apollo 3.0 reader unit only
GENERAL ACCESSORIES	
A542	Olympos Measurement Stand for Apollo 2.0/BB 2.0 Series/MB 2.0 Series/UVG Series
S401	UV Block Visor
S505	UV Block Goggles "XC"
COSMOS	
L3200	Cosmos







# Labino warranty policy

**Labino does not sell used products** nor do we authorize any third party to conduct the resale of used or damaged goods. If you purchase any products from an unauthorized re-seller, there is a risk that the product may be defective. Labino's policy is to uphold product warranties and to perform service on products purchased from authorized retailers only.

We strongly encourage our customers to protect themselves by purchasing products only from the list of authorized distributors provided by Labino.

## About Labino

**Labino AB is an Original Equipment Manufacturer of UV, Alternate Light Sources and UV measurement instruments.** We are an ISO 9001-2015 certified company, an ISO 80079-34EX certified company and an ISO/IEC 17025 calibration lab with scope in UV and White Light calibrations.

We have a team of highly qualified scientists whose sole duty is working towards providing accurate instruments and constantly improving all products we manufacture. Our products are sold in over 50 countries via a wide network of distributors, service centres and calibration centres. Our overhead UV lights carry a 4-year warranty and our handheld UV lights 2-4 year warranty.

All products we sell are made only by Labino, in factories located in Sweden and owned by Labino, controlled by a Labino quality manager, and audited by a third party.

**Our auditor for ISO/IEC 17025 is SWEDAC.**

**Our auditor for ISO 80079-34EX, manufacturing of explosion proof products, is Intertek.**

**Our auditor for ISO 9001-2015 is DNV.**

Any owner of Labino products has an open invitation to visit us and meet the team. Take a tour to see where your equipment has been designed, where it has been built, but most important of all, where and how it has been tested to comply with respective standards.



Accred. no. 10391  
Calibration  
ISO/IEC 17025

**If you have any questions, please feel free to contact us by email or by phone as follows:**

Marios Athanasiadis  
Customer Service Manager  
Tel: +1 202 888 2025 / +46 766773406  
Email: [labino@labino.com](mailto:labino@labino.com)



Labino North America Customer Service:  
Tel: +1 202 888 2025  
Email: labino@labino.com

Labino European Customer Service:  
Tel: +46 76677 3406  
Email: labino@labino.com

Hercules EX  
4 Year warranty



GX Orion  
4 Year warranty



Apollo 3.0  
4 Year warranty



” We provide the best warranty terms in the industry, and we maintain a growing UV-A product line, demonstrating our commitment to innovation, quality, and our customers ”

Cosmos  
4 Year warranty



UVG5 2.0 Series  
3 Year warranty



MB Pro  
3 Year warranty

