# SPECTROLINE®

# Inspection Products for Nondestructive Testing
## Solutions for the NDT Technician

*ISO 9001:2008*
**CERTIFIED COMPANY**

# NDT: AN OVERVIEW

Nondestructive testing (NDT) is a procedure used to examine and/or inspect materials and components to locate surface and subsurface defects in a way that allows such materials to be examined without changing or destroying their original design or structure.

NDT plays a crucial role in everyday life. It is necessary to ensure structural integrity, safety and reliability in aircraft, motor vehicles, pipelines, seafaring vessels, bridges, trains, tunnels, power stations, refineries and oil platforms. All are inspected using some method of nondestructive testing.

Nondestructive testing is also a quality assurance production and management tool which can provide impressive results when used correctly. It requires an understanding of the various methods available, their capabilities and limitations, knowledge of the relevant standards and specifications for performing the tests.

Materials, products and equipment that fail to achieve their design requirements or projected life due to undetected defects may require expensive repair or early replacement. Such defects may also be the cause of unsafe conditions or catastrophic failure, as well as the loss of revenue due to unplanned shutdowns.

Nondestructive testing can be applied to each stage of an item's development, manufacture or construction. The item's materials and assembly can be examined using NDT and either accepted, rejected or repaired. NDT techniques can then be used to monitor the integrity of the item or structure throughout its service life.

The most commonly used NDT methods are visual inspection, liquid penetrant inspection, magnetic particle inspection, Eddy current inspection, acoustic emission, ultrasonic inspection and radiography.

## TABLE OF CONTENTS

Spectronics Corporation manufactures a wide array of medium and high-intensity inspection lamps and products that are used to detect and identify surface and subsurface flaws in the performance of nondestructive testing utilizing the visual inspection, liquid penetrant and magnetic particle methods. For more information see www.spectroline.com.

Surface metal defect revealed using the TRITAN™ 365 UV-A inspection lamp and Zyglo® liquid penetrant

# OLX-365 Series

## OPTI-LUX™ 365 UV-A LED Inspection Flashlights

### *Affordable, Super-Compact and Designed Specifically for NDT!*

Feature a powerful UV-A (365 nm) LED light source coupled with a rugged anodized lamp body. Lightweight and compact, they reduce user fatigue while providing an extremely uniform beam profile that surpasses those of more expensive lamps.

Available in four models to suit your specific NDT needs: high-intensity or standard-intensity versions, each with or without an internal black light filter.

- Choice of nominal steady-state UV-A intensity of *10,000 µW/cm²* or maximum of *4,500 µW/cm²*  at 15 inches (38 cm)
- Coverage area up to 2.5 inch (6.3 cm) diameter at 15 inches  (38 cm), with minimum UV-A intensity of *2,000 µW/cm²*
- Anodized aluminum lamp body minimizes corrosion and stands up to years of heavy use
- Instant-on operation; lamp reaches full intensity immediately!
- Convenient on/off switch for easy, one-handed operation
- Powered by one rechargeable lithium-ion battery with an extra battery included with the lamp. Each provides 4 hours of continuous inspection between charges.
- Meets ASTM UV-A intensity and wavelength specifications for LPT and MPT
- Both high- and standard-intensity versions are available with internal black light filter. Externally mounted black light filter with rubber bumper can be purchased as an accessory.
- *Certificate of compliance* for both wavelength and output measurements supplied with every lamp

**OPTI-LUX™ 365** flashlight with **BF-365LX** external black light filter accessory

| Model | Nominal steady-state UV-A (365 nm) intensity at 15 inches (38 cm) $①$ | Visible light measurement | Diameter of UV-A coverage area at 15 inches (38 cm) |
|---|---|---|---|
| **OLX-365** High intensity, with clear filter | 10,000 µW/cm$^2$ | 0.8 foot-candles (8.6 lux) | 2 inch (5.0 cm) |
| **OLX-365B** High intensity, with internal black light filter | 10,000 µW/cm$^2$ | 0.4 foot-candles (4.3 lux) | 2 inch (5.0 cm) |
| **OLX-365FL** Standard intensity, with clear filter | 4,500 µW/cm$^2$ maximum $②$ | 0.3 foot-candles (3.2 lux) | 2.5 inch (6.3 cm) |
| **OLX-365BFL** Standard intensity, with internal black light filter | 4,500 µW/cm$^2$ maximum $②$ | 0.2 foot-candles (2.1 lux) | 2.5 inch (6.3 cm) |

| | |
|---|---|
| **Light Source:** | UV-A LED |
| **Lamp Style:** | Cordless flashlight |
| **Lamp Head Diameter:** | 1.25 in (3.2 cm) |
| **Length:** | 5.9 in (15 cm) |
| **Weight (*w/Battery*):** | 4.6 oz (130 g) |
| **Power Requirement:** | One 3.7V 2200mA/Hr lithium-ion battery (rechargeable) |
| **Run Time:** | 4 hours (continuous) |
| **Charge Time:** | 4 hours (one or two batteries) |
| **Charging Cradle:** | Two-battery capability with AC and DC cord sets |

$①$ All UV-A intensity readings taken with Spectroline® AccuMAX™ Series meter, and are factory set to the values shown

$②$ To address aerospace industry concerns

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**OPTI-LUX™ 365 Series flashlights** come complete with lanyard, belt holster, two rechargeable batteries, smart charging cradle with AC and DC cord sets, UV-absorbing spectacles and a padded carrying case.

## Replacement Parts & Accessories

| | |
|---|---|
| **BF-365LX** | External black light filter with rubber bumper |
| **127423** | Dome lens |
| **127568** | Lithium-ion battery (rechargeable) |
| **127607** | Internal black light filter |
| **127785** | Internal clear filter |
| **128217** | Battery charging cradle with AC cord |
| **128225** | DC cord set |
| **127574** | Belt holster |
| **UVS-30** | UV-absorbing spectacles |
| **CC-365** | Carrying case |

# HIGH-INTENSITY MODELS

**OPTI-LUX™ 365 Series** flashlights are available in two *high-intensity* models that are designed for NDT inspection applications requiring high UV-A output. The **OLX-365** is equipped with a clear filter, while the **OLX-365B** comes with an internal black light filter that reduces the output of wavelengths longer than 400 nm. Both versions provide a nominal steady-state UV-A intensity of *10,000 μW/cm²* at 15 inches (38 cm).

## UV-A BEAM PROFILE



SURFACE CONTOUR PROFILE AT 15 IN (38 CM)

TOP INTENSITY PROFILE AT 15 IN (38 CM)
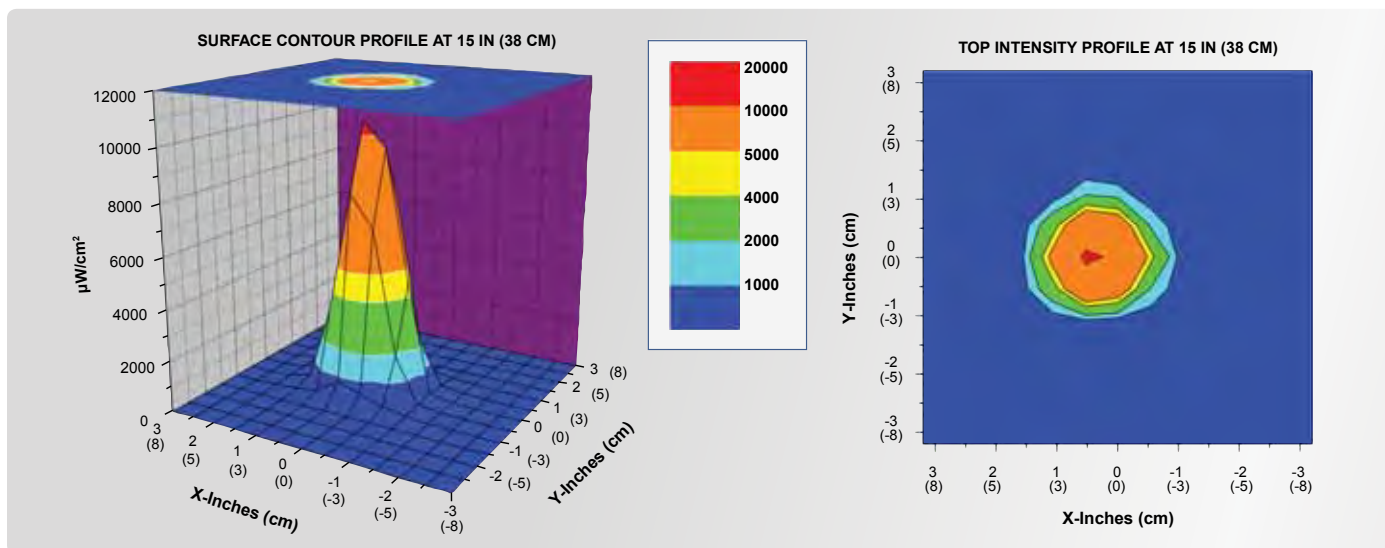
## NORMALIZED UV IRRADIANCE

**Typical wavelength output profile of OPTI-LUX™ 365 with and without black light filter, with peak at 365 nm.**



Legend:
- Without Black Light Filter
- With Black Light Filter
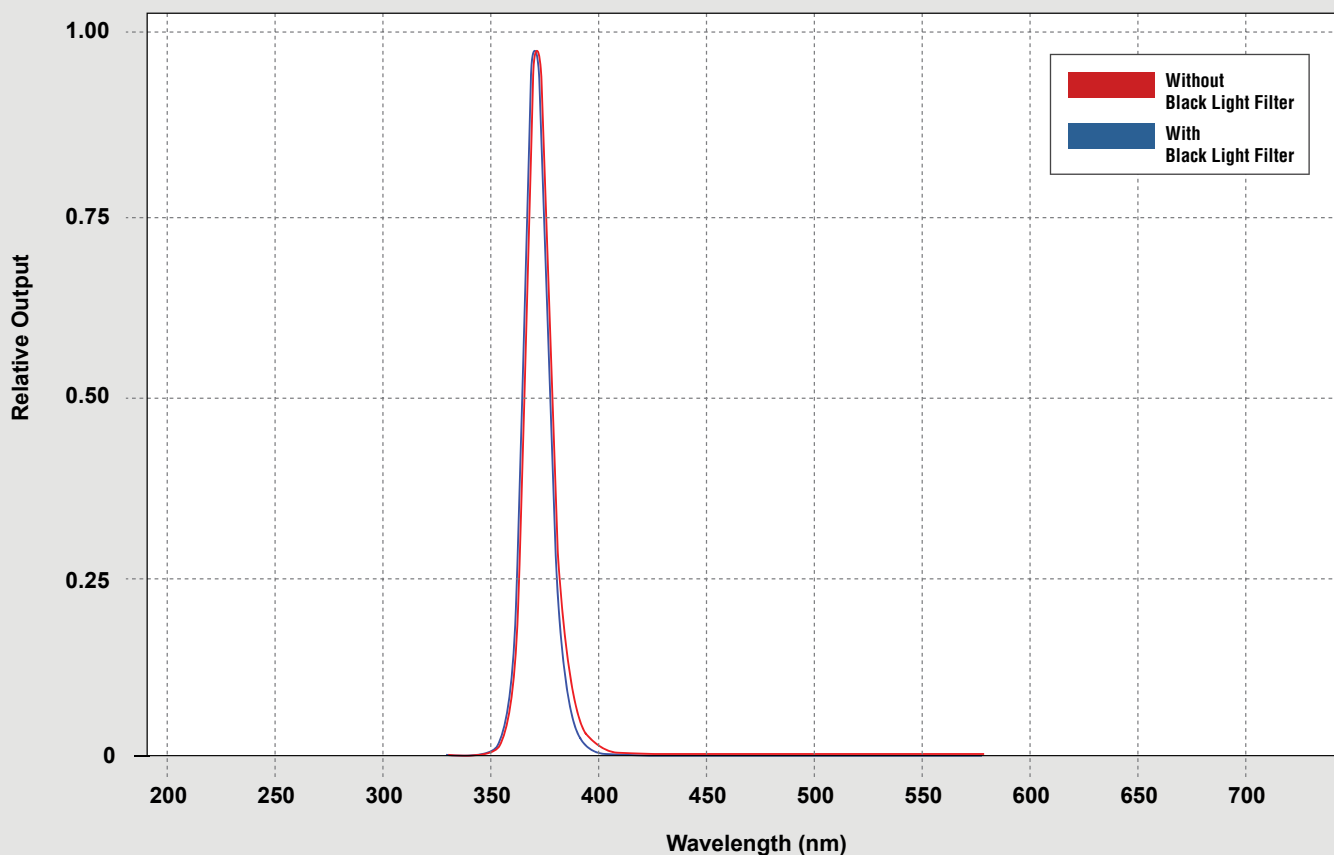
# STANDARD-INTENSITY MODELS

**OPTI-LUX™ 365** flashlights are also available in two ***standard-intensity*** models that are designed for inspection applications requiring limited UV-A output. The **OLX-365FL** is equipped with a <u>clear filter</u>, while the **OLX-365BFL** comes with an <u>internal black light filter</u> that reduces the output of wavelengths longer than 400 nm. These lamps also offer a larger coverage area compared to high-intensity models. Both versions provide a nominal steady-state UV-A intensity of ***<u>4,500 µW/cm²</u>*** maximum at 15 inches (38 cm), and <u>comply with aerospace industry standards.</u>

## UV-A BEAM PROFILE

**SURFACE CONTOUR PROFILE AT 15 IN (38 CM)**

µW/cm²

5000
4000
2000
1000

X-Inches (cm)

Y-Inches (cm)

**TOP INTENSITY PROFILE AT 15 IN (38 CM)**

Y-Inches (cm)

X-Inches (cm)
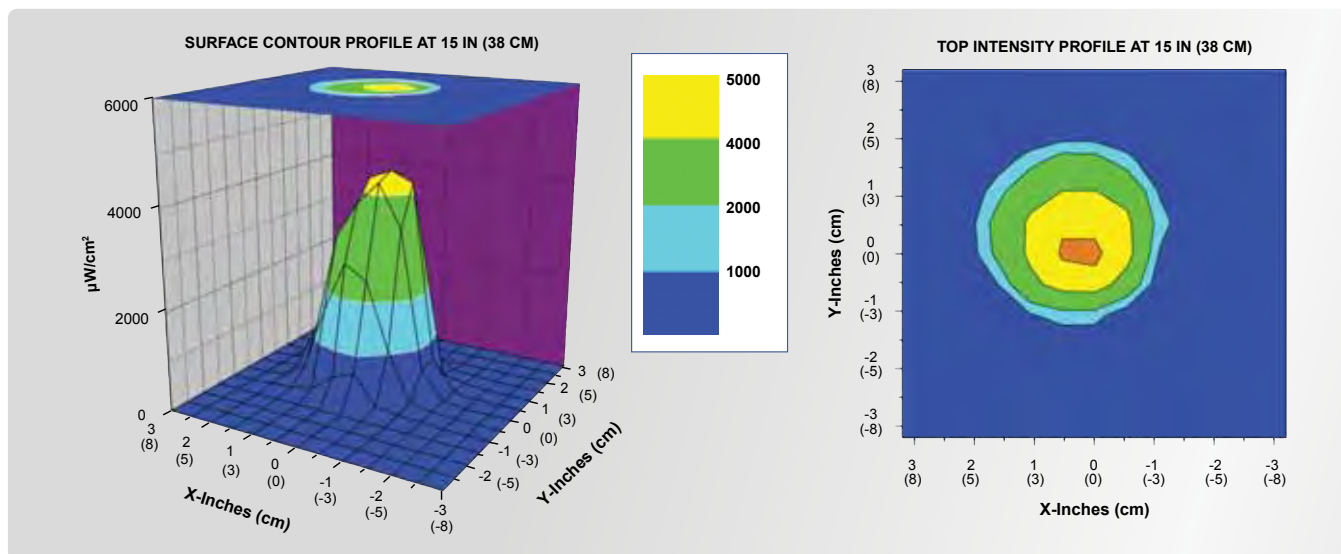
## SELECT WAVELENGTHS WITH AND WITHOUT BLACK LIGHT FILTER

**As the wavelength of the OPTI-LUX™ 365 moves into the visible light range, the black light filter significantly reduces the UV-A output of the lamp by as much as 50% at 400 nm.**

Relative Output

Wavelength (nm)

■ Without Black Light Filter
■ With Black Light Filter
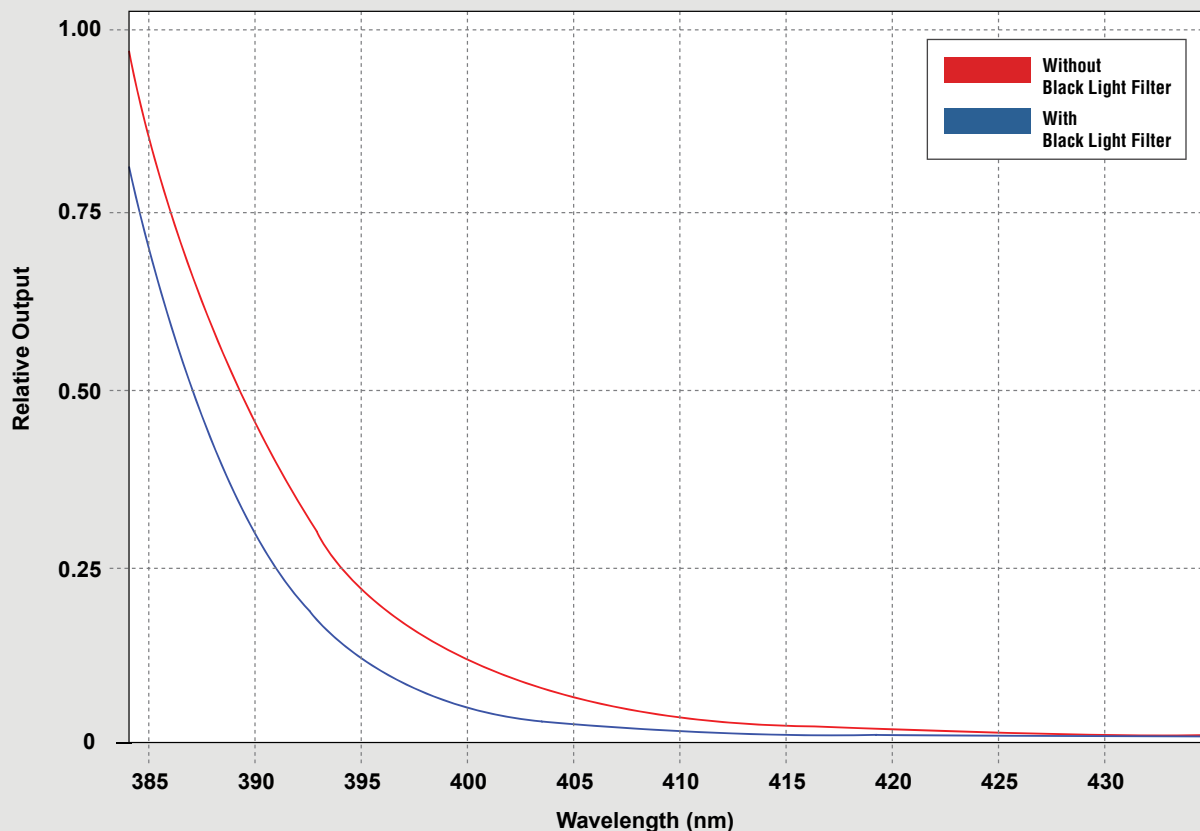
# OPX-365

## OPTIMAX™ 365 UV-A LED Inspection Flashlight
### (U.S. and foreign patents pending)

***Powerful, rechargeable, high-intensity UV-A inspection flashlight featuring state-of-the-art, ultra-hi-flux LED technology!***

- Nominal steady-state UV-A intensity of **_18,000 µW/cm²_** at 15 inches (38 cm)
- Low visible light emission — less than 2 foot-candles (22 lux)
- Electronic Intensity Stabilizer assures consistent performance. Beam strength will not weaken between charges!
- Instant-on operation. Lamp reaches full intensity <u>immediately!</u>
- Rubber lamp protector prevents damage to LED head
- Ergonomic, portable and rugged. Anodized aluminum lamp body minimizes corrosion and stands up to years of heavy use.
- Powered by a rechargeable NiMH battery. Provides 90 minutes of continuous inspection between charges.

**Also available: DF-365** diffusing filter (sold separately).
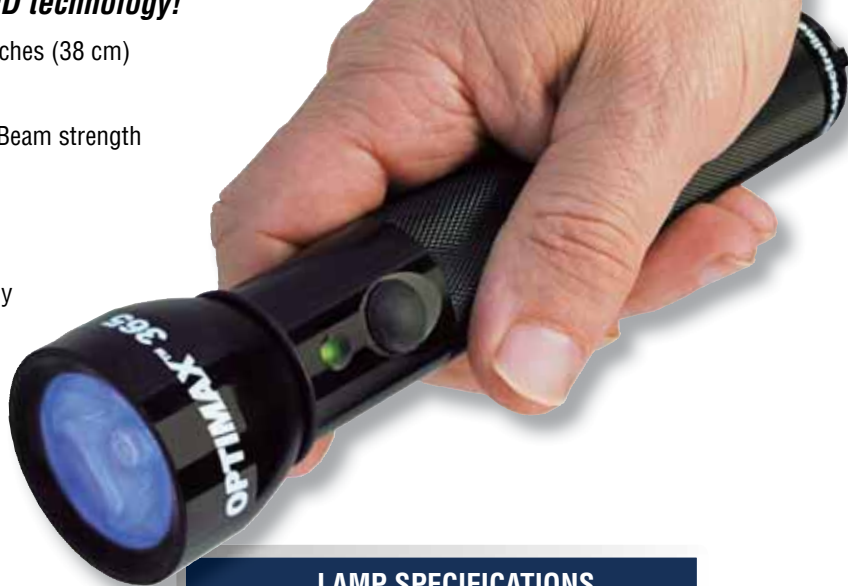
**OPTIMAX™ 365 UV-A LED Inspection Flashlight** comes complete with rubber lamp protector, smart AC and DC chargers, UV-absorbing spectacles, belt holster and padded carrying case.

### LAMP SPECIFICATIONS

| | |
|---|---|
| **Style** | Cordless flashlight body with UV-A LED lamp head |
| **Length** | 8.0 inch (20.3 cm) |
| **Weight** (with Battery) | 11.8 oz (335 g) |
| **Power Requirement** | 3.6V, 2 AH NiMH internal battery stick (rechargeable) |
| **Run Time** | 90 minutes (continuous) |
| **Charge Time** | 4 hours |
| **Spectacles** | UVS-30 UV-absorbing, clear |

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## UV-A BEAM PROFILE

**SURFACE CONTOUR PROFILE AT 15 IN (38 CM)**



| | |
|---|---|
| | 20000 |
| | 10000 |
| | 5000 |
| | 4000 |
| | 2000 |
| | 1000 |
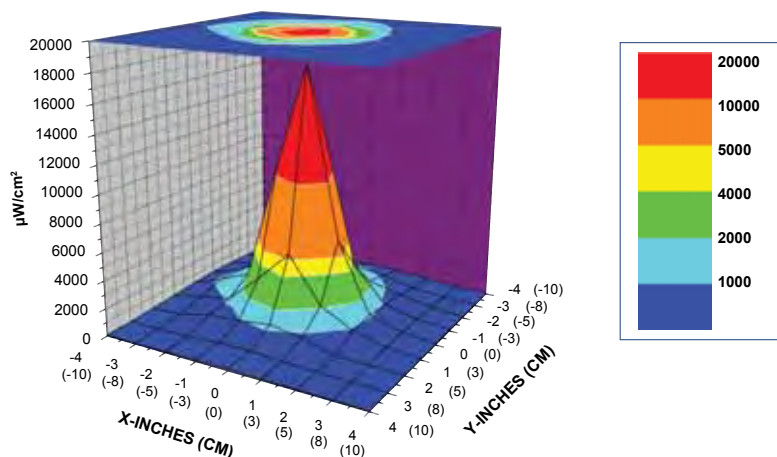
**TOP INTENSITY PROFILE AT 15 IN (38 CM)**
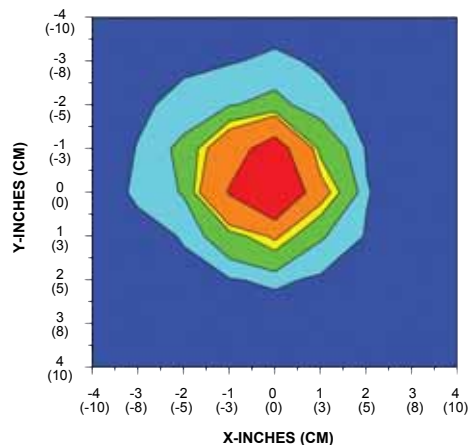
# OPK-300N

## OPTIMAX™ Multi-Lite™ NDT Inspection Kit

*(U.S. patent no. 5,905,268; foreign patents pending)*

### A New Powerful, Versatile, Multi-LED, NDT Light Source!

Features <u>three</u> Qwik-Connect™ interchangeable LED lamp heads that connect to a rugged, black-anodized flashlight body. It provides single-wavelength illumination in UV-A and blue light, and is ideal for both pre-screening of fluorescent particles in ambient light conditions and full-fledged NDT inspections utilizing magnetic particles or fluorescent penetrants. A convenient white light LED provides general illumination of dark work areas.

- Super-powerful LED optical output with ultra-high intensity 365 nm UV-A <u>and</u> 450 nm blue light performance

- Provides nominal steady-state intensity of **_18,000 µW/cm²_** (UV LED) or **_7,000 µW/cm²_** (blue light LED) at 15 inches (38 cm)

- Blue light LED with patented thin-film dichroic lens filters out long-wave visible light

- Electronic Intensity Stabilizer ensures consistent performance. Beam strength will not weaken between charges!

- Instant-on operation. Lamp reaches full intensity <u>immediately</u>!

- Lightweight, cordless, ergonomic design eliminates fatigue

- Powered by a rechargeable NiMH battery. Provides 90 minutes of continuous inspection between charges (smart AC and DC chargers included).

**OPK-300N Multi-Lite™ Inspection Kit** comes complete with three storage pouches for the LED lamp heads, smart AC and DC battery chargers, UV-absorbing spectacles, fluorescent-enhancing, yellow spectacles and a padded carrying case.
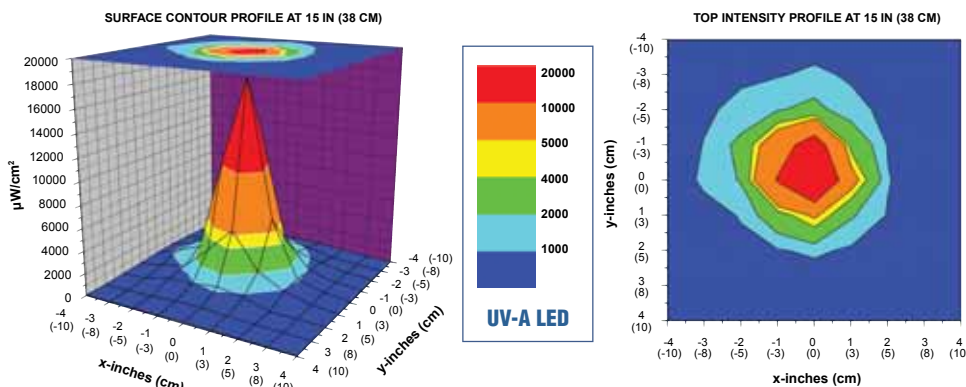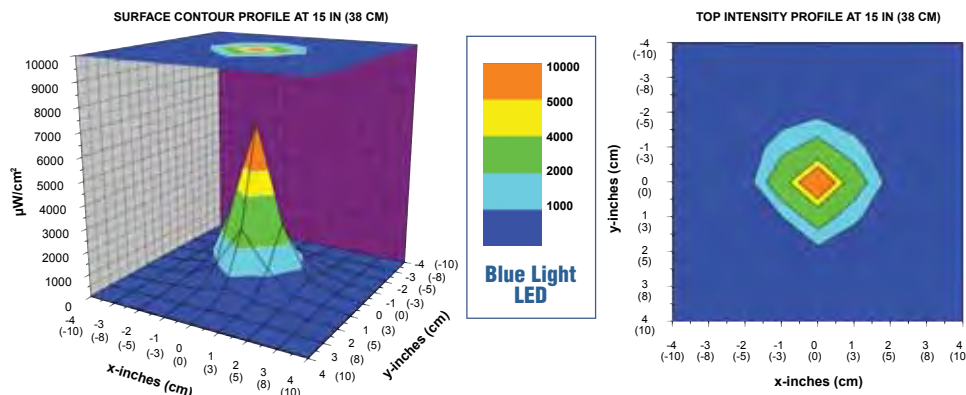
## UV-A BEAM PROFILE



SURFACE CONTOUR PROFILE AT 15 IN (38 CM)

TOP INTENSITY PROFILE AT 15 IN (38 CM)

UV-A LED

## BLUE LIGHT BEAM PROFILE



SURFACE CONTOUR PROFILE AT 15 IN (38 CM)

TOP INTENSITY PROFILE AT 15 IN (38 CM)

Blue Light LED

### LAMP SPECIFICATIONS

| | |
|---|---|
| **Style** | Cordless flashlight body with three interchangeable LED lamp heads |
| **Length** | 9.0 inch (22.9 cm) |
| **Weight** *(with Battery)* | 15.3 oz (434 g) |
| **Power Requirement** | 3.6V, 2 AH NiMH internal battery stick (rechargeable) |
| **Run Time** | 90 minutes (continuous) |
| **Charge Time** | 4 hours |
| **Spectacles** | UVS-30 UV-absorbing, clear UVS-40 fluorescent-enhancing, yellow |

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# TRI-365 Series

## TRITAN™ 365 Multi-LED, Broad-Beam UV-A Inspection Lamps

Feature <u>three</u> ultra-hi-flux UV-A LEDs for fluorescent inspection, <u>plus</u> a convenient white light LED to scan for surface flaws and illuminate dark work areas. Their broad-beam configuration provides an extremely wide coverage area, while a compact head design allows access into areas inaccessible to larger UV inspection lamps.

Available in <u>three models</u> to meet your specific NDT inspection requirements: high-intensity, standard-intensity and standard-intensity with integral black light filters.

- Choice of one <u>high-intensity</u> model with a nominal steady-state UV-A intensity of **_9,000 µW/cm²_** or two standard-intensity **models, both with a** maximum UV-A intensity of <u>less than</u> **_5,000 µW/cm²_** at 15 inches (38 cm)

- Large 4 inch (10 cm) diameter coverage area at 15 inches (38 cm), with a minimum UV-A intensity of **_2,000 µW/cm²_**

- Low visible light emission — less than 2 foot-candles (22 lux)

- Grip-mounted, three-way rocker switch (white light/off/UV) for easy control of light sources

- Built-in fans keep LEDs cool to maintain optimum light output during extended use

- Long-lasting UV-A lenses reduce the rate of solarization

- Rubber bumper with Borofloat® glass lens protects LEDs from damage

- Modular construction for easy servicing in the field

- Choice of standard 8 foot (2.4 m) or extra-long 20 foot (6.1 m) heavy-duty power cord with AC plug and rubber boot. Also available: Optional in-line power supply or industrial power supply with cord sets (sold separately).

- Meets ASTM UV-A intensity and wavelength specifications for LPT and MPT

- **_Certificate of compliance_** for <u>both</u> wavelength and output measurements supplied with every lamp

- UV-absorbing spectacles and soft carrying case included

TRITAN™ 365 faceplate shown with (left) and without (right) integral black light filters.



| Model | Nominal steady-state UV-A (365 nm) intensity at 15 inches (38 cm) ① | Visible light measurement | Diameter of UV-A coverage area at 15 inches (38 cm) |
|---|---|---|---|
| **TRI-365HB** High intensity, with clear filter | 9,000 µW/cm$^2$ | < 2 foot-candles (22 lux) | 4 inch (10 cm) |
| **TRI-365DB** Standard intensity, with clear filter | < 5,000 µW/cm$^2$ maximum ② | < 1 foot-candle (11 lux) | 4 inch (10 cm) |
| **TRI-365DBB** Standard intensity, with integral black light filters | < 5,000 µW/cm$^2$ maximum ② | < 0.5 foot-candle (5 lux) | 4 inch (10 cm) |

| | |
|---|---|
| **Light Source:** | 3 UV-A LEDs, 1 White Light LED |
| **Lamp Style:** | Pistol grip |
| **Lamp Head Diameter:** | 3.25 in (8.25 cm) |
| **Length:** | 8.0 in (20.3 cm) |
| **Weight:** | 1 lb (454 g) |
| **White Light LED Intensity:** | 400 foot-candles (4,306 lux) |

**Power Requirements:**

**AC Lamp**
(TRI-365DB, TRI-365DBB, TRI-365HB)   120VAC*

**AC/DC Lamp**
(TRI-365MDB, TRI-365MDBB, TRI-365MHB)   120VAC*/12VDC

**Battery Pack:**
**Type**        12V, NiMH (rechargeable)
**Run Time**    3.5 hours (continuous)
**Charge Time** 2 hours

*Also available in 230V, 240V and 100V versions.

① All UV-A intensity readings were taken with the Spectroline® AccuMAX™ Series meter, and are factory set to the values shown
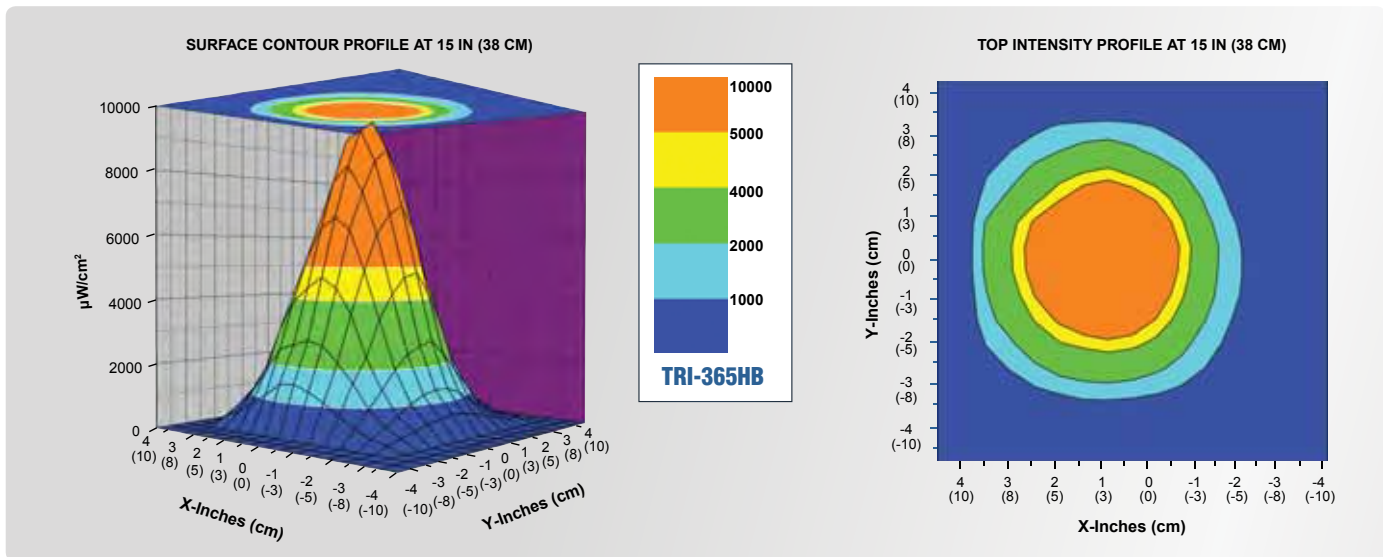② To address aerospace industry concerns

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TRITAN™ 365 shown with optional PS-200A (above) and PS-300A (below) power supplies.



### Replacement Parts & Accessories

| | |
|---|---|
| **129141** | Standard, 8 foot (2.4 m) AC power cord |
| **129145** | Extra-long, 20 foot (6.1 m) AC power cord |
| **129162** | 3.5 foot (1.1 m) DC power cord for "M" series lamps |
| **127933** | Particulate filter assembly |
| **127955** | Standard faceplate |
| **128196** | Faceplate with integral black light filters |
| **BP-30** | Battery pack with 12V rechargeable NiMH battery |
| **BR-150A** | Smart AC charger |
| **CC-370A** | Soft carrying case |
| **FP-365** | Rubber bumper with Borofloat® glass |
| **PSA-250A** | AC/DC power supply adapter for "M" series lamps |
| **PS-200A** | Industrial power supply. Primary cord: 8 feet (2.4 m); secondary cord: 20 feet (6.1 m). |
| **PS-300A** | In-line power supply. Primary cord: 8 feet (2.4 m); secondary cord: 8 feet (2.4 m). |
| **UL-100** | UV-A Lens |
| **UVS-30** | UV-absorbing spectacles |

### Also Available:

**TRITAN™ 365 M-Series** portable, battery-operated AC/DC lamp kits. Include TRITAN™ 365 UV lamp, rechargeable NiMH battery pack, power supply adapter with AC and DC cord sets, smart AC charger, UV-absorbing spectacles and soft carrying case.
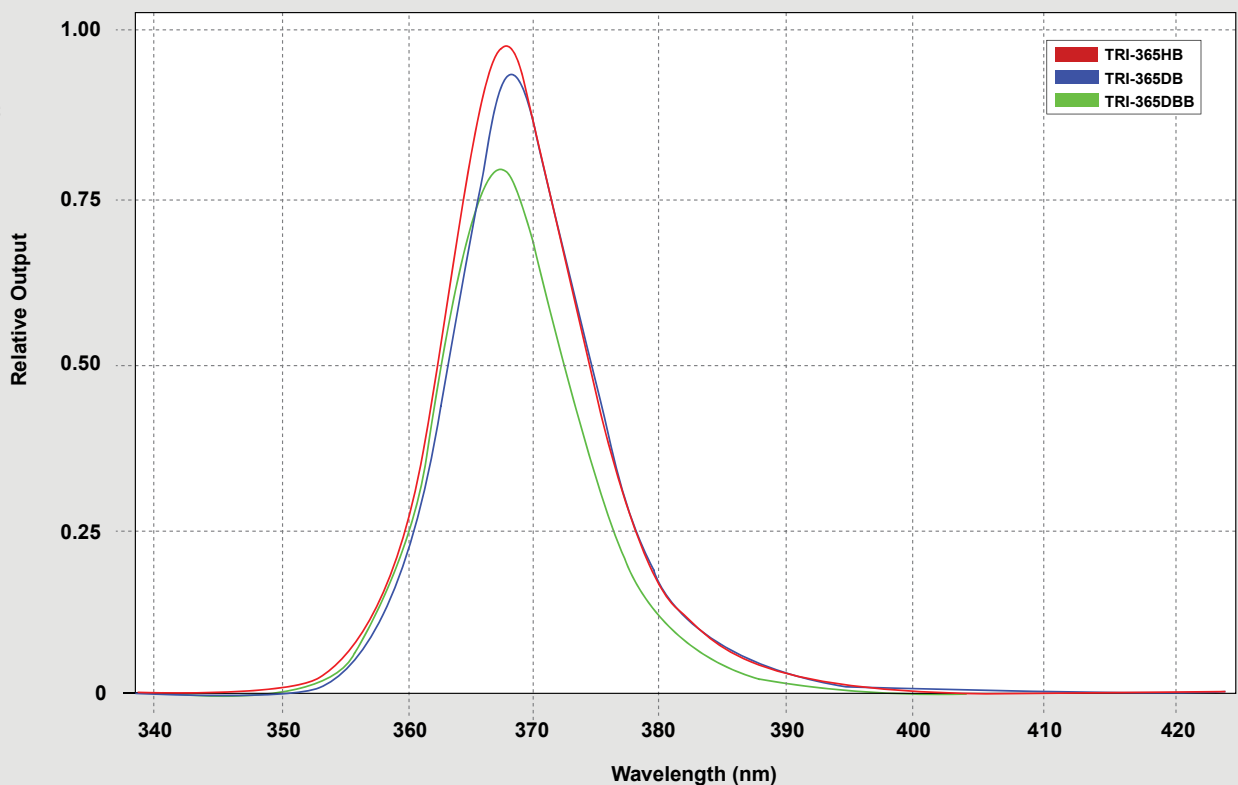
# HIGH-INTENSITY MODEL
## UV-A BEAM PROFILE

The **TRITAN™ 365** lamp is available in a *high-intensity* model specifically designed for NDT inspection applications requiring high UV-A output.

The **TRI-365HB** comes equipped with a clear glass fi lter and is "tuned" to provide a nominal steady-state UV-A intensity of ***9,000 µW/cm²*** at 15 inches (38 cm).



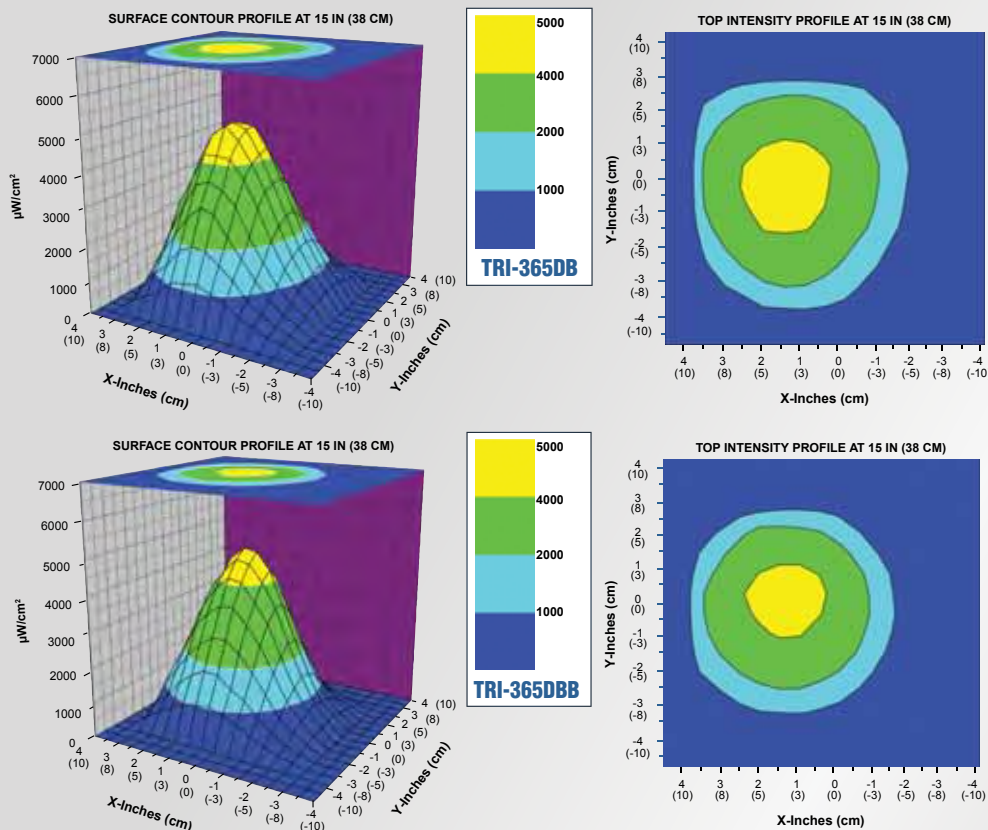SURFACE CONTOUR PROFILE AT 15 IN (38 CM)

TRI-365HB

TOP INTENSITY PROFILE AT 15 IN (38 CM)

## NORMALIZED UV IRRADIANCE

**Typical wavelength output profile of TRITAN™ 365 Series with and without integral black light filters.**



Legend:
- TRI-365HB
- TRI-365DB
- TRI-365DBB

# STANDARD-INTENSITY MODELS
## UV-A BEAM PROFILES

SURFACE CONTOUR PROFILE AT 15 IN (38 CM)

TRI-365DB

TOP INTENSITY PROFILE AT 15 IN (38 CM)

SURFACE CONTOUR PROFILE AT 15 IN (38 CM)

TRI-365DBB

TOP INTENSITY PROFILE AT 15 IN (38 CM)

The **TRITAN™ 365** lamp is also available in two *standard-intensity* models that are designed for inspection applications requiring limited UV-A output.

The **TRI-365DB** is fitted with a clear glass filter. The **TRI-365DBB** is equipped with a faceplate with integral black light filters that cover each of the LEDs and reduce the output of wavelengths longer than 400 nm. This addresses aerospace industry concerns.

Both versions are "tuned" to ensure that they provide a maximum steady-state UV-A intensity of less than *5,000 µW/cm²* at 15 inches (38 cm).

## SELECT WAVELENGTHS WITH AND WITHOUT BLACK LIGHT FILTER



TRI-365HB
TRI-365DB
TRI-365DBB
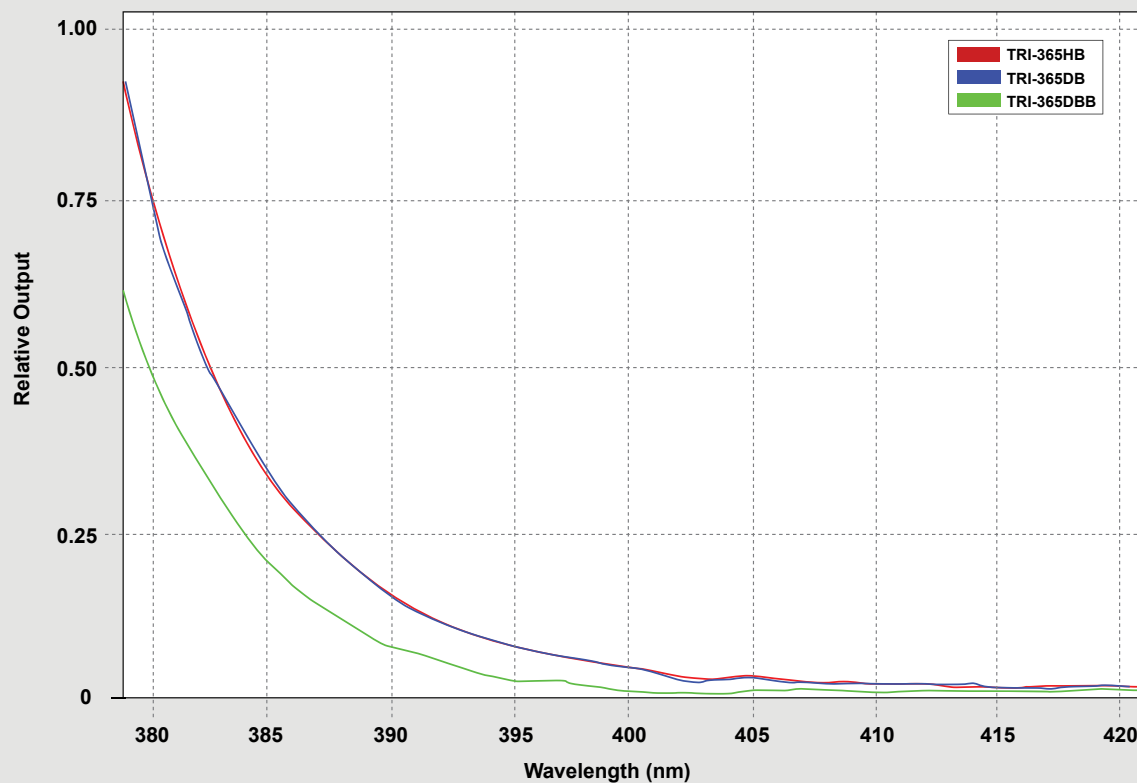
As the wavelength of the TRITAN™ 365 moves into the visible light range, the black light filters significantly reduce the output of the lamp at 400 nm.

# TRI-365SBLC

## TRITAN™ 365 UV-A Inspection Lamp

Certified to Meet **Rolls-Royce RRES 90061** Requirements

### Key Features:

▸ Nominal steady-state UV-A intensity of less than *5,000 µW/cm²* at 15 inches (38 cm).

▸ Large 4 inch (10 cm) diameter coverage area at 15 inches (38 cm), with a minimum UV-A intensity of *2,500 µW/cm²*.

▸ Low visible light emission—less than 0.5 foot-candle (5 lux).

▸ Long-lasting UV-A lenses reduce the rate of solarization.

▸ Thermal cut-off circuitry prevents lamp from going out of compliance when internal temperature exceeds specifications.

▸ Certificate of compliance and *full serialized validation report* for both output and wavelength measurements supplied with each lamp.

**RUBBER BUMPER**
with Borofloat® glass lens protects LEDs from damage

**LONG-LASTING UV-A LENSES**
reduce the rate of solarization

**BUILT-IN FANS**
maintain optimum light output

Faceplate with **INTEGRAL BLACK LIGHT FILTERS**

**EASY CONTROL**
Grip-mounted, three-way rocker switch (white light/off/UV)

**THERMAL CUT-OFF CIRCUITRY**
prevents lamp from going out of compliance when internal temperature exceeds specifications

**TWO CORD CHOICES!**
Standard or Extra-Long with AC plug and rubber boot

## TRI-365

ї Faceplate with integral blacklight filters reduce output of wavelengths longer than 400 nm.

ї White light LED allows for scanning of surface flaws or illuminating dark work spaces.

ї Grip-mounted, three-way rocker switch (white light/off/UV) for easy control of light sources.

ї Built-in fans keep LEDs cool to maintain optimum light output during extended use.

ї Choice of standard 8 foot (2.4 m) or extra-long 20 foot (6.1 m) heavy-duty power cord with AC plug and rubber boot.

ї Meets ASTM UV-A intensity and wavelength specifications for LPT and MPT.

ї UV-absorbing spectacles and soft carrying case included.

| Model | Nominal steady-state UV-A (365 nm) intensity at 15 inches (38 cm) ① | Visible light measurement | Diameter of UV-A coverage area at 15 inches (38 cm) |
|---|---|---|---|
| TRI-365SBLC | < 5,000 µW/cm² maximum | < 0.5 foot-candle (5 lux) | 4 inch (10 cm) |

**Light Source:** 3 UV-A LEDs, 1 White Light LED
**Lamp Style:** Pistol grip
**Lamp Head Diameter:** 3.25 in (8.25 cm)
**Length:** 8.0 in (20.3 cm)
**Weight:** 1 lb (454 g)
**White Light LED Intensity:** 400 foot-candles (4,306 lux)
**Power Requirements:** 120VAC* Power Cord

*Also available in 230V, 240V and 100V versions.

① All UV-A intensity readings were taken with the Spectroline® AccuMAX™ Series meter, and are factory set to the values shown
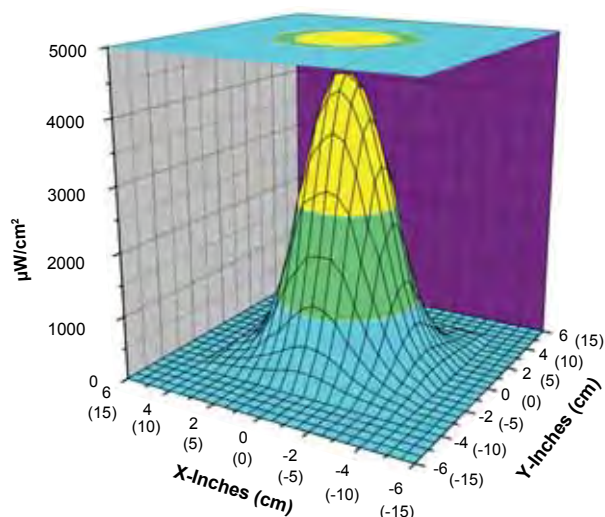
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**FULL SERIALIZED VALIDATION REPORT**
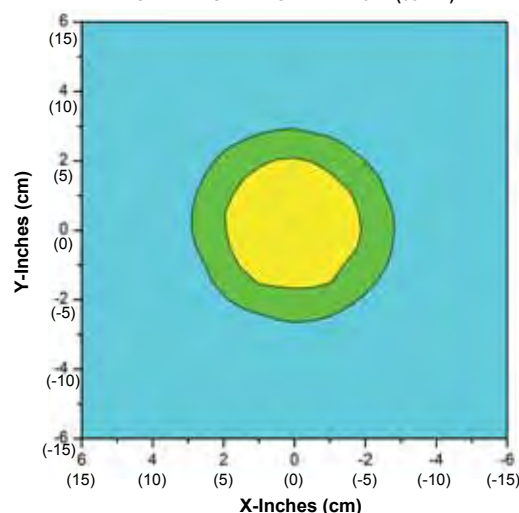


**CERTIFICATE OF COMPLIANCE**

## UV-A BEAM PROFILE



SURFACE CONTOUR PROFILE AT 15 IN (38 CM)



TOP INTENSITY PROFILE AT 15 IN (38 CM)

# QDR-365 Series

## QUADRAN™365

### Versatile, Dual-Intensity, Multi-LED, Broad-Beam NDT Inspection Lamps!

Feature <u>four</u> ultra-hi-flux UV-A LEDs <u>plus</u> a convenient white light LED to quickly switch between fluorescent inspection and flaw location. A unique dual-intensity feature provides both high and standard UV-A <u>and</u> white light output for added versatility.

The lamps' broad-beam configuration produces an extremely wide coverage area, making them ideal for both in-line and hand-held applications. Models are available either with or without integral black light filters to meet <u>*your*</u> specific inspection requirements.

The **QUADRAN™ 365** can be quickly mounted for in-line inspections using various Spectroline® accessories (FA-100 flexible arm shown).

- Dual-intensity capability: High setting produces a nominal steady-state UV-A intensity as high as ***8,000 μW/cm²***; standard setting produces a nominal steady-state intensity of ***4,500 μW/cm²***, both at 15 inches (38 cm)

- Extremely large coverage area of up to 6 inches (15 cm), with a minimum UV-A intensity of ***2,000 μW/cm²***

- Low visible light emission — <u>less</u> than 2 foot-candles (22 lux)

- Conveniently located rocker switches for quick and easy control of light sources

- Built-in fan keeps LEDs cool to maintain optimum light output during extended use

- Rubber bumper with Borofloat® glass lens protects LEDs from damage

- Rugged, modular construction allows for easy field serviceability

- Lamp handle pin receptacle allows for easy attachment of various Spectroline® mounting accessories for in-line inspection applications (accessories sold separately)

- Choice of standard 8 foot (2.4 m) or extra-long 20 foot (6.1 m) heavy-duty power cord with AC plug and rubber boot. Also available: Optional industrial power supply or in-line power supply with cord sets (sold separately).

- UV-absorbing spectacles and soft carrying case included

QUADRAN™ 365 faceplate shown with (top) and without (bottom) integral black light filters.

| Model | Nominal steady-state UV-A (365 nm) intensity at 15 inches (38 cm) ① | Visible light measurement | UV-A coverage area (at minimum 2,000 µW/cm²) |
|---|---|---|---|
| QDR-365A Standard Intensity, with clear filter | 4,500 µW/cm² maximum | < 1 foot-candle (11 lux) | 5 in (13 cm) |
| High Intensity, with clear filter | 8,000 µW/cm² | < 2 foot-candles (22 lux) | 6 in (15 cm) |
| QDR-365BLA Standard Intensity, with intergral black light filters | 4,500 µW/cm² maximum | < 0.5 foot-candle (5 lux) | 4 in (10 cm) |
| High Intensity, with intergral black light filters | 7,000 µW/cm² | < 1 foot-candle (11 lux) | 6 in (15 cm) |

| | |
|---|---|
| **Light Source:** | 4 UV-A LEDs, 1 White Light LED |
| **Lamp Style:** | Pistol grip |
| **Lamp Head (WxH):** | 6 x 5.5 in (15 x 14 cm) |
| **Length:** | 10 in (25 cm) |
| **Weight:** | 3 lb (1.36 kg) |
| **White Light LED Intensity:** | |
| High setting: | 300 foot-candles (3,229 lux) |
| Low setting: | 10 foot-candles (108 lux) |
| **Power Requirement:** | |
| **AC Lamp** (QDR-365A, QDR-365BLA) | 120VAC* power cord supplied with lamp |
| **AC/DC Lamp** (QDR-365MA, QDR-365MBLA) | 120VAC*/12VDC |
| **Battery Pack:** | |
| **Type** | 12V, NiMH (rechargeable) |
| **Run Time** | |
| High intensity: | 2.5 hours (continuous) |
| Standard intensity: | 4.5 hours (continuous) |
| **Charge Time** | 2 hours |

*Also available in 230V, 240V and 100V versions.

① All UV-A intensity readings were taken with Spectroline® AccuMAX™ Series meter, and are factory set to the values shown
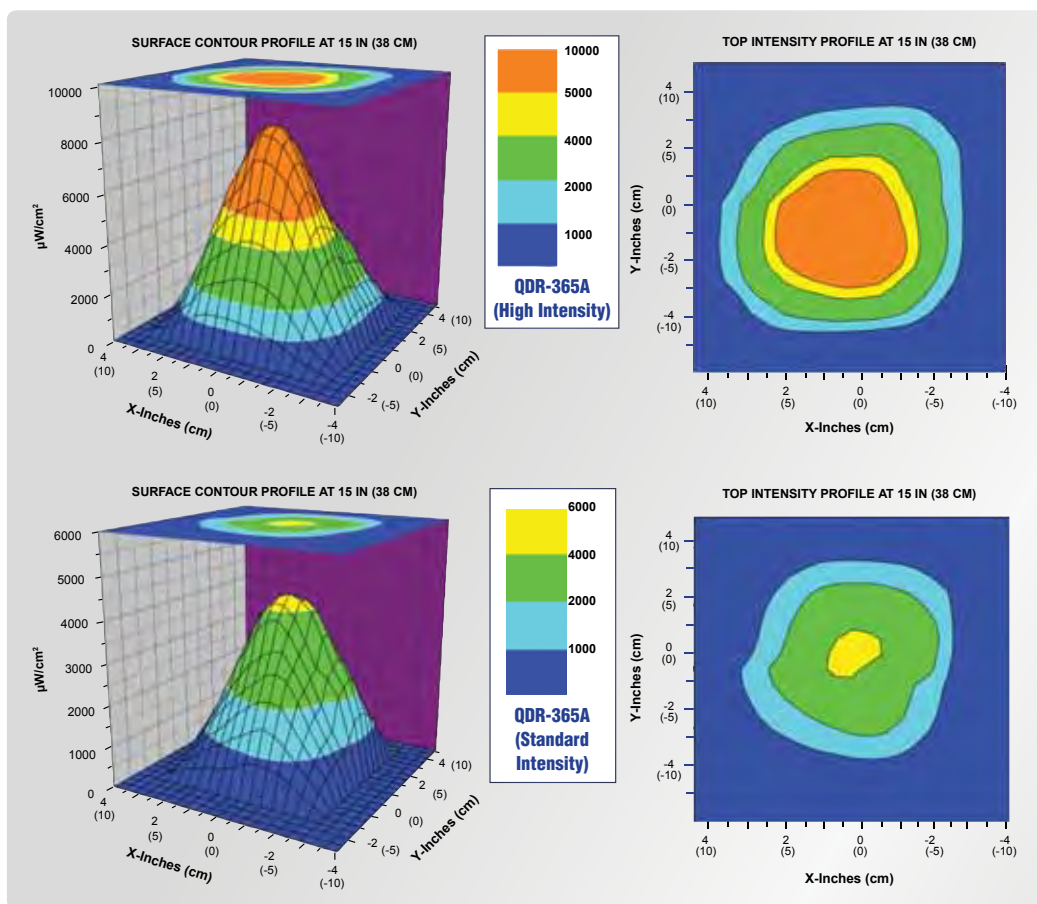
CE



### Also Available:

**QUADRAN™ 365 M-Series** portable, battery-operated AC/DC lamp kits. Include QUADRAN™ 365 UV lamp, rechargeable NiMH battery pack, power supply adapter with AC and DC cord sets, smart AC charger, UV-absorbing spectacles and soft carrying case.

# QDR-365A MODELS
## UV-A BEAM PROFILES

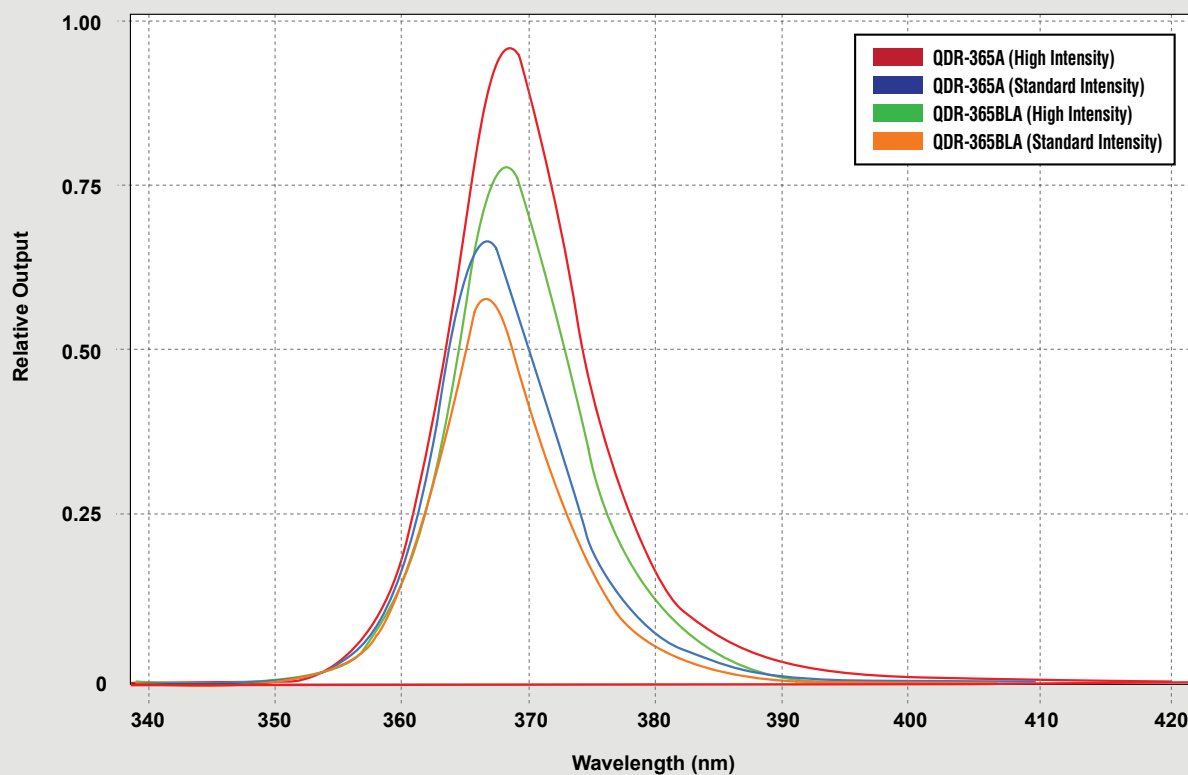When the **QDR-365A** is in *high intensity* mode, the lamp provides a nominal steady-state UV-A intensity of *__8,000 µW/cm²__* at 15 inches (38 cm).

When switched to the *standard intensity* mode, the **QDR-365A** provides a nominal steady-state UV-A intensity of *__4,500 µW/cm²__* at 15 inches (38 cm).

In addition, the lamp has a high/low switch to control the white light LED output.



SURFACE CONTOUR PROFILE AT 15 IN (38 CM)

QDR-365A (High Intensity)

TOP INTENSITY PROFILE AT 15 IN (38 CM)

SURFACE CONTOUR PROFILE AT 15 IN (38 CM)

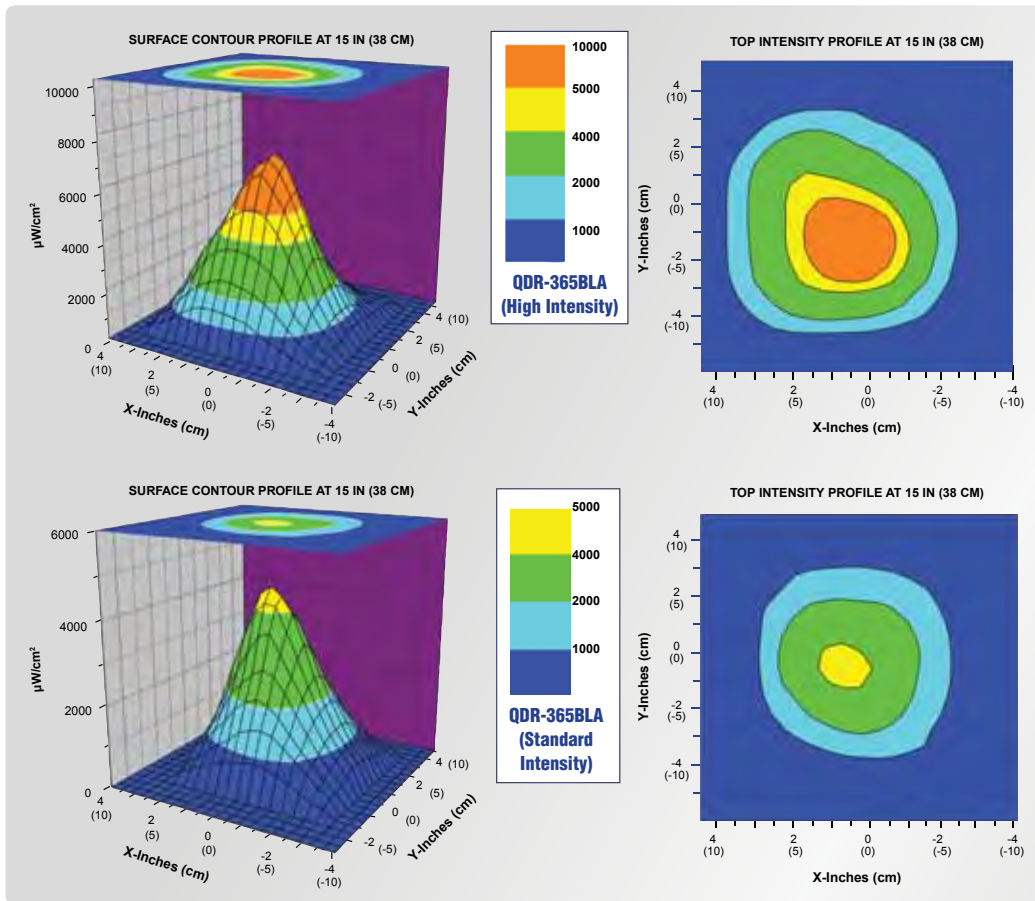QDR-365A (Standard Intensity)

TOP INTENSITY PROFILE AT 15 IN (38 CM)

## NORMALIZED UV IRRADIANCE

**Typical wavelength output profile of QUADRAN™ 365 with and without intergral black light filters, with peak at 365 nm.**



Legend:
- QDR-365A (High Intensity)
- QDR-365A (Standard Intensity)
- QDR-365BLA (High Intensity)
- QDR-365BLA (Standard Intensity)

X-axis: Wavelength (nm)
Y-axis: Relative Output

# QDR-365BLA MODELS
## UV-A BEAM PROFILES

**SURFACE CONTOUR PROFILE AT 15 IN (38 CM)**



| | |
|---|---|
| 10000 | |
| 5000 | |
| 4000 | |
| 2000 | |
| 1000 | |

**QDR-365BLA (High Intensity)**

**TOP INTENSITY PROFILE AT 15 IN (38 CM)**



**SURFACE CONTOUR PROFILE AT 15 IN (38 CM)**



| | |
|---|---|
| 5000 | |
| 4000 | |
| 2000 | |
| 1000 | |

**QDR-365BLA (Standard Intensity)**

**TOP INTENSITY PROFILE AT 15 IN (38 CM)**



The **QDR-365BLA** is equipped with a faceplate with integral black light filters that reduce the output of wavelengths longer than 400 nm. When in the *high intensity* mode, the lamp provides a nominal steady-state UV-A intensity of *7,000 µW/cm²* at 15 inches (38 cm).

When switched to the *standard intensity* mode, the **QDR-365BLA** provides a nominal steady-state standard UV-A intensity of *4,500 µW/cm²* at 15 inches (38 cm).

In addition, the lamp has a high/low switch to control the white light LED output.

## SELECT WAVELENGTHS WITH AND WITHOUT BLACK LIGHT FILTER



Legend:
- QDR-365A (High Intensity)
- QDR-365A (Standard Intensity)
- QDR-365BLA (High Intensity)
- QDR-365BLA (Standard Intensity)
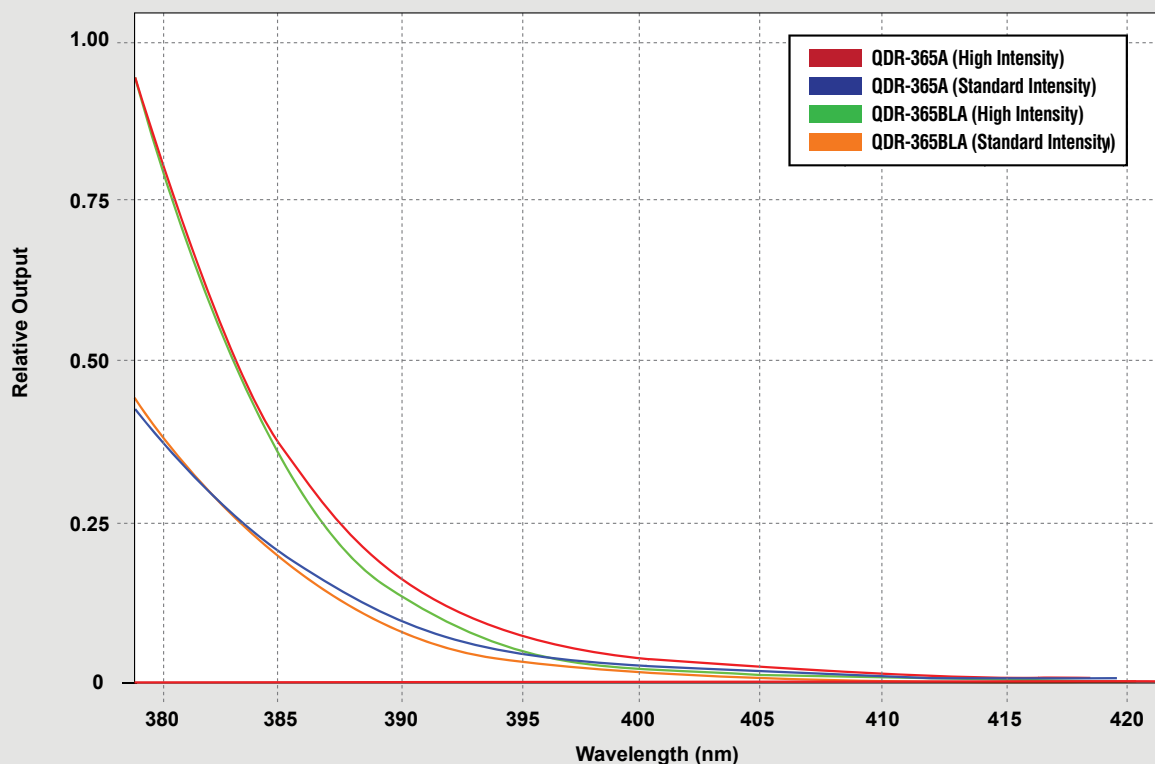
**As the wavelength of the QUADRAN™ 365 moves into the visible light range, the black light filters significantly reduce the output of the lamp at 400 nm.**

# QDR-365 S-Series

## QUADRAN™365

## Powerful, Multi-LED, Broad-Beam NDT Inspection Lamps!

Feature <u>four</u> ultra-hi-flux UV-A LEDs <u>plus</u> a convenient white light LED to quickly switch between fluorescent inspection and flaw location. For increased flexibility, a unique dual-intensity feature provides high/low white light output control.

The lamps' broad-beam configuration produces an extremely wide coverage area, making them ideal for both in-line and hand-held applications. Two models are available, either with or without integral black light filters to meet *your* specific NDT inspection requirements.

**QUADRAN™ 365 S-Series** lamps can be quickly mounted for in-line inspections using various Spectroline® accessories *(FA-100 flexible arm shown).*

- Choice of <u>two models</u>, both with a maximum standard UV-A intensity of ***4,500 µW/cm²*** at 15 inches (38 cm)
- Extremely large coverage area of up to 5 inches (13 cm), with a minimum UV-A intensity of ***2,000 µW/cm²***
- Low visible light emission — <u>less</u> than 1 foot-candle (11 lux)
- Conveniently located rocker switches for quick and easy control of light sources
- Built-in fan keeps LEDs cool to maintain optimum light output during extended use
- Long-lasting UV-A lenses reduce the rate of solarization
- Rubber bumper with Borofloat® glass lens protects LEDs from damage
- Rugged, modular construction allows for easy field serviceability
- Lamp handle pin receptacle allows for easy attachment of various Spectroline® mounting accessories for in-line inspection applications (accessories sold separately)
- Choice of standard 8 foot (2.4 m) or extra-long 20 foot (6.1 m) heavy-duty power cord with AC plug and rubber boot. Also available: Optional industrial power supply or in-line power supply with cord sets (sold separately).
- Meets ASTM UV-A intensity and wavelength specifications for LPT and MPT
- ***Certificate of compliance*** for <u>both</u> wavelength and output measurements supplied with every lamp
- UV-absorbing spectacles and soft carrying case included

QUADRAN™ 365 S-Series faceplate shown with (top) and without (bottom) integral black light filters.

| Model | Nominal steady-state UV-A (365 nm) intensity at 15 inches (38 cm) ① | Visible light measurement | UV-A coverage area (at minimum 2,000 µW/cm²) |
|---|---|---|---|
| QDR-365SA | 4,500 µW/cm² maximum ② | < 1 foot-candle (11 lux) | 5 in (13 cm) |
| QDR-365SBLA With integral black light filters | 4,500 µW/cm² maximum ② | < 0.5 foot-candle (5 lux) | 4 in (10 cm) |

**Light Source:**            4 UV-A LEDs, 1 White Light LED
**Lamp Style:**              Pistol grip
**Lamp Head (WxH):**         6 x 5.5 in (15 x 14 cm)
**Length:**                  10 in (25 cm)
**Weight:**                  3 lb (1.36 kg)
**White Light LED Intensity:**
    High setting:            300 foot-candles (3,229 lux)
    Low setting:             10 foot-candles (108 lux)

**Power Requirement:**
**AC Lamp**
(QDR-365SA, QDR-365SBLA)    120VAC* power cord supplied with lamp
**AC/DC Lamp**
(QDR-365MSA, QDR-365MSBLA) 120VAC*/12VDC
**Battery Pack:**
**Type**                     12V, NiMH (rechargeable)
**Run Time**                 4.5 hours (continuous)
**Charge Time**              2 hours

*Also available in 230V, 240V and 100V versions.

① All UV-A intensity readings were taken with Spectroline® AccuMAX™ Series meter, and are factory set to the values shown
② To address aerospace industry concerns

CE

**Also Available:**

**QUADRAN™ 365 MS-Series** portable, battery-operated AC/DC lamp kits. Include QUADRAN™ 365 UV lamp, rechargeable NiMH battery pack, power supply adapter with AC and DC cord sets, smart AC charger, UV-absorbing spectacles and soft carrying case.
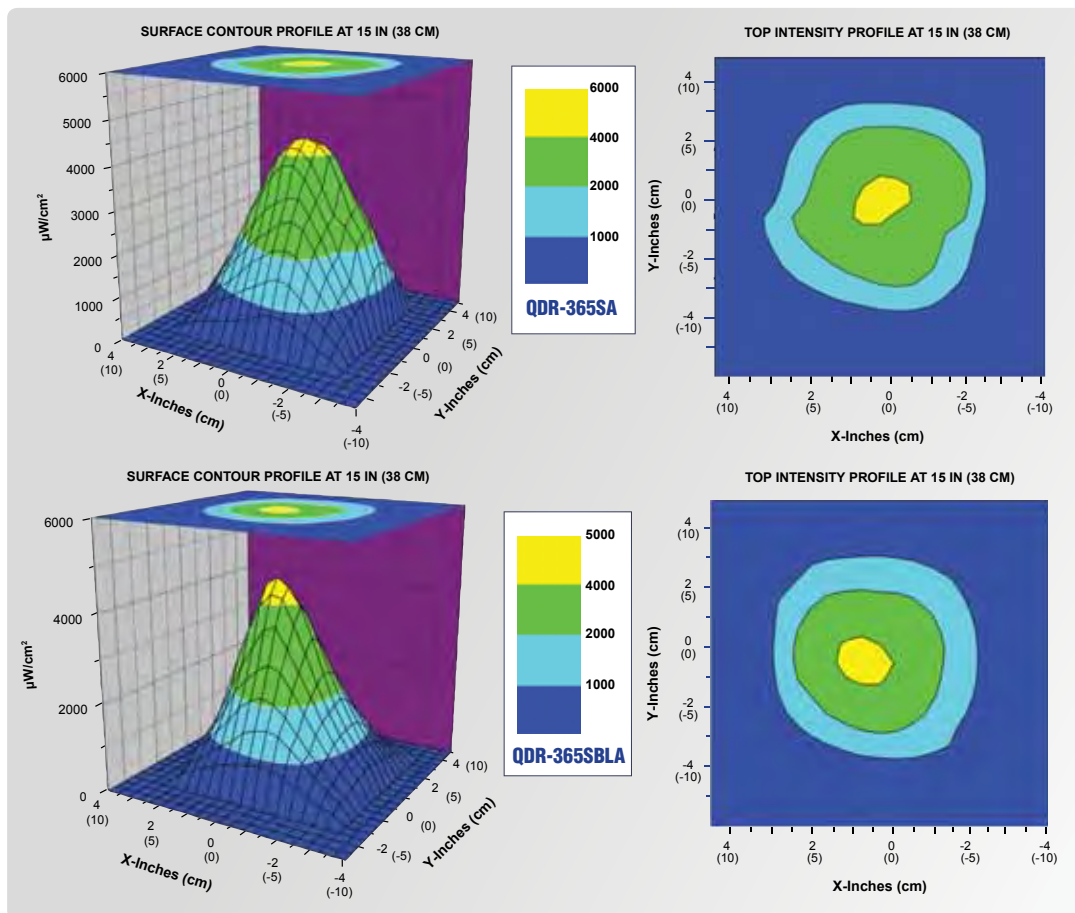
# UV-A BEAM PROFILES

**QUADRAN™ 365 S-Series** lamps are available in two models (**QDR-365SA** and **QDR-365SBLA**).

Both are designed for NDT inspection applications requiring limited UV-A output. The **QDR-365SA** comes with a standard faceplate. The **QDR-365SBLA** is equipped with a faceplate containing integral black light filters that reduce the output of wavelengths longer than 400 nm.

Both lamps are "tuned" to provide a nominal steady-state UV-A intensity of *4,500 μW/cm²* at 15 inches (38 cm). This addresses aerospace industry concerns.

In addition, both lamps have a high/low switch to control the white light LED output.

SURFACE CONTOUR PROFILE AT 15 IN (38 CM)

TOP INTENSITY PROFILE AT 15 IN (38 CM)

QDR-365SA

SURFACE CONTOUR PROFILE AT 15 IN (38 CM)

TOP INTENSITY PROFILE AT 15 IN (38 CM)

QDR-365SBLA

## NORMALIZED UV IRRADIANCE

## SELECT WAVELENGTHS WITH AND WITHOUT BLACK LIGHT FILTER

Typical wavelength output profile of QUADRAN™ 365 S-Series lamps with and without black light filters.
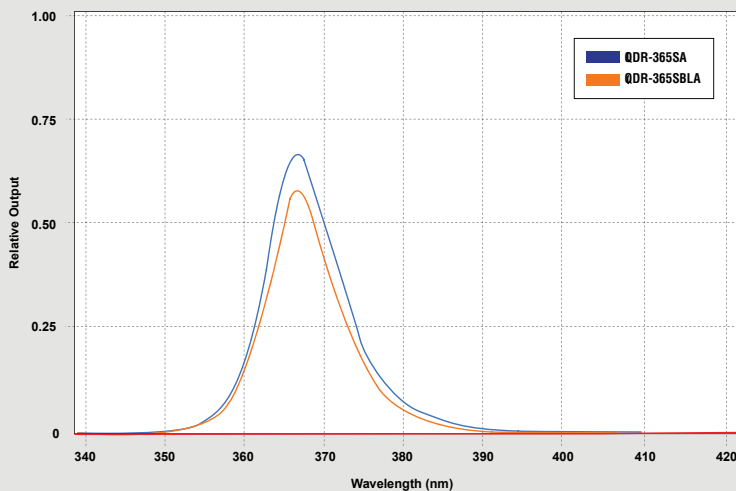
As the wavelength of the QUADRAN™ 365 S-Series moves into the visible light range, the black light filters significantly reduce the output of the lamp at 400 nm.
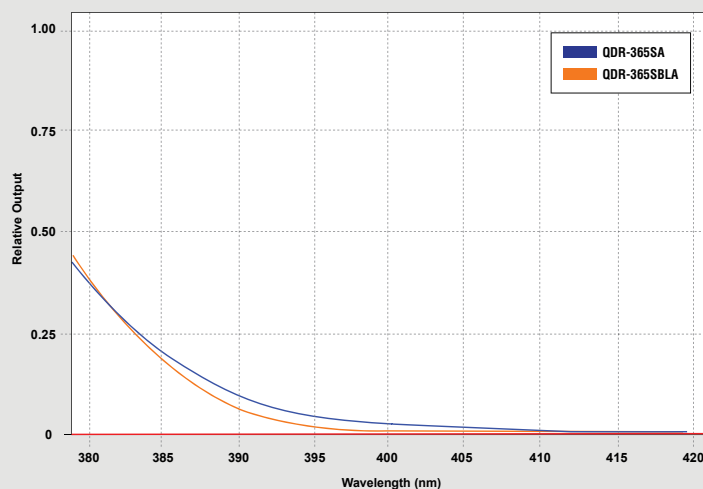
*All QUADRAN™ 365 S-Series lamps are ideal for performing both in-line and hand-held inspections!*

Each lamp can easily be attached to a variety of Spectroline® mounting accessories, as well as to our optional in-line power supplies.

QUADRAN™ 365 lamp shown with optional **PS-200A (left)** and **PS-300A (right)** power supplies.

## Replacement Parts & Accessories for the QDR-365 & QDR-365 S-Series

| | | | | |
|---|---|---|---|---|
| **129141** | Standard, 8 foot (2.4 m) AC power cord | | **FA-100** | Flexible arm |
| **129145** | Extra-long, 20 foot (6.1 m) AC power cord | | **FP-550** | Rubber bumper with Borofloat® glass |
| **129162** | 3.5 foot (1.1 m) DC power cord for "M" series lamps | | **PSA-250A** | AC/DC power supply adapter for "M" series lamps |
| **127922** | Particulate filter assembly | | **PS-200A** | Industrial power supply. Primary cord: 8 feet (2.4 m); secondary cord: 20 feet (6.1 m). |
| **127944** | Standard faceplate | | | |
| **128094** | Faceplate with integral black light filters | | **PS-300A** | In-line power supply. Primary cord: 8 feet (2.4 m); secondary cord: 8 feet (2.4 m). |
| **B-6** | Bench mount | | | |
| **BP-30** | Battery pack with 12V rechargeable NiMH battery | | **W-6** | Wall mount with pin |
| **BR-150A** | Smart AC charger | | **WM-100** | Wall mounting bracket |
| **CC-400** | Soft carrying case | | **UL-100** | UV-A Lens |
| | | | **UVS-30** | UV-absorbing spectacles |

# EK-3000

## EAGLE EYE™

## UV-A/White Light LED Inspection Kit

*(U.S. patent: 8,616,722; CN patent ZL201010265212.4)*

*Palm-Sized, Cool-Running, Hands-Free Light Source!*

**Ideal for fluorescent magnetic particle and penetrant testing, mining inspection and a variety of other specialized applications!**

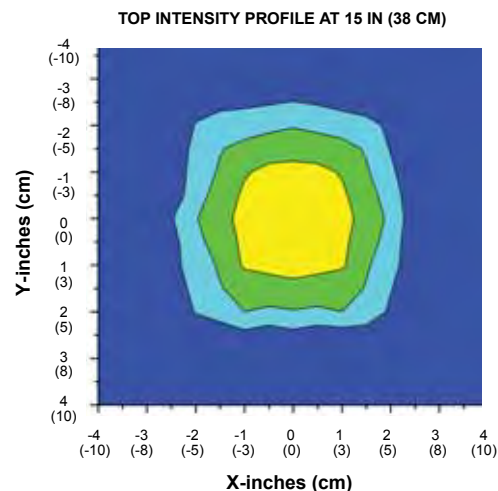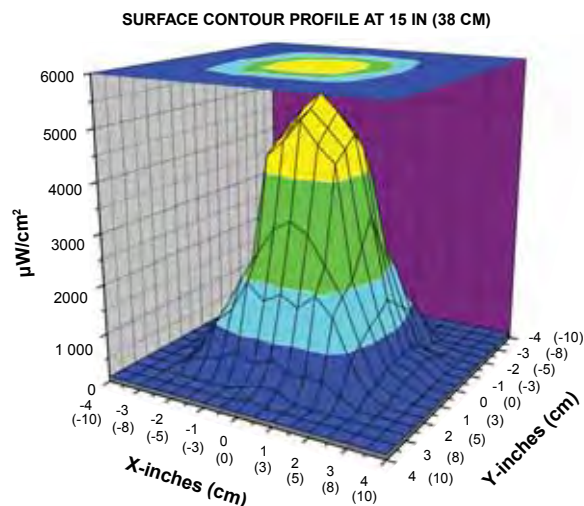**Spray _and_ inspect in one simple step!**

- Compact, lightweight lamp with two ultra-high intensity UV-A (365 nm) LEDs for inspection, plus a three-LED white light assembly for general illumination
- Adjustable strap allows lamp to be worn on a hard hat or directly on the head for hands-free operation
- Unique lamp mount/sprayer attachment permits lamp and spray can to be mounted together for convenient, single-handed fluorescent yoke inspection
- Built-in fan keeps lamp cool to maintain optimum UV-A intensity during extended use
- Long-lasting UV-A lenses reduce the rate of solarization
- Splash guard with integral particulate filter protects UV lenses and cooling fan from damage
- Powered by a rechargeable lithium-ion battery (included).  Provides up to 75 minutes of continuous inspection between charges.
- ***Certificate of compliance*** for _both_ wavelength and output measurements supplied with every lamp

## LAMP SPECIFICATIONS

**Product Number:**
EE-365

**Light Sources:**
2 UV LEDs, 3 white light LEDs

**Dimensions:**
Length    3.75 in (9.5 cm)
Width     2.25 in (5.7 cm)
Height    1.85 in (4.7 cm)

**Weight with Battery:** 8 oz (227 g)

**Power Requirement:**
One 3.7V 2200mA/Hr lithium-ion battery
(rechargeable)

**Run Time:**
75 minutes (continuous)

**Charge Time:**
4 hours (two batteries)

**Charging Cradle:**
Two-battery capability with AC
and DC cord sets.

**Nominal Steady-State UV-A
(365 nm) Intensity:**
6 in (15 cm) — 20,000 µW/cm²
15 in (38 cm) — 4,500 µW/cm²
24 in (61 cm) — 2,000 µW/cm²
36 in (91 cm) — 1,000 µW/cm²

**NOTE:** All UV-A intensity readings
taken with a Spectroline® AccuMAX™
Series meter

**EK-3000 EagleEye™ Kit** comes with a lanyard, two replacement splash guards with integral particulate filters, two spare batteries, battery charging cradle with AC and DC cord sets, UV-absorbing spectacles and soft carrying case.

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## UV-A BEAM PROFILE

**SURFACE CONTOUR PROFILE AT 15 IN (38 CM)**



| | |
|---|---|
| 6000 | |
| 4000 | |
| 2000 | |
| 1000 | |

**TOP INTENSITY PROFILE AT 15 IN (38 CM)**



## Replacement Parts & Accessories

| | | | | |
|---|---|---|---|---|
| **EE-365** | UV-A/white light LED lamp | | **128225** | DC cord set for 128217 |
| **LMS-100** | Lamp mount/sprayer | | **127568** | Lithium-ion battery (rechargeable) |
| **HS-100** | Head strap | | **UL-100** | UV-A Lens |
| **SG-100** | Splash guard with integral particulate filter (set of three) | | **UVS-30** | UV-absorbing spectacles |
| **128217** | Battery charging cradle with AC cord | | **CC-370A** | Soft carrying case |

# PM-1600 Series

**PowerMAX™ 365**

---

## UV-A LED Panel Flood Lamps
### Designed Specifically for NDT Professionals!

**PowerMAX™ 365 Series** flood lamps feature a panel of 16 powerful UV-A (365 nm) LEDs specially engineered for non-destructive testing applications. These versatile, stationary light sources can be installed overhead or in-line, and can be ganged together to provide an even wider coverage area.

Available in four models to meet your specific inspection needs: high-intensity and standard-intensity versions, each with or without a black light filter. Ideal for NDT inspection booths, fluorescent penetrant and magnetic particle inspection, screening of fluorescent particles, wash station inspection and many other applications requiring maximum uniformity of UV-A coverage over a large area.

- Choice of two high-intensity models with a nominal steady-state UV-A intensity as high as **8,000 µW/cm²** or two standard-intensity models with a maximum UV-A intensity of **4,500 µW/cm²** at 15 inches (38 cm)

- Large coverage area of 15 inches by 6 inches (38 cm x 15 cm), with a minimum UV-A intensity of **2,000 µW/cm²**

- Low visible light emission — less than 2 foot-candles (22 lux)

- Easily mountable for overhead inspection or in-line applications

- Built-in fans keep LEDs cool to maintain optimum light output during extended use

- Customizable — multiple lamp units can be "ganged" together longitudinally or back-to-back for a larger coverage area to meet _your_ specific inspection requirements!

- Both high- and standard-intensity versions available with or without black light filter

- Standard-intensity lamps meet ASTM UV-A intensity and wavelength specifications for LPT and MPT, and come with a **_certificate of compliance_** for both wavelength and output measurements

| Model | Nominal steady-state UV-A (365 nm) intensity at 15 inches (38 cm) ① | Visible light measurement | UV-A coverage area (at minimum 2000 µW/cm²) |
|---|---|---|---|
| PM-1600UVH High intensity, with clear filter | 8,000 µW/cm² | < 2 foot-candles (22 lux) | 15 in by 6 in (38 cm x 15 cm) |
| PM-1600BLH High intensity, with black light filter | 6,500 µW/cm² | < 1 foot-candle (11 lux) | 15 in by 6 in (38 cm x 15 cm) |
| PM-1600UV Standard intensity, with clear filter | 4,500 µW/cm² maximum ② | < 1 foot-candle (11 lux) | 15 in by 6 in (38 cm x 15 cm) |
| PM-1600BL Standard intensity, with black light filter | 4,000 µW/cm² maximum ② | < 0.5 foot-candle (5 lux) | 15 in by 6 in (38 cm x 15 cm) |

**Light Source:** 16 UV-A (365 nm) LEDs

**Lamp Style:** Panel flood lamp

**Dimensions:** 5.5 x 13.75 x 6 in (14 x 35 x 15 cm)
(W x L x H)

**Weight:** 9 lb (4 kg)

**Power Requirement:** AC power (main AC power cord supplied with the unit)

① All UV-A intensity readings were taken with Spectroline® AccuMAX™ Series meter, and are factory set to the values shown

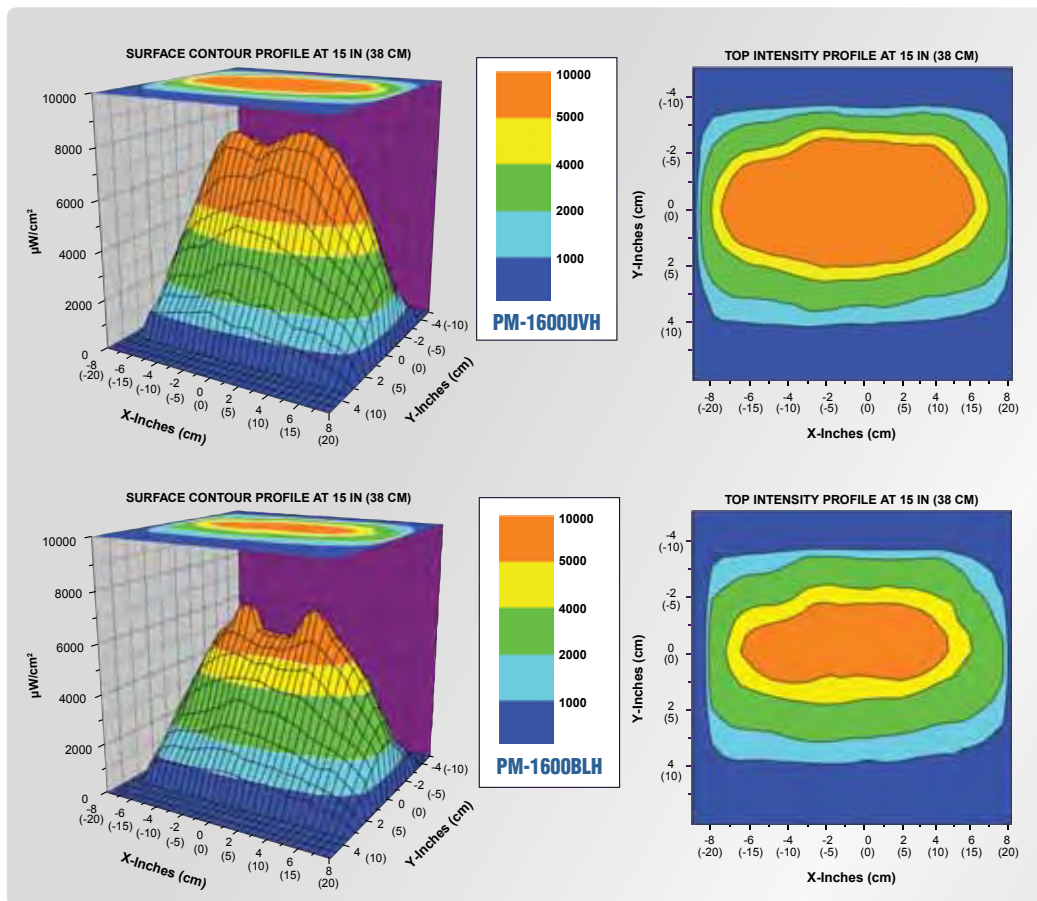② To address aerospace industry concerns

CE

For applications requiring extremely large coverage areas, the PowerMAX™ 365 can be quickly ganged together longitudinally (top) or back-to-back (below) using customized, easy-to-install connecting plates and brackets.

**Top View**

## Replacement Parts & Accessories

| | |
|---|---|
| **128177** | AC power cord |
| **BF-365PM** | Black light filter assembly |
| **CF-100** | Clear glass filter assembly |
| **127918** | Particulate air filter |
| **127935** | Retainer, LED assembly face plate |
| **CC-200** | Connector cable for ganging lamps |
| **CP-100** | Top connecting plate for ganging lamps longitudinally |
| **CP-200** | Top connecting plate for ganging lamps back-to-back (Two required) |
| **CP-300** | Side connecting bracket for ganging lamps longitudinally (Two required) |
| **UL-100** | UV-A lens |
| **UVF-80** | Face shield, UV-absorbing |
| **UVG-50** | Goggles, UV-absorbing |
| **UVS-30** | Spectacles, UV-absorbing |

# HIGH-INTENSITY MODELS
## UV-A BEAM PROFILES

**PowerMAX™ 365 Series** UV-A LED panel flood lamps are available in two *high-intensity* models that are specifically designed for NDT inspection applications requiring high UV-A output.
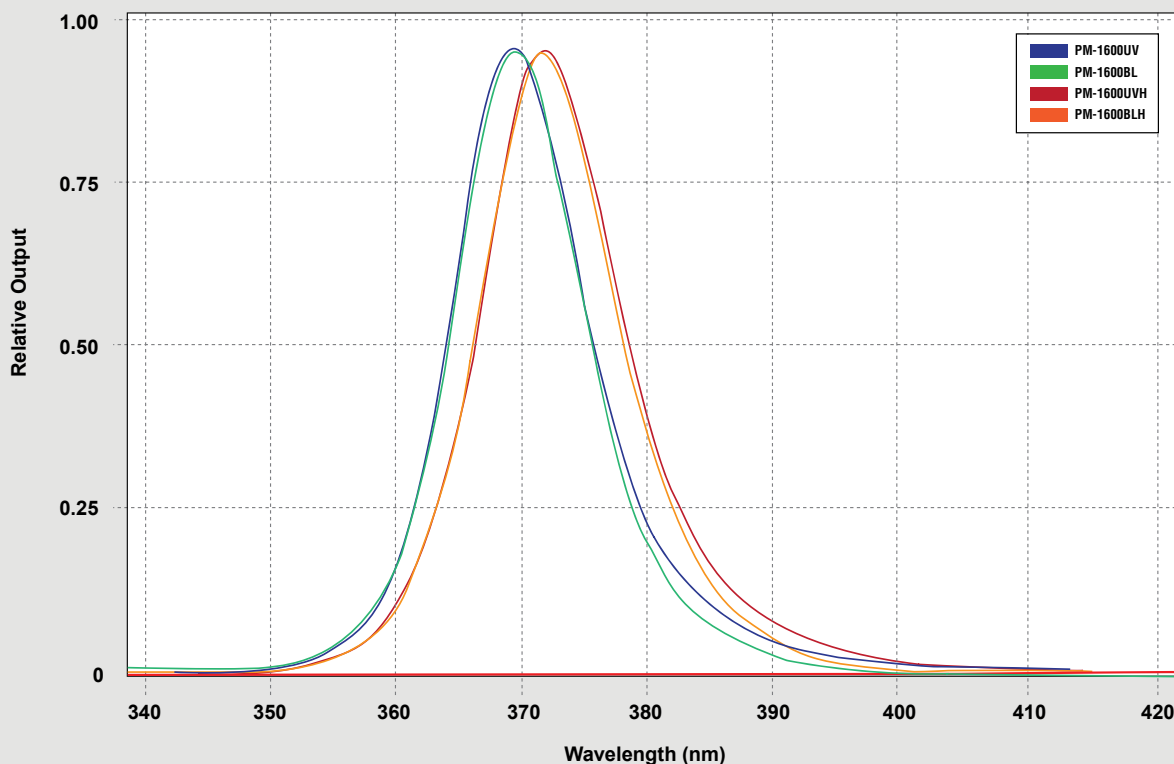
The **PM-1600UVH** is equipped with a clear glass filter and provides a nominal steady-state UV-A intensity of ***8,000 µW/cm²*** at 15 inches (38 cm).

The **PM-1600BLH** is equipped with a black light filter that reduces the output of wavelengths longer than 400 nm. It provides a nominal steady-state UV-A intensity of ***6,500 µW/cm²*** at 15 inches (38 cm).



SURFACE CONTOUR PROFILE AT 15 IN (38 CM) — PM-1600UVH

TOP INTENSITY PROFILE AT 15 IN (38 CM) — PM-1600UVH

SURFACE CONTOUR PROFILE AT 15 IN (38 CM) — PM-1600BLH

TOP INTENSITY PROFILE AT 15 IN (38 CM) — PM-1600BLH

## NORMALIZED UV IRRADIANCE

**Typical wavelength output profile of PowerMAX™ 365 Series with and without black light filter.**



Legend: PM-1600UV, PM-1600BL, PM-1600UVH, PM-1600BLH

Relative Output vs Wavelength (nm)

# STANDARD-INTENSITY MODELS
## UV-A BEAM PROFILES

**SURFACE CONTOUR PROFILE AT 15 IN (38 CM)**



PM-1600UV

**TOP INTENSITY PROFILE AT 15 IN (38 CM)**



**SURFACE CONTOUR PROFILE AT 15 IN (38 CM)**



PM-1600BL

**TOP INTENSITY PROFILE AT 15 IN (38 CM)**
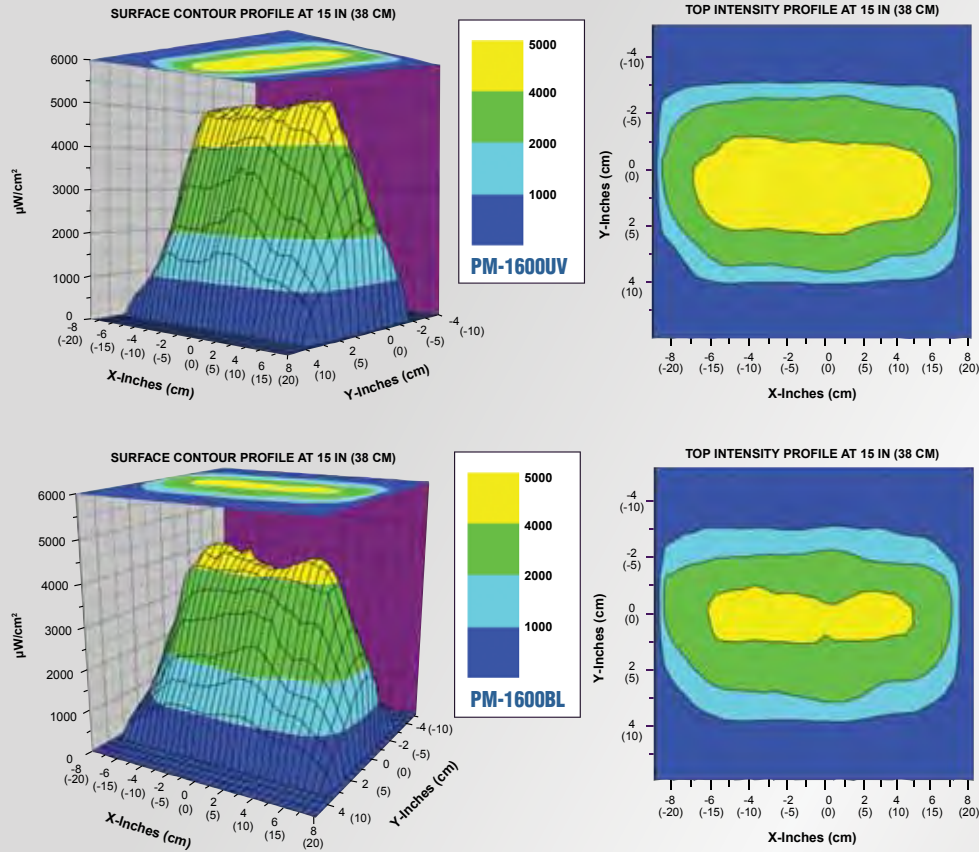


**PowerMAX™ 365** Series UV-A LED panel flood lamps are also available in two *standard-intensity* models that are designed for NDT inspection applications requiring limited UV-A output.

The **PM-1600UV** is equipped with a clear glass filter and provides a nominal steady-state UV-A intensity of *4,500 µW/cm²* (maximum) at 15 inches (38 cm).

The **PM-1600BL** is equipped with a black light filter that reduces the output of wavelengths longer than 400 nm. It provides a nominal steady-state UV-A intensity of *4,000 µW/cm²* (maximum) at 15 inches (38 cm). This addresses aerospace industry concerns.

## SELECT WAVELENGTHS WITH AND WITHOUT BLACK LIGHT FILTER
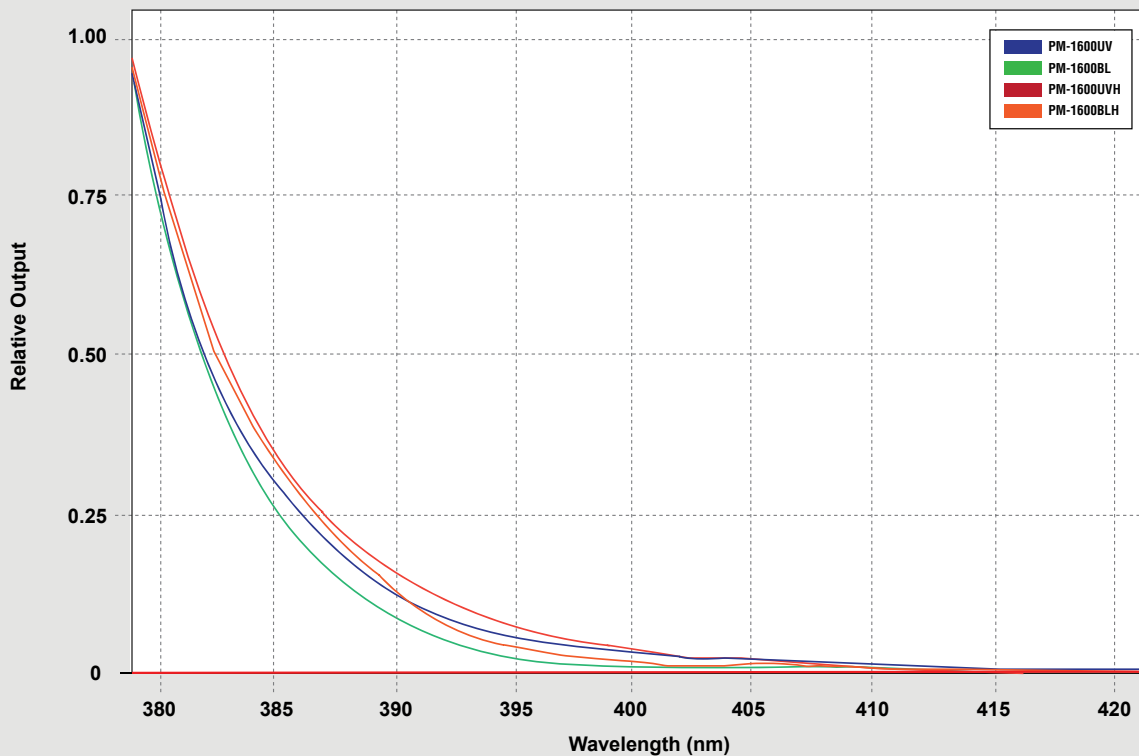


As the wavelength of the PowerMAX™ 365 moves into the visible light range, the black light filter significantly reduces the output of the lamp at 400 nm.

# UV-400 Series SuperFlood™

## Our Most Powerful UV-A Flood Lamps Designed Specifically for NDT

**These super-powerful _and_ versatile lamps have been specially engineered for fluorescent penetrant and magnetic particle inspection, parts degreasing inspections and wash station inspections.**

- Powerful, 400-watt metal halide bulb, combined with tempered, heat-resistant low solarization UV filters provide the highest intensity over the largest area
- Unique twin-filter system eliminates hazardous UV-B and UV-C radiation escaping from lamp
- Easily mounts over automated magnetic particle systems or above penetrant inspection booths for the most accurate inspections of even the largest parts
- Compact design and built-in mounting features allow lamps to be positioned anywhere — even in previously inaccessible areas

The **UV-400A** features a concentrated-beam reflector designed to assure the highest concentrated UV-A intensity available. It has a peak steady-state UV-A intensity of **_8,000 µW/cm²_** within the lamp's center area, measured at 15 inches (38 cm). The lamp irradiates an area as large as 16" x 10" (41 cm x 25 cm), producing a nominal steady-state UV-A irradiance of not less than **_2,000 µW/cm²_**.

The **UV-400B** features a unique broad-beam reflector designed to provide NDT inspectors with maximum uniformity of coverage over the largest area. It has a peak steady-state UV-A intensity of **_5,000 µW/cm²_** within the lamp's center area, measured at 15 inches (38 cm). The lamp irradiates an area as wide as 27" x 15" (69 cm x 38 cm) with unmatched uniformity, producing a nominal steady-state UV-A irradiance of not less than **_2,000 µW/cm²_**.

## UV-A BEAM PROFILE



SURFACE CONTOUR PROFILE AT 15 IN (38 CM) — UV-400A

TOP INTENSITY PROFILE AT 15 IN (38 CM)

SURFACE CONTOUR PROFILE AT 15 IN (38 CM) — UV-400B

TOP INTENSITY PROFILE AT 15 IN (38 CM)
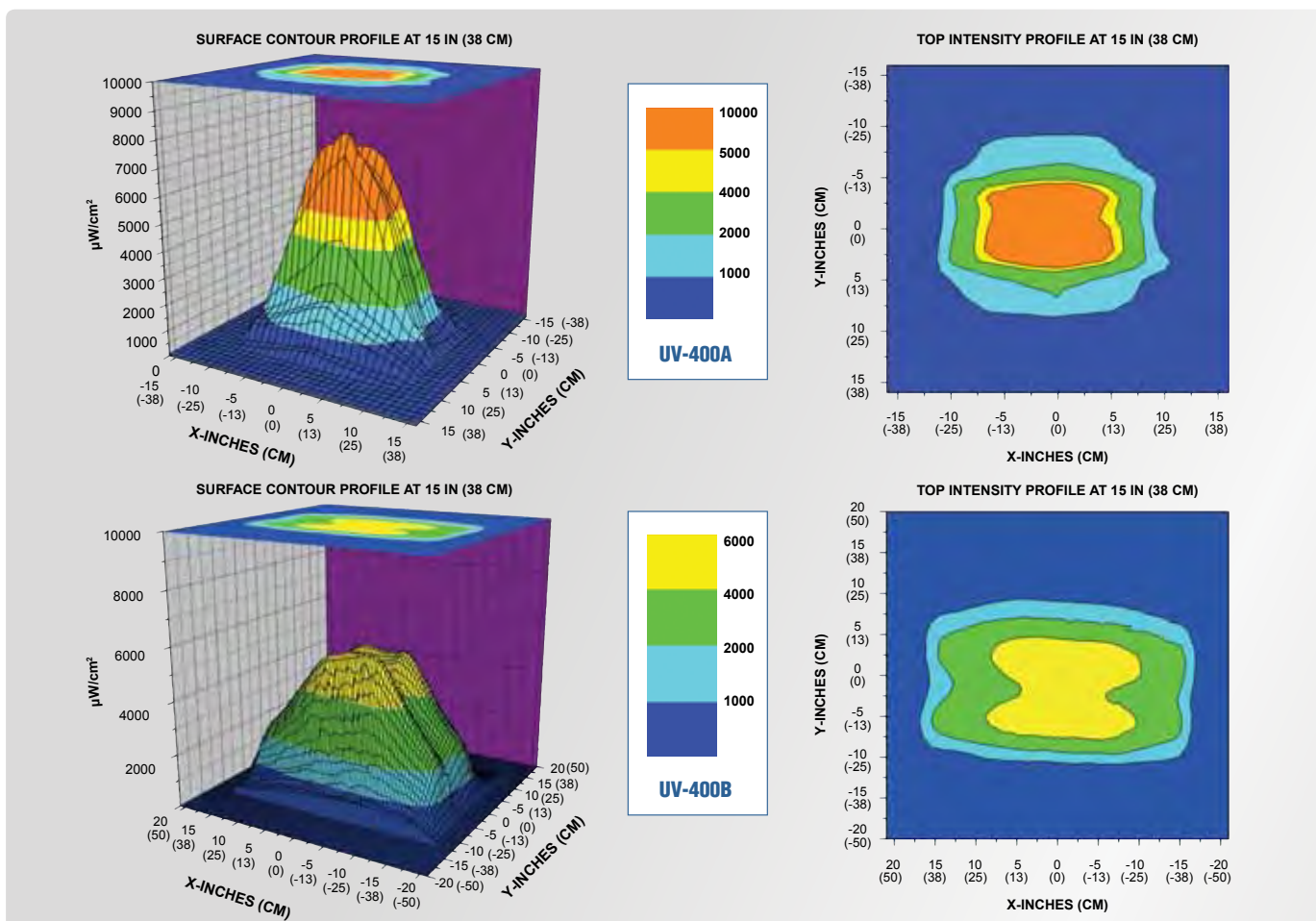
# A weld defect...
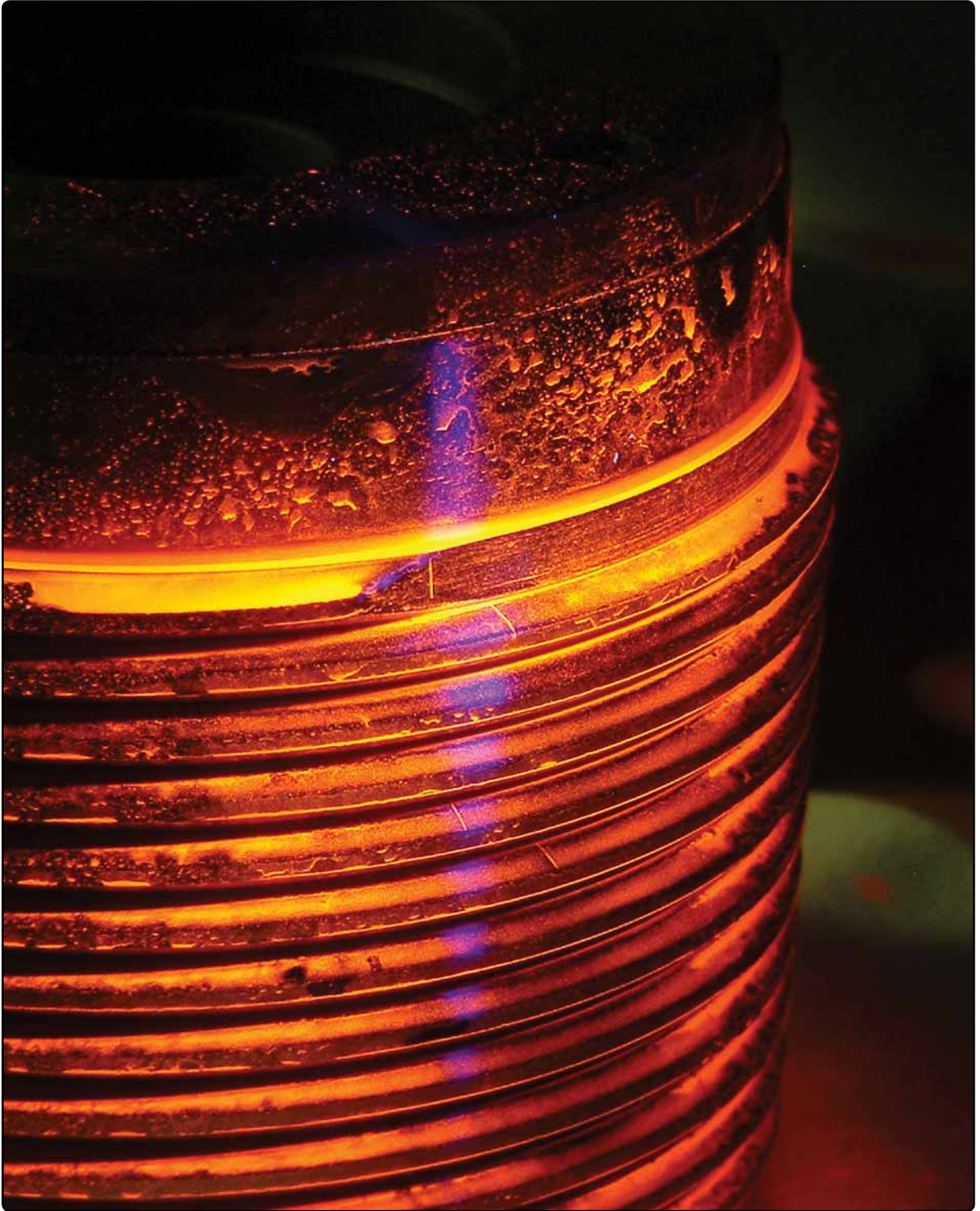


Revealed by the MAXIMA™ ML-3500S UV-A inspection lamp using the liquid penetrant method.

# ML-3500 Series MAXIMA™

## Ultra-High Intensity UV-A Lamps

**These super-powerful lamps make NDT inspections easier, safer and more reliable. They feature state-of-the-art micro discharge light (MDL) technology with a fatigue-free ergonomic design.**

- Powerful, 35 watt high-intensity MDL bulb
- Deliver up to 10 times the UV-A output of conventional HID inspection lamps
- Prefocused at the factory
- Instant on/off/restrike
- Lightweight, solid-state ballast
- Integral bulb/reflector assembly
- Stay-cool, impact-resistant and dent-proof housing
- Battery-operated versions available
- All bulbs feature a rated life of 2,000 hours
- Come complete with both UV-absorbing and fluorescent-enhancing spectacles

**The MAXIMA™ series consists of three models:**

» The **ML-3500S** with a spot reflector has a nominal steady-state UV-A intensity of **_50,000 µW/cm²_** at 15 inches (38 cm). Works even in direct sunlight!

» The **ML-3500D** with a spot reflector and diffusing filter has a nominal steady-state UV-A intensity of **_14,000 µW/cm²_** at 15 inches (38 cm).

» The **ML-3500FL** with a flood reflector has a nominal steady-state UV-A intensity of **_4,500 µW/cm²_** at 15 inches (38 cm).
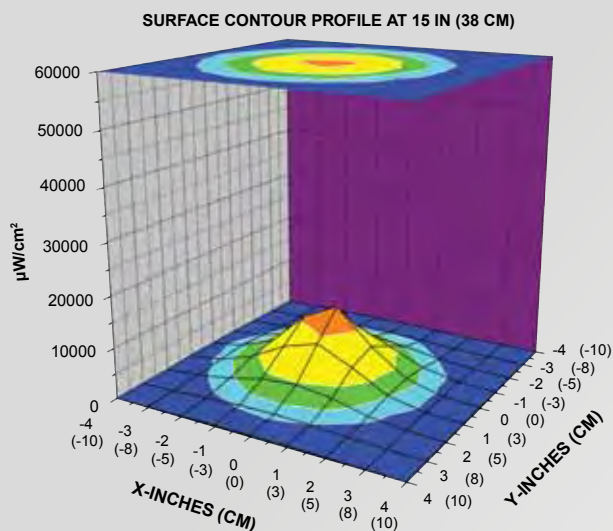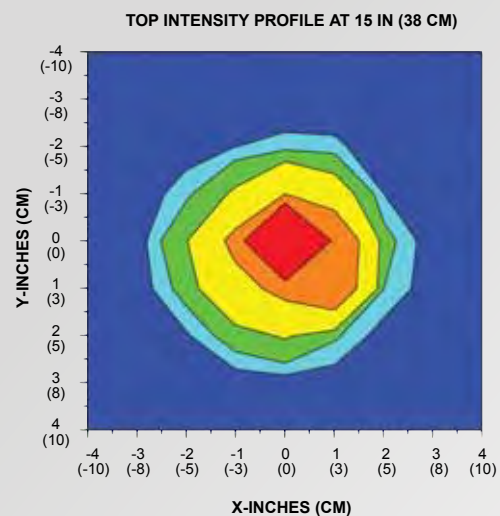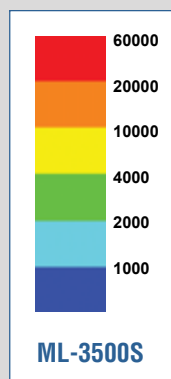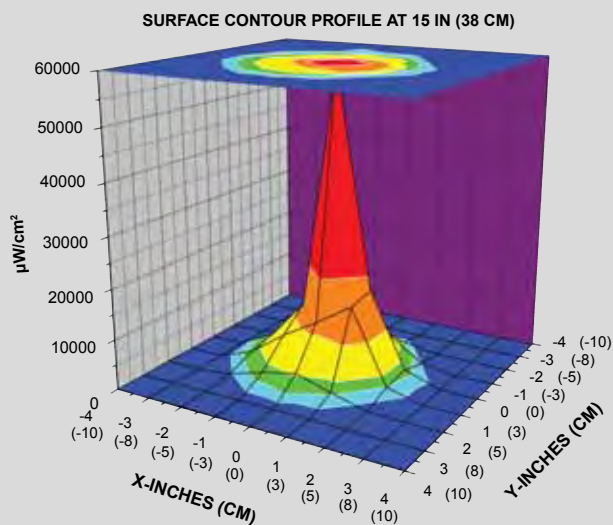
All models come standard with 8 foot (2.4 m) primary and secondary cords. Lamps are also available with extended length primary cords or with a 35 foot (10.7 m) secondary cord housed in a retractable "flying" reel.

In addition, all MAXIMA™ lamps are available in battery-operated "M" versions. Each includes a 12-volt, 7 amp/hr rechargeable battery that will operate the lamp for a full two hours. A battery charger and carrying case are included.

$C\epsilon$

**Line voltage model**

**ML-3500® Series lamp with 35 foot (10.7 m) secondary cord housed in a retractable "flying" reel**

**Battery-operated "M" version**

# UV-A BEAM PROFILES

## SURFACE CONTOUR PROFILE AT 15 IN (38 CM)



**ML-3500S**

Legend:
- 60000
- 20000
- 10000
- 4000
- 2000
- 1000

## TOP INTENSITY PROFILE AT 15 IN (38 CM)



## SURFACE CONTOUR PROFILE AT 15 IN (38 CM)



**ML-3500D**

Legend:
- 20000
- 10000
- 4000
- 2000
- 1000

## TOP INTENSITY PROFILE AT 15 IN (38 CM)



## SURFACE CONTOUR PROFILE AT 15 IN (38 CM)



**ML-3500FL**

Legend:
- 6000
- 5000
- 4000
- 2000
- 1000

## TOP INTENSITY PROFILE AT 15 IN (38 CM)

# ONT-365 On-Trak™
## Modular Inspection System

*(U.S. and foreign patents pending)*

The **ONT-365 On-Trak™** is an innovative, track light-style modular inspection system. It features <u>four</u> broad-beam lamps, each of which utilizes <u>three</u> powerful, ultra-high-flux UV-A (365 nm) LEDs for inspection plus one white light LED for general illumination. This overhead lighting system allows inspectors to customize lamp beam patterns to suit their individual needs. Two lamp head assemblies can be added, as desired, to increase the coverage area. Perfect for NDT inspection booths, pre-inspections and screening applications requiring maximum uniformity of coverage over large areas.

- Cool-running, energy-efficient LEDs
- Broad-beam profiles provide wide coverage area
- Electronic Intensity Stabilizers ensure consistent LED performance
- Instant-on operation; lamps reach full intensity <u>immediately</u>
- Built-in fans keep LEDs cool to maintain optimum UV-A intensity during extended use
- Long-lasting UV-A lenses reduce the rate of solarization
- Produces less than 2 foot-candles of visible light
- Filter protectors with rubber bumpers and Borofloat® glass lenses prevent damage to LEDs
- Easily customizable! Move, adjust and add up to two lamp heads according to <u>your</u> specific inspection requirements (additional lamp heads sold separately)
- Optional remote control with three-position rocker switch provides added convenience and versatility
- Comes complete with UVS-30 UV-absorbing spectacles

**Optional remote control with three-position rocker switch adds convenience and versatility**

## LAMP SPECIFICATIONS

**Product Number:**
ONT-365

**Light Sources:**
3 UV-A LEDs and 1 white light LED per lamp head

**System dimensions:** (L x W x H)
28.5 x 18.3 x 11 in (72 x 46 x 28 cm)

**Lamp:**
Head diameter:    3.25 in (8.3 cm)
Length:            9.5 in (24 cm)

**Platform Dimensions:** (L x W x H)
28.5 x 18.3 x 2.5 in (72 x 46 x 6 cm)

**Platform Weight:**
13 lb (5.9 kg)

**Power Supply Cord:**
8 ft (2.4 m)

**Power Supply:**
Input:   100-240 VAC 50/60 Hz
Output:  12 VDC

**Nominal Steady-State UV-A (365 nm) Intensity:**
15 in (38 cm) — 9,000 µW/cm²

**NOTE:** UV-A intensity reading taken with a Spectroline® AccuMAX™ Series meter

## UV-A BEAM PROFILE



SURFACE CONTOUR PROFILE AT 15 IN (38 CM)
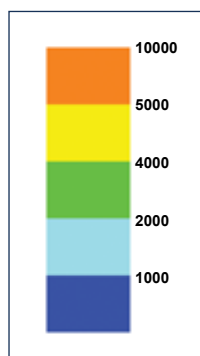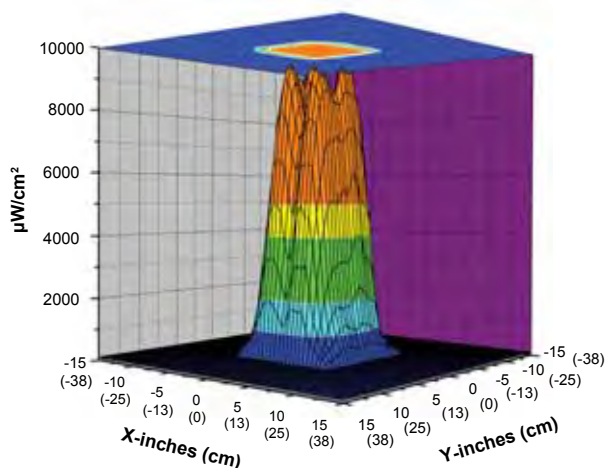
TOP INTENSITY PROFILE AT 15 IN (38 CM)
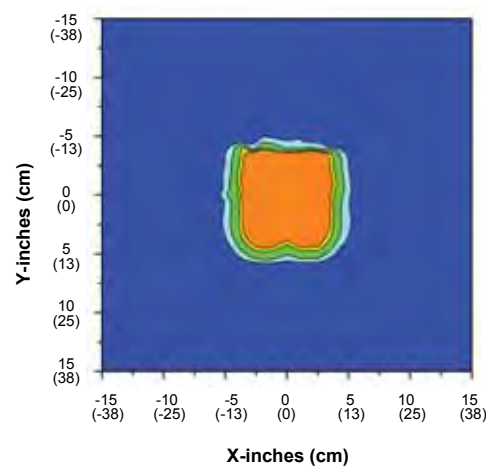
### Replacement Parts & Accessories

| | | | |
|---|---|---|---|
| **LA-365** | UV-A/white light LED lamp head assembly | **RC-200** | AC remote control with 8 foot (2.4 m) cord |
| **PT-200** | Platform and track assembly | | |
| **FP-100** | Filter protector with rubber bumper and Borofloat® glass lens | **UL-100** | UV-A Lens |
| | | **UVS-30** | Spectacles, UV-absorbing |
| **AF-200** | Air filter (package of 24) | **UVG-50** | Goggles, UV-absorbing |
| **PS-100A** | Power supply module | **UVF-80** | Face shield, UV-absorbing |

# LED Light Sources in Blue Light Wavelengths!

The importance of high-intensity UV-A black lights for proper magnetic particle or penetrant NDT inspection is well established. However, a concern for UV safety has always existed. Our new blue light inspection lamps and modular systems address this concern. While still no substitute for UV-A lamps, blue light does provide the safety and convenience desired for quick pre-inspection or screening of fluorescent particles in operating conditions with ambient light, saving time and limiting the use of black lights to only when necessary.

**TRITAN™ 450**

**OPTIMAX™ 450**

*Powerful, Broad-Beam Lamp!*

*Cordless & Lightweight Flashlight!*

*Versatile, Stationary Flood Lamp!*

*Powerful, Customizable Track Light System!*

**PowerMAX™ 450**

**On-Trak™ 450**

# OPX-450

## OPTIMAX™ 450 Rechargeable Blue Light LED Flashlight
*(U.S. patent no. 5,905,268; foreign patents pending)*

**This versatile, cordless inspection lamp features a high-intensity, 450 nm blue light LED, a black anodized lamp body and our patented, thin-film dichroic lens to filter out long-wave visible light.**

- Nominal steady-state blue light intensity of *__7,000 µW/cm²__* at 15 inches (38 cm)

- Patented, thin-film dichroic lens improve contrast and fluorescent response

- Electronic Intensity Stabilizer assures consistent performance. Beam strength will not weaken between charges!

- Instant-on operation. Lamp reaches full intensity <u>immediately</u>!

- Lightweight, cordless, ergonomic design eliminates fatigue

- Portable and rugged. Anodized aluminum lamp body minimizes corrosion and stands up to years of heavy use.

- Powered by a rechargeable NiMH battery. Provides 90 minutes of continuous inspection between charges.

**OPTIMAX™ 450** comes complete with smart AC and DC chargers, fluorescent-enhancing, yellow spectacles, belt holster and rugged, padded carrying case.
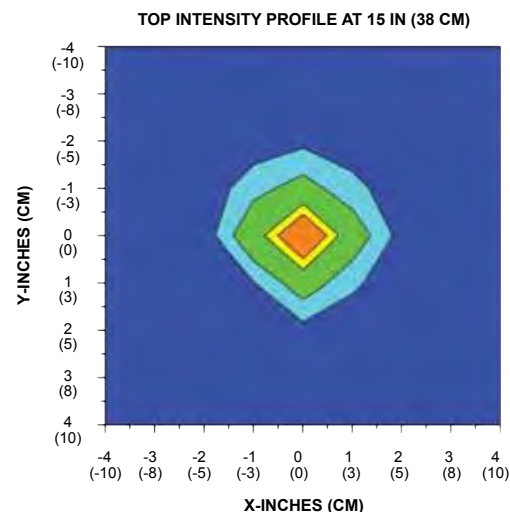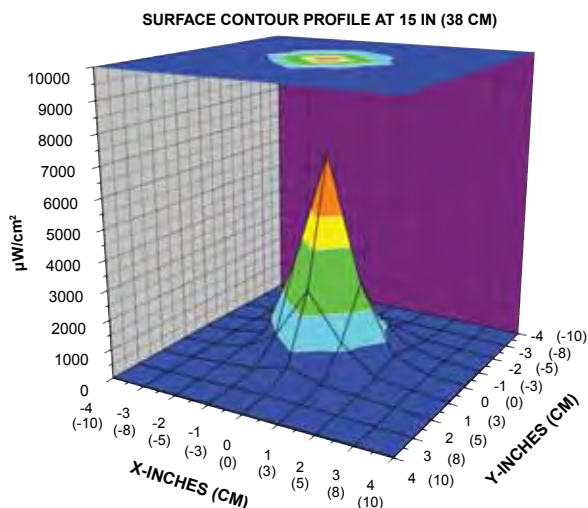
## LAMP SPECIFICATIONS

| | |
|---|---|
| **Style** | Cordless flashlight |
| **Lamp Head Diameter** | 2.0 inch (5.1 cm) |
| **Length** | 8.0 inch (20.3 cm) |
| **Weight (with Battery)** | 11.8 oz (335 g) |
| **Power Requirement** | 3.6V, 2 AH NiMH internal battery stick (rechargeable) |
| **Run Time** | 90 minutes (continuous) |
| **Charge Time** | 4 hours |

CE

## BLUE LIGHT BEAM PROFILE

**SURFACE CONTOUR PROFILE AT 15 IN (38 CM)**

µW/cm²

X-INCHES (CM)

Y-INCHES (CM)

| | |
|---|---|
| | 10000 |
| | 5000 |
| | 4000 |
| | 2000 |
| | 1000 |

**TOP INTENSITY PROFILE AT 15 IN (38 CM)**

Y-INCHES (CM)

X-INCHES (CM)

# TRI-450B Series

## TRITAN™ 450 Multi-LED, Broad-Beam Blue Light Lamp

*(U.S. patent no. 5,905,268; foreign patents pending)*

Feature <u>three</u> cool-running, ultra-high flux 450 nm blue light LEDs with a broad-beam configuration. This powerful lamp provides a wider coverage area than conventional inspection lamps, while its compact head design allows access into areas inaccessible to larger inspection lamps. Ideal for most non-destructive testing applications.

- Nominal steady-state blue light intensity of *9,500 µW/cm²* at 15 inches (38 cm)

- Large 5 inch (13 cm) diameter coverage area at 15 inches (38 cm) with a minimum intensity of *2,000 µW/cm²*

- Rubber bumper with patented thin-film dichroic lens filters out long-wave visible light

- Electronic Intensity Stabilizer ensures consistent LED performance

- Built-in fans keep LEDs cool to maintain optimum light output during extended use

- Instant-on operation. Lamp reaches full intensity <u>immediately!</u>

- Rugged, ergonomic, angled lamp body provides safe, fatigue-free handling

- Choice of standard 8 foot (2.4 m) or extra-long 20 foot (6.1 m) heavy-duty power cord with AC plug and rubber boot. Also available: Optional in-line power supply or industrial power supply with cord sets (sold separately).

- Includes fluorescent-enhancing, yellow spectacles and soft carrying case

## LAMP SPECIFICATIONS

| | |
|---|---|
| Style | Pistol grip |
| Light Source | 3 blue light LEDs |
| Lamp Head Diameter | 5 in (13 cm) |
| Length | 8.0 in (20.3 cm) |
| Weight | 1 lb (454 g) |
| **Power Requirements:** | |
| AC lamp | (TRI-450B) 120VAC* |
| AC/DC lamp | (TRI-450MB) 120VAC*/12VDC |
| **Battery Pack:** | |
| Type | 12V, NiMH (rechargeable) |
| Run Time | 3.5 hours (continuous) |
| Charge Time | 2 hours |

*Also available in 230V, 240V and 100V versions.

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## Replacement Parts & Accessories

| | |
|---|---|
| **129141** | Standard, 8 foot (2.4 m) AC power cord |
| **129145** | Extra-long, 20 foot (6.1 m) AC power cord |
| **129162** | 3.5 foot (1.1 m) DC power cord for "M" series lamps |
| **127933** | Particulate filter assembly |
| **BP-30** | Battery pack with 12V rechargeable NiMH battery |
| **BR-150A** | Smart AC charger |
| **CC-370A** | Soft carrying case |
| **FP-450** | Rubber bumper with dichroic lens |
| **PSA-250A** | AC/DC power supply adapter for "M" series lamps |
| **PS-200A** | Industrial power supply. Primary cord: 8 feet (2.4 m); secondary cord: 20 feet (6.1 m). |
| **PS-300A** | In-line power supply. Primary cord: 8 feet (2.4 m); secondary cord: 8 feet (2.4 m). |
| **UVS-40** | Fluorescent-enhancing spectacles, yellow |

### Also Available:

**TRITAN™ 450MB** portable, battery-operated AC/DC lamp kit. Includes TRITAN 450 blue light LED lamp, rechargeable NiMH battery pack, power supply adapter with AC and DC cord sets, smart AC charger, fluorescent-enhancing, yellow spectacles and soft, lightweight carrying case.

## BLUE LIGHT BEAM PROFILE



SURFACE CONTOUR PROFILE AT 15 IN (38 CM)



TOP INTENSITY PROFILE AT 15 IN (38 CM)
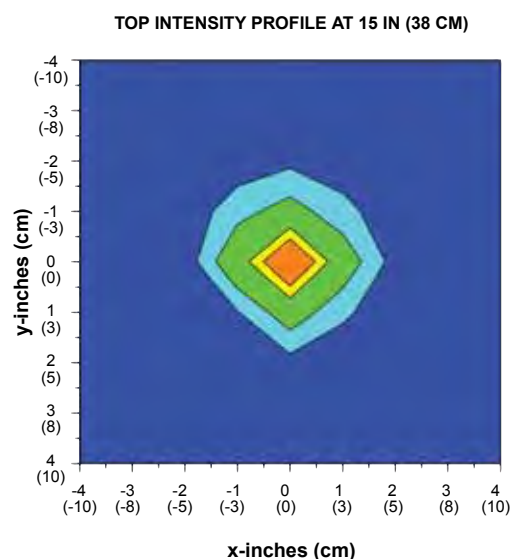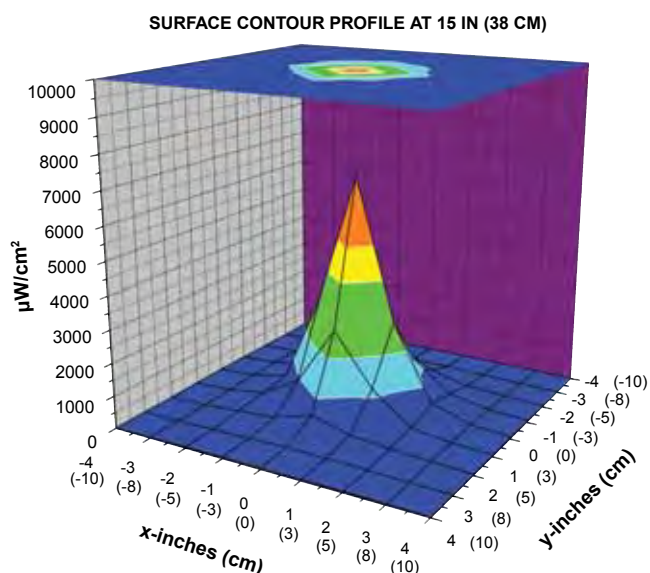
# PM-1600B

**PowerMAX™ 450**

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## Blue Light LED Panel Flood Lamp

### *Designed Specifically for NDT Professionals!*

**PowerMAX™ 450** flood lamp features a panel of 16 powerful blue light (450 nm) LEDs specially engineered for non-destructive testing applications when limiting the use of UV-A light is a requirement. This versatile, stationary light source can be installed overhead or in-line, and can be ganged together to provide an even wider coverage area.

Ideal for NDT inspection booths, quick pre-inspection or screening of fluorescent particles in ambient light conditions and any other applications requiring maximum uniformity of blue light coverage over a large area.

- Nominal steady-state blue light intensity of *14,000 µW/cm²* at 15 inches (38 cm)

- Large coverage area of 18 inches by 8 inches (46 cm x 20 cm) with a minimum blue light intensity of *2,000 µW/cm²*

- Patented, thin-film dichroic lens to filter out long-wave visible light

- Easily mountable for overhead inspection or in-line applications

- Built-in fans keep LEDs cool to maintain optimum light output during extended use

- Customizable — multiple lamp units can be "ganged" together longitudinally or back-to-back for a larger coverage area to meet *your* specific inspection requirements!

Top View

## LAMP SPECIFICATIONS

| Style | Panel flood lamp |
|---|---|
| Light Source | 16 blue light (450 nm) LEDs |
| Dimensions (WxLxH) | 5.5 x 13.75 x 6 in (14 x 35 x 15 cm) |
| Weight | 9 lb (4 kg) |
| Power Requirement | AC power (main AC power cord supplied with the unit) |

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For applications requiring extremely large coverage areas, the PowerMAX™ 450 can be quickly ganged together longitudinally (top) or back-to-back (bottom) using customized, easy-to-install connecting plates and brackets.

Top View

## Replacement Parts & Accessories

| 128177 | AC power cord |
|---|---|
| 127918 | Particulate air filter |
| 127935 | Retainer, LED assembly face plate |
| DF-450PM | Dichroic filter assembly |
| CC-200 | Connector cable for ganging lamps |
| CP-100 | Top connecting plate for ganging lamps longitudinally |
| CP-200 | Top connecting plate for ganging lamps back-to-back (two required) |
| CP-300 | Side connecting bracket for ganging lamps longitudinally (two required) |
| UVS-40 | Fluorescent-enhancing spectacles, yellow |

## BLUE LIGHT BEAM PROFILE

SURFACE CONTOUR PROFILE AT 15 IN (38 CM)

TOP INTENSITY PROFILE AT 15 IN (38 CM)
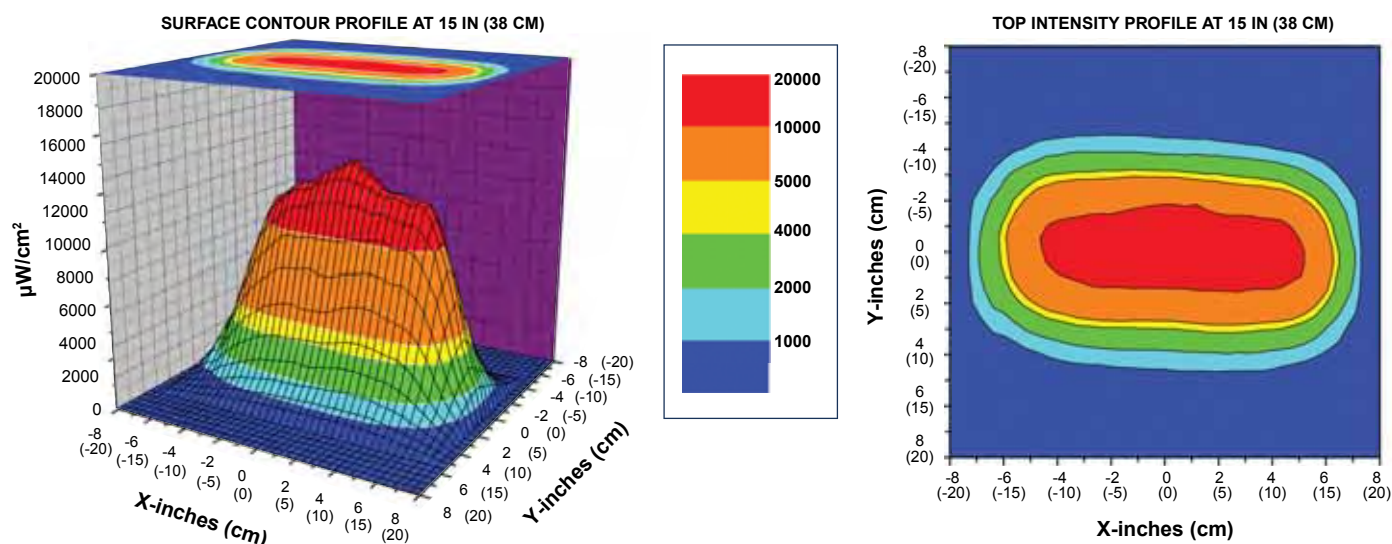
# ONT-450 On-Trak™
### Modular Inspection System
*(U.S. and foreign patents pending)*

## Blue Light LED Inspection System

The **ONT-450 On-Trak™** is an innovative, modular, track light-style inspection system. It features <u>four</u> broad-beam lamps, each of which utilizes three powerful, blue light (450 nm) LEDs. This overhead lighting system provides a fast, safe and effective alternative to UV-A light. It allows inspectors to customize lamp beam patterns to suit their individual needs, and provides the ability to add two additional lamp head assemblies to further increase the coverage area. Perfect for NDT inspection booths, pre-inspections and screening of fluorescent particles in operating conditions with ambient light or <u>any</u> application requiring maximum uniformity of coverage over large areas.

- Powerful, cool running, energy-efficient blue light LEDs
- Broad-beam profiles provide wide coverage area
- Electronic Intensity Stabilizers ensure consistent LED performance
- Instant-on operation; lamps reach full intensity <u>immediately</u>
- Built-in fans keep LEDs cool to maintain optimum light output during extended use
- Rubber bumpers with patented thin-film dichroic lenses filter out long-wave visible light while preventing damage to the LEDs
- Easily customizable! Move, adjust and add up to two additional lamp heads according to <u>*your*</u> specific inspection requirements (additional lamp heads sold separately)
- Optional remote control with two-position rocker switch provides added convenience and versatility
- Comes complete with UVS-40 fluorescence-enhancing spectacles

Optional remote control with two-position rocker switch adds convenience and versatility

## LAMP SPECIFICATIONS

**Product Number:**
ONT-450

**Light Sources:**
3 blue light LEDs per lamp head

**System dimensions:** (L x W x H)
28.5 x 18.3 x 11 in (72 x 46 x 28 cm)

**Lamp:**
Head diameter:   3.25 in (8.3 cm)
Length:          9.5 in (24 cm)

**Platform Dimensions:**   (L x W x H)
28.5 x 18.3 x 2.5 in (72 x 46 x 6 cm)
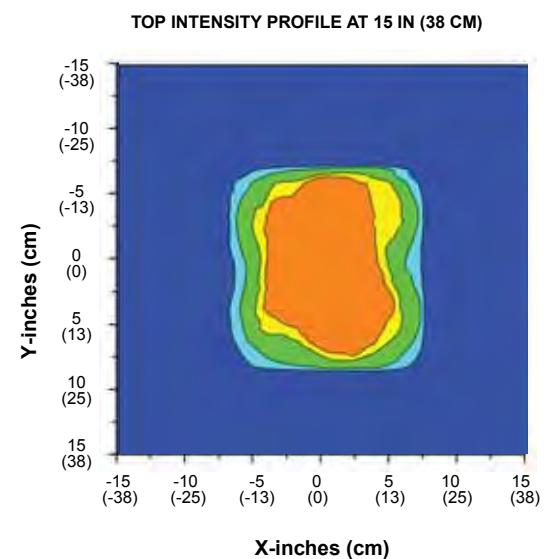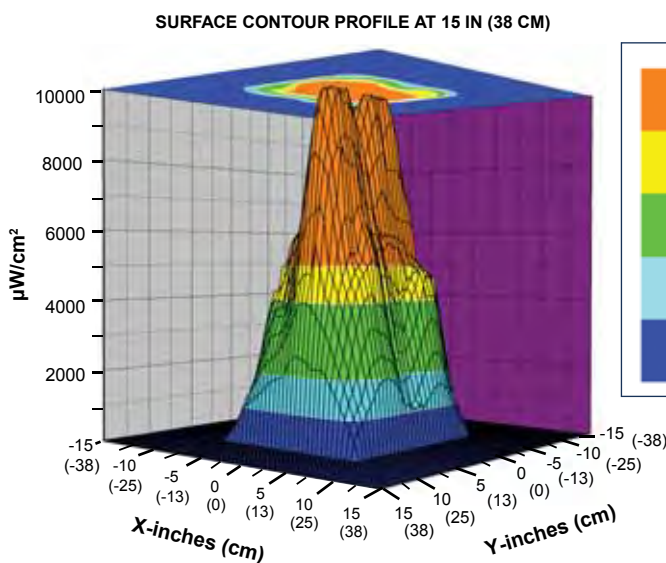
**Platform Weight:**       13 lb (5.9 kg)

**Power Supply Cord:**     8 ft (2.4 m)

**Power Supply:**
Input:   100-240 VAC 50/60 Hz
Output:  12 VDC

**Nominal Steady-State Blue Light (450 nm) Intensity:**

15 in (38 cm) — 9,500 µW/cm²

**NOTE:** Blue light intensity reading taken with a Spectroline® AccuMAX™ Series meter

## BLUE LIGHT BEAM PROFILE

**SURFACE CONTOUR PROFILE AT 15 IN (38 CM)**



**TOP INTENSITY PROFILE AT 15 IN (38 CM)**



## Replacement Parts & Accessories

| | | | |
|---|---|---|---|
| **LA-450** | Lamp head assembly with three blue light LEDs | **FP-200** | Filter protector with rubber bumper and thin-film dichroic lens |
| **PS-100A** | Power supply module | | |
| **PT-200** | Platform and track assembly | **UVS-40** | Fluorescence-enhancing spectacles, yellow |
| **RC-300** | AC remote control with 8 foot (2.4 m) cord | **AF-200** | Air filter (package of 24) |

# AccuPRO™ Series
# Digital Radiometer/Photometers

The **AccuPRO™ Series** meters feature an advanced, microprocessor-controlled readout unit calibrated to accurately measure and display both UV-A and visible light readings for non-destructive testing applications.

**Available in two versions:** The AccuPRO™ (**XP-2000**) readout unit features a single dual-wavelength sensor detector designed to measure both ultraviolet and visible light. The AccuPRO™ Plus (**XP-4000**) features a single 3-in-1 multi-purpose sensor that measures ultraviolet, visible and blue light.

These compact, lightweight, battery-operated units are ideal for use in the field, the factory or anywhere accurate light measurements are needed!

- Large, easy to read, LCD screen with 4-digit autoranging display
- Both units provide accurate readouts for UV-A irradiance as well as visible illuminance. AccuPRO™ Plus unit also measures blue light
- Simply to use, three-button interface. Toggle between light measurement modes.
- Overall accuracy greater than ± 5% per NIST standards
- Superior band-pass interference filter provides excellent cosine response
- One-touch PEAK with reset functions
- User-defined power save and automatic shutoff
- User-selectable, multilingual display settings at any operational level. Choose from English, French, German, Chinese and Spanish.
- Rugged meter features protective rubber housing for better grip and to help prevent accidental breakage
- Sealed sensor with water-resistant housing
- Multi-wavelength sensor directly attached to meter by 3 ft (0.9 m) cord
- Complies with ASTM specifications for LPT and MPT
- Convenient on-board recharging
- Powered by four rechargeable "AAA" nickel-metal hydride batteries (included)
- Come complete with AC charger and padded carrying case

3-in-1 sensor

AccuPRO™ Plus

The AccuPRO™ meter features a dual-wavelength UV/visible light sensor, while the AccuPRO™ Plus (shown) features a 3-in-1 sensor that measures UV, visible <u>and</u> blue light.

## SPECIFICATIONS

### Readout Unit

| | |
|---|---|
| Resolution | 4-digit autoranging display |
| Screen | 128 x 64 dot pixel chip on glass STN transmissive monochrome LCD 2.25 in (5.7cm) diagonal illuminated (backlit) |
| Read Update | 2 Hz |
| Overall Accuracy | Better than ± 5% with reference to NIST standards |
| Temperature Coefficient | ± 0.025%/°C (0 to 50°C) |
| Power Requirements | Four "AAA" nickel-metal hydride batteries (rechargeable). AC charger included. *Available in 120V, 230V, 240V or 100V versions.* |

### Dimensions
| | |
|---|---|
| Length | 6.0 in (15.2 cm) |
| Width | 3.0 in (7.6 cm) |
| Thickness | 1.0 in (2.5 cm) |
| Weight | 8 oz (227 g) |

### Sensor Detector
| | |
|---|---|
| Length | 3.0 in (7.6 cm) |
| Width | 2.0 in (5.1 cm) |
| Thickness | 0.5 in (1.3 cm) |
| Weight | 5.6 oz (159 g) |

### Spectral Range
| | |
|---|---|
| UV-A Sensor | 320-400 nm |
| Visible Sensor | 460-675 nm |
| Blue Light Sensor | 410-475 nm |

### XP-2000 AccuPRO™
**Dual Sensor (UV-A/VIS)**
Sensitive to UV and Visible Light

**Wavelength/Measurement Range**
| | |
|---|---|
| UV-A (365 nm) Irradiance | 0-100 mW/cm² |
| Visible (555 nm) Illuminance | 0-5,382 Lux (0-500 fc) |

### XP-4000 AccuPRO™ Plus
**3-in-1 Sensor (UV-A/VIS/Blue)**
Sensitive to UV, Visible and Blue Light

**Wavelength/Measurement Range**
| | |
|---|---|
| UV-A (365 nm) Irradiance | 0-100 mW/cm² |
| Visible (555 nm) Illuminance | 0-5,382 Lux (0-500 fc) |
| Blue (450 nm) | 0-100 mW/cm² |

CE

DIGITAL RADIOMETERS

# XRP-3000 AccuMAX™

## Digital Radiometer/Photometer

**Features an advanced microprocessor-controlled readout unit with a dual-wavelength sensor detector to measure _both_ ultraviolet and visible light.**

- Large, easy-to-read LCD screen
- Provides readouts for UV-A, visible irradiance or radiance
- Overall accuracy greater than ± 5% per NIST standards
- Choice of direct or USB cable connection between sensor detector and readout unit
- Superior bandpass interference filter
- Automatic zeroing, integration and signal hold
- Excellent cosine response
- User-selectable, multilingual display settings. Choose from English, French, German and Spanish.
- User-defined power save and automatic shutoff
- Rugged meter housing features removable, protective rubber boot for better grip and to help prevent accidental breakage
- Sealed sensor housing and USB connection with water-resistant adapter
- Compact, lightweight and battery-operated for convenient use in the factory, field or anywhere measurements are needed
- Complies with ASTM specifications for LPT and MPT
- Comes complete with readout unit, dual-wavelength sensor detector, USB cable with water-resistant adapter, protective rubber boot, two 9V alkaline batteries and padded carrying case.

**XR-1000 readout unit with dual-wavelength sensor detector connected directly to unit**

**XR-1000 readout unit with dual-wavelength sensor detector connected to unit via USB cable**

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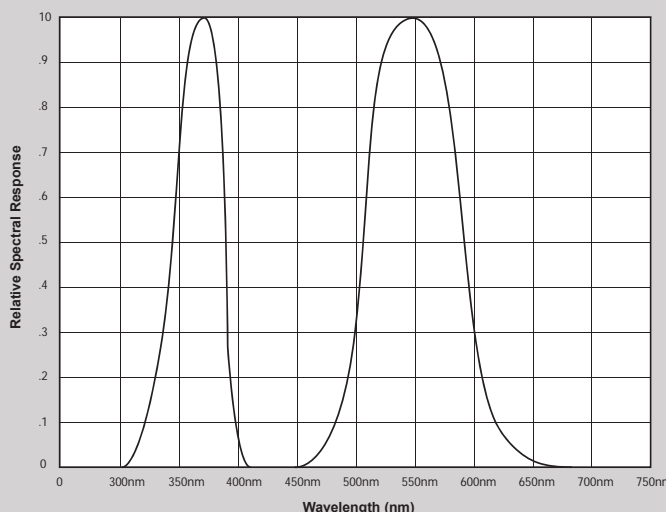
## SPECIFICATIONS

### Readout Unit (XR-1000)

| | |
|---|---|
| **Resolution** | 4-digit autoranging display |
| **Screen** | 128 x 64 dot pixel chip on glass STN transmissive monochrome LCD 2.8 in (7.1 cm) diagonal illuminated (backlit) |
| **Sample Rate** | 7.5 Hz (single sensor) 15 Hz (dual sensor) |
| **Read Update** | 2 Hz |
| **Overall Accuracy** | Better than ± 5% with reference to NIST standards |
| **Temperature Coefficient** | ± 0.025%/°C (0 to 50°C) |
| **Power Requirements** | Two 9V alkaline batteries (included) |

**Dimensions**

| | |
|---|---|
| **Length** | 7.75 in (19.7 cm) |
| **Width** | 4.25 in (10.8 cm) |
| **Thickness** | 1.25 in (3.2 cm) |
| **Weight** | 0.8 lb (360 g) |

### Dual UV-A/Visible Sensor Detector (XDS-1000)

**Irradiance Range**

| | |
|---|---|
| **UV-A Sensor** | 0-100 mW/cm$^2$ (0-100,000 µW/cm$^2$) |
| **Visible Sensor** | 0-5,300 lux (0-500 fc) |

**Spectral Range**

| | |
|---|---|
| **UV-A Sensor** | 320-400 nm |
| **Visible Sensor** | 460-675 nm |

**Dimensions**

| | |
|---|---|
| **Length** | 4.75 in (12.1 cm) |
| **Width** | 2.0 in (5.1 cm) |
| **Thickness** | 7/8 in (2.2 cm) |
| **Weight** | 0.22 lb (100 g) |
| **USB Cable (Length)** | 5 ft (1.5 m) |

CE

# DM-365XA

## Digital UV-A Radiometer

### Provides increased accuracy for more repeatable results.

- Measures UV-A light sources with overall accuracy of ± 5% per NIST standards

- Autozeroing, excellent linearity and cosine response, solid-state design, compact, durable, simple operation, battery-level indicator

- Sealed silicone photodiode protects against shock and humidity

- Sensor housing is constructed with series of baffles and unique self-sealing mechanism to eliminate light leakage

- Compact, lightweight and battery operated so measurements can be taken anywhere

- Complies with ASTM specifications for LPT and MPT

## SPECIFICATIONS

### Readout Unit

| | |
|---|---|
| Resolution | 10 µW/cm$^2$ |
| Screen | 4½ digit, 7 segment, LED display |
| | 0.5 in (1.3 cm) high |
| Overall Accuracy | Better than ± 5% with reference to NIST standards |
| Temperature Coefficient | ± 0.025%/°C (0 to 50°C) |
| Irradiance Range | 0-19,900 µW/cm$^2$ |
| Spectral Range | 320-400 nm |
| Power Requirements | Two "AA" alkaline batteries (included) |
| Length | 7¼ in (18.4 cm) |
| Width | 3.5 in (8.9 cm) |
| Thickness | 2 in (5.1 cm) |
| Weight | 1 lb (0.45 kg) |

### Sensor Detector

| | |
|---|---|
| Length | 3 in (7.6 cm) |
| Width | 2 in (5.1 cm) |
| Thickness | 0.70 in (1.8 cm) |
| Weight | 1¼ lb (0.57 kg) |
| Cord Length | 3 ft (91.4 cm) |

## BP-12A
**BATTERY PACK**

Complete with RB-12S Smart Charger with Cordset, 12 Volt Rechargeable NiMH Battery and Nylon Carrying Case for MAXIMA™ ML-3500 Series Lamps. (120V)*

## BP-30
**BATTERY PACK**

Complete with BR-150A Smart Charger, 12 Volt Rechargeable NiMH Battery for QUADRAN™ QDR-365M, TRITAN™ TRI-365M and TRI-450MB AC/DC Lamp Kits. (100-120V)*

## CC-120A
**CARRYING CASE**

for BIB-150P Series. FC-Series and SB-100P Series Lamps

## CC-350
**CARRYING CASE**

for MAXIMA™ ML-3500 Series Lamps

## CC-365
**CARRYING CASE**

for OPTIMAX™ OPX-365 and OPX-450 Flashlights

## CC-370A
**CARRYING CASE**

for EagleEye™ and TRITAN™ Series Lamp Kits

## CC-400
**CARRYING CASE**

for QUADRAN™ 365 Series Lamp Kits

## UVS-30
**SPECTACLES**
UV-Absorbing

## UVS-40
**SPECTACLES**
Fluorescence-Enhancing

## UVF-80
**FACE SHIELD**
UV-Absorbing

## UVG-50
**GOGGLES**
UV-Absorbing

*For other voltages, please see price list.*
**Using genuine Spectroline® replacement parts ensures that lamps will operate at their optimum performance.**

**BLE-35PRA**
**MDL BULB/POLISHED REFLECTOR ASSEMBLY**
for MAXIMA™ ML-3500 Series Lamps

**BLE-35RA**
**MDL BULB/COATED REFLECTOR ASSEMBLY**
for MAXIMA™ ML-3500 Series Lamps

**BLE-35RAF**
**MDL BULB/ANODIZED REFLECTOR ASSEMBLY**
for MAXIMA™ ML-3500 Series Lamps
for CH-50P/12 and MAXIMA™ ML-3500 Series Lamps

**BLE-400**
**METAL HALIDE BULB**
400 Watt for SuperFlood™ UV-400 Series Lamps

**119584**
**MDL BULB**
35 Watt for MAXIMA™ ML-3500 Series Lamps

**120344**
**COATED SPOT REFLECTOR**
for MAXIMA™ ML-3500 Series Lamps

**120514**
**ANODIZED FLOOD REFLECTOR**
for MAXIMA™ ML-3500 Series Lamps

**123378**
**POLISHED REFLECTOR**
for MAXIMA™ ML-3500 Series Lamps

**127423**
**DOME LENS**
for OPTI-LUX™ 365 Series LED Flashlights
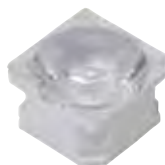
**UL-100**
**UV-A LENS**
for all UV-A (365 nm) LED Lamps, *except* TRITAN™ 365 TRI-365SBLC

**UL-110**
**UV-A LENS**
for TRITAN™ 365 TRI-365SBLC Lamp

**OF-300W**
**LED LAMP HEAD, WHITE LIGHT**
for OPTIMAX™ OPK-300N Multi-Lite™ Lamp

**OF-365UV**
**LED LAMP HEAD, UV (365 NM)**
for OPTIMAX™ OPK-300N Multi-Lite™ Lamp

**OF-450BD**
**LED LAMP HEAD, BLUE LIGHT (450 NM)**
with dichroic lens for OPTIMAX™ OPK-300N Multi-Lite™ Lamp
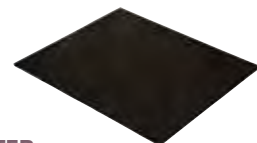
**2F110**
**UV-A FILTER**
for SuperFlood™ UV-400 Series Lamps

**2F350**
**DIFFUSING FILTER**
for FC-Series and MAXIMA™ ML-3500 Series Lamps

**2F400B**
**UV-B BLOCKING FILTER**
for SuperFlood™ UV-400 Series Lamps

**2F958**
**UV-A FILTER**
for BIB-150P Series, FC-Series and MAXIMA™ ML-3500 Series Lamps

**125565**
**RUBBER LAMP PROTECTOR**
for OPTIMAX™ Flashlights

**127796**
**RUBBER LAMP PROTECTOR**
for OPTI-LUX™ 365 Flashlight

**BF-365LX**
**EXTERNAL BLACK LIGHT FILTER WITH RUBBER BUMPER**
for OPTI-LUX™ 365 Flashlight

**DF-365**
**DIFFUSING FILTER**
for OPTIMAX™ OPX-365 Flashlight

**FP-100**
**FILTER PROTECTOR**
with Rubber Bumper/Borofloat® glass lens for ONT-365 On-Trak™ Inspection System Lamps

**FP-200**
**FILTER PROTECTOR**
with Rubber Bumper/Dichoric glass lens for ONT-450 On-Trak™ blue light Inspection System Lamps

**FP-365**
**FILTER PROTECTOR**
with Rubber Bumper/Borofloat® Glass for TRITAN™ 365 Series Lamps

**FP-450**
**FILTER PROTECTOR**
with Rubber Bumper/Dichroic Filter for TRITAN™ 450 Series Lamps

**HS-100**
**HEAD STRAP**
for EagleEye™ Lamp

**LMS-100**
**LAMP MOUNT/SPRAYER**
for EagleEye™ Lamp

**SG-100**
**SPLASH GUARDS WITH INTEGRAL PARTICULATE FILTER**
for EagleEye™ Lamp (3 pack)

**127243**
**HOLSTER**
for OPTIMAX™ OPX-365 and OPX-450 Flashlights

**127574**
**BELT HOLSTER**
For OPTI-LUX™ 365 Series Flashlights

Using genuine Spectroline® replacement parts ensures that lamps will operate at their optimum performance.

### 124826
**CORD SET**

2 Foot (0.6 m), 7 Pin for MAXIMA™ ML-3500 Series Lamps. (12V DC version)



### 124827
**CORD SET**

8 Foot (2.4 m), 7 Pin for MAXIMA™ ML-3500 Series Lamps. (230V version)



### 124828
**CORD SET**

8 Foot (2.4 m), 7 Pin for MAXIMA™ ML-3500 Series Lamps. (115V and 100V versions)



### 129141
**AC CORD SET**

8 Foot (2.4 m) for QUADRAN™ A and TRITAN™ B Series Lamps. (100-120V)*



### 129145
**AC CORD SET**

20 Foot (6.1 m) for QUADRAN™ A and TRITAN™ B Series Lamps. (100-120V)*



### 129162
**DC CORD SET**

3.5 Foot (1.1 m) for QUADRAN™ A and TRITAN™ B "M" Series Lamps



### 128217
**BATTERY CHARGING CRADLE**

with AC cord for Eagle-Eye™ Inspection Lamp and OPTI-LUX™ 365 Series Flashlights. (100-120V)*



### 128225
**DC CORD SET**

for Eagle-Eye™ Inspection Lamp and OPTI-LUX™ 365 Series Flashlights



### BR-150A
**SMART BATTERY CHARGER**

for BP-30 Battery Pack. (100-120V)*



### PS-200A
**INDUSTRIAL POWER SUPPLY**

with cord sets for QUADRAN™ 365 and TRITAN™ Series Lamps. (100-120V)*



### PS-300A
**IN-LINE POWER SUPPLY**

for QUADRAN™ 365 and TRITAN™ Series Lamps. (100-120V)*



### PSA-250A
**POWER SUPPLY ADAPTER**

with AC and 12V DC connections for QUADRAN™ and TRITAN™ "M" Series Lamps. (100-120V)*



### RB-12S
**SMART BATTERY CHARGER**

for BP-12A Battery Pack. (120V)*



### RB-300
**SMART AC CHARGER**

for OPTIMAX™ OPK-300N, OPX-365 and OPX-450 Flashlights. (100-120V)*

*For other voltages, please see price list.*

**RB-300DC**
**12V DC CHARGER**

for OPTIMAX™ OPK-300N, OPX-365 and OPX-450 Flashlights.

**RC-200**
**AC REMOTE CONTROL**

for On-Trak™ ONT-365 UV-A Inspection System with 8 foot (2.4 m) cord

**RC-300**
**AC REMOTE CONTROL**

for On-Trak™ ONT-450 Blue Light Inspection System with 8 foot (2.4 m) cord

**125608**
**BATTERY STICK WITH TAILCAP**

for OPTIMAX™ OPK-300N, OPX-365 and OPX-450 Flashlights

**127568**
**LITHIUM-ION BATTERY**

Rechargeable for EagleEye™ Lamp and OPTI-LUX™ 365 LED Flashlights

**XCB-100**
**WATER-RESISTANT USB CABLE WITH ADAPTER**

for AccuMAX™ Meter

**XCC-100**
**CARRYING CASE**

for AccuMAX™ XRP-3000 Meter

**XRB-100**
**RUBBER BOOT**

for AccuMAX™ XR-1000 Readout Unit
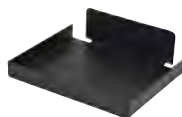
**AB-100**
**ADAPTER BRACKET**

for Mounting Transformer-Based Spectroline® HID Lamps onto a Magnaflux® Wet Horizontal Mag Machine

**B-6**
**BENCH MOUNT**

for all Spectroline® HID, QUADRAN™ and TRITAN™ Series Lamps

**FA-100**
**FLEXIBLE ARM**

for all Spectroline® HID, QUADRAN™ and TRITAN™ Series Lamps

**LH-200**
**LAMP HOLDER**

for OPTIMAX™ OPX-365 and OPX-450 Flashlights (for use with VF-100A)

**LH-300A**
**LAMP HOLDER**

for TRITAN™ Series Lamps (for use with VF-100A, FA-100, WM-100, B-6 and W-6)

**VF-100A**
**SPEC-STIK™ VERIFICATION FIXTURE**

for all Spectroline® sensors, as well as HID, QUADRAN™, TRITAN™ and OPTIMAX™ Series Lamps.

NOTE: Lamp mounting accessories for TRITAN™ and OPTIMAX™ Series Lamps are sold separately (see LH-200 and LH-300A)

**W-6**
**WALL MOUNT**

for all Spectroline® HID and TRITAN™ Series Lamps

**WM-100**
**WALL MOUNTING BRACKET**

for all Spectroline® HID, QUADRAN™ and TRITAN™ Series Lamps

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### 100S
**SPOT BULB**

Ad-Medium Base, 100 Watt for SB-100P and FC-Series Lamps

### 100S/M
**SPOT BULB**

Medium Base, 100 Watt for SB-100P and FC-Series Lamps

### 100S/M-PQL
**UPGRADED, PREMIUM QUALITY LIGHTING SPOT BULB**

Medium Base, 100 Watt for SB-100P and FC-100 Series Lamps

### BLE-150BS-115/M
**BROAD-BEAM BULB**

Self-Ballasted, 150 Watt for BIB-150P Series Lamps (115 volt version)

### BLE-150CS-100/M
**CONCENTRATED SPOT BULB**

Self-Ballasted, 150 Watt for BIB-150P Series Lamps (100 volt version)

### BLE-150CS-115/M
**CONCENTRATED SPOT BULB**

Self-Ballasted, 150 Watt for BIB-150P Series Lamps (115 volt version)

### BLE-150CS-230/M
**CONCENTRATED SPOT BULB**

Self-Ballasted, 150 Watt for BIB-150P Series Lamps (230 volt version)

### BLE-150FC-115/M
**CONCENTRATED SPOT BULB**

Self-Ballasted, 150 Watt for FC-150 Lamp (115 volt version)

### BLE-150FC-230/M
**CONCENTRATED SPOT BULB**

Self-Ballasted, 150 Watt for FC-150 Lamp, (230 volt version)
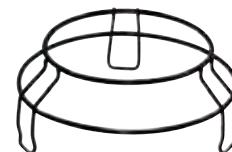
### FP-175
**FILTER PROTECTOR/LAMP STAND**

for BIB-150PR and FC-Series Lamps
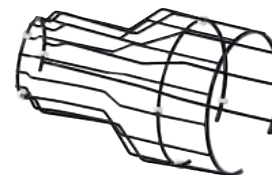
### HGS-100A
**HEAT GUARD/STAND**

for SB-100P Series Lamps

### HGS-150A
**HEAT GUARD/STAND**

for BIB-150P and BIB-150PX Lamps

**\*Mercury Vapor Bulbs.**

# COMPANY BACKGROUND

Spectronics Corporation is the world's leading manufacturer of ultraviolet equipment and fluorescent materials. Spectronics supplies over 1,000 different products for the nondestructive testing, laboratory, biotechnology, industrial, electronics, semi-conductor, forensics, financial, automotive, HVAC/R and other markets.

Spectronics' modern, 100,000 square-foot manufacturing facility and office headquarters is located in Westbury, New York. Nearly 200 personnel are involved in all phases of research and development, manufacturing, sales, marketing, customer service, and logistical and technical support.

Over five decades since its inception, the goal of Spectronics is still the same — to produce effective, top-quality products with the utmost dedication to customer satisfaction.

**SPECTRONICS CORPORATION**

## Warranty

All equipment is warranted against defects in manufacture. Spectronics Corporation's obligation under this warranty is limited to repairing or replacing, at the option of Spectronics Corporation, any part(s) of the product which, if properly installed, used and maintained, proves upon factory examination to have been defective in materials or workmanship within 12 months from the date of delivery to the customer, including LEDs.

This warranty does not apply to any component which (1) is normally consumed in operation or (2) has a normal life inherently shorter than the warranty stated. For example, bulbs, filters and rechargeable batteries are warranted for 30 days; the 100S/M-PQL bulb is warranteed for 90 days. In addition, Spectronics Corporation does not warrant any instrument that has been subjected to misuse, negligence or accident, or has been repaired or altered by anyone other than Spectronics Corporation.

This warranty is in place of all other warranties of quality. There are no other warranties either oral, written, express, implied or statutory. IMPLIED WARRANTIES OF FITNESS FOR PURPOSE AND MERCHANTABILITY ARE EXCLUDED. This warranty and your remedies thereunder are solely as stated in this form. In no event shall Spectronics Corporation be liable for special, indirect, incidental or consequential damages, nor for any damages arising out of delay in shipment or production.

### Product Specifications
Spectronics Corporation reserves the right to alter product specifications without notice. Spectronics is under no obligation to make similar changes in its products previously produced.

## Product/Customer Support & Technical Assistance

Product literature, instructions and a full staff of trained customer service representatives and technical service engineers are available for support. Additional product information and support are available on our website.

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**Technical Assistance**

**Local Sales Representatives**

**Authorized Distributors**

PHONE (516) 333-4840 | FAX (516) 333-4859 | WWW.SPECTROLINE.COM

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