LUYOR®

Product Catalog

Fluorescent Leak Detection

Leak Detection | **LUYOR-3180 High-Intensity UV Flashlight**

LUYOR-3180 High-intensity UV Flashlight is a compact, lightweight, and rugged flashlight. LUYOR-3180 can be widely used in fluorescent leak detection, fluorescent magnetic particle inspection, hygiene inspection in hotels or pharmaceutical plants, detecting impurities and defects in oxygen degreasing procedure, crime-scene investigations (analysis of blood and bodily fluids) and documentation verification.

Product Features

- Instant-on operation
- Able to work in magnetic fields
- Energy saving
- Long lifespan up to 50,000 hours
- Power button at the tail, avoid accidental startup
- No harmful UVB or UVC
- IP65 rating: dust-proof and water resistant

What's Included

- LUYOR-3180 lamp
- A pair of spectacles
- 100-240V AC Charger, two batteries
- A storage case
- Instruction manual, certificate, warranty card

Technical Data

	LUYOR-3180	LUYOR-3180B	LUYOR-3180W
Wavelength	360-370nm	360-370nm	400-760nm
Type	Transparent filter	Black filter	White light
UV Intensity (at 38cm)	40,000 μw/cm^2	30,000 μw/cm^2	/
Visible Light Measurement	< 20 lux	< 10 lux	/
Battery	2,200mAh lithium battery, 3.7V		
Battery Working Time	Approx. 3 hours		
Battery Charging Time	Approx. 8 hours		
Dimension	15.9 cm length		
Weight	166g (without battery), 211g (with battery)		

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Leak Detection | **LUYOR-365L Fluorescent Leak Detection Flashlight**

LUYOR-365L is a compact, lightweight, portable florescent leak detection lamp. Equipped with 4 high-power 365nm UVA LEDs, LUYOR-365L produces a large coverage area up to 150mm and high intensity of 15,000 μw/cm^2 at 38cm. Powered by a high-capacity lithium battery, LUYOR-365L can work continually for 3-4 hours after fully charged.

LUYOR-365L Applications:

- UV curing: instant curing of adhesives
- Polymerization: speed up polymerization
- Surface inspection, dust inspection
- Fluorescent leak detection of hydraulic equipment, oil tanks and piping
- Forensics: detection of fingerprints

Product Features

- Instant-on operation
- For applications where high-intensity, wide UV coverage is required
- Compact and lightweight, ideal for applications in limited spaces
- Military-grade oxidation stands up to years of heavy use
- Meets international NDT standards
- Powered by a high-capacity, long-lasting lithium battery

Technical Data

- 4 high-power UVA LEDs
- Wavelength: 365nm
- Intensity: 15,000 μw/cm^2 at 38cm
- Illuminated area: diameter 150mm at 38cm
- LED Lifespan: 50,000 hours
- Charger: 110-260V, 50/60 Hz
- Dimension: length 200mm, head diameter 70mm, tail diameter 45mm
- Weight: 400g

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Leak Detection | **LUYOR-3130 UV LED Flashlight**

LUYOR-3130 UV LED Flashlight is a lightweight, portable flashlight designed for numerous specialized applications such as fluorescent leak detection, fluorescent inspection, fingerprint detection, oil detection and so on. Powered by a rechargeable battery, LUYOR-3130 can work continuously for 3 hours. With an extra battery supplied, it provides 6 hours of continuous inspection in total. Adopting ergonomic design, it has a convenient on/off button for easy, one-handed operation.

Technical Data

- Wavelength: 365nm
- Intensity: 36,000 to 930 μw/cm^2 (at 38cm)
- Coverage area: 4 to 25cm (at 38cm)
- LED Lifespan: ≥ 50,000 hours
- Battery: lithium-ion rechargeable 18650 battery, 2400mAh
- Charging time: 6-8 hours
- Working time: one battery works for 3 hours (a spare battery is supplied)
- Dimension: length 145mm, diameter 33mm
- Weight: 160g

Leak Detection | **LUYOR-3150 Leak Detection Flashlight**

Product Features

- Compatible with most of popular fluorescent dyes
- Long-lasting LED lifespan of 100,000 hours
- Inspection distance up to 7.6m
- Anodized aluminum body stands up to years of use
- Compact design, excellent for operation in limited spaces
- Two rechargeable batteries provide 6 hours of continuous working.

What's Included

- LUYOR-3150
- A pair of LUV-30 spectacles
- Two rechargeable batteries
- A 100-240V AC charger, a 12V car charger
- A storage case
- Instruction manual, certificate, warranty card

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Leak Detection | **LUYOR-3160 Economical Leak Detection Flashlight**

LUYOR-3160 is an economical fluorescent leak detection flashlight. With an optical quartz lens, LUYOR-3160 provides uniform illumination and a high intensity of 18,000 μw/cm^2 at 38cm.

Product Features

- Compatible with all popular fluorescent dyes
- Wavelength: 365nm, no harmful UVB or UVC
- Anodized aluminum body stands up to years of use
- Work continuously for 3 hours after fully charged
- Compact design, excellent for operation in limited spaces

What's Included

Model	What's Included
LUYOR-3160	• LUYOR-3160 • A 100-260V AC charger • Two batteries • A pair of LUV-10 UV protection spectacles • A storage case
LUYOR-3160T1	• LUYOR-3160 • A 100-260V AC charger • Two batteries • A pair of LUV-10 UV protection spectacles • A storage case • 500ml LUYOR-6100 fluorescent leak detection dye
LUYOR-3160T2	• LUYOR-3160 • A 100-260V AC charger • Two batteries • A pair of LUV-10 UV protection spectacles • A storage case • 500ml LUYOR-6200 fluorescent leak detection dye

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Leak Detection | **LUYOR-3170 Leak Detection Flashlight**

LUYOR-3170 Leak Detection Flashlight features a high-power 365nm UV LED and a long operation distance up to 5m. It produces uniform illumination and is applicable for most of popular fluorescent dyes, making it excellent for application in automobile industry.

Product Features

- White light illumination on the side is ideal for lighting car engines and the bottom of vehicles. The magnet on the light head allows you to attach the flashlight to the car body and free your hands.
- USB charging: charge at any time on the detection vehicles
- Battery indicator turns red when the battery is low and turns green when the flashlight is fully charged.
- Aluminum alloy case dissipates heat quickly.
- Chip-controlled circuit specially design for leak detection. High UV output during the first few minutes of startup allows the user to locate detection spots quickly, and then the current decreases to meet the need for long-time operation.

Technical Data

- One 365nm LED
- Intensity: 8,000 μw/cm^2 at 38cm
- White light: 3w cob 5700k, 3000 lux at 1m
- Battery: one 2,600mha lithium battery
- Dimension: length 18cm, head diameter 4cm, tail diameter 3cm
- Net weight: 300g (including battery)
- Gross weight: 1kg
- Charging time: 4~6 hours
- Working time: 3~6 hours

What's Included

- LUYOR-3170
- A rechargeable battery
- A pair of LUV-10 UV protection glasses
- A charging cable

Optional:

- A rechargeable battery
- 220v double-slot charger
- A storage case

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Leak Detection | **LUYOR-6100 Fluorescent Dye**

LUYOR-6100 Fluorescent Dye works well for synthetic and petroleum-based fluid systems. It can be used for leak detection of gasoline, diesel engines, hydraulic systems, transmission systems, steering systems, and industrial pipelines.

Chemical Properties

Ideal wavelength of leak detection lamps	365nm
Usage per liter	0.5-2.5ml
Compatibility with sealing material-concentrated dyes	Fluorinated rubber, PTFE, perfluoro rubber
Compatibility with sealing material-dyes diluted by oil	Nitro, butyl synthetic rubber
Solubility (petroleum products)	Completely soluble
Solubility (water)	Insoluble
Density (20°)	0.91
Flash point (ASTM D-3278)	>85℃ (185℉)
Maximum excitation value (n-hexane solvent)	494+5nm
Maximum emission value (n-hexane solvent)	535+5nm

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Leak Detection | **LUYOR-6100 Fluorescent Dye**

LUYOR-6100 Configurations

Model	Amount	Package
LUYOR-6100-00030	30ml	Plastic bottle
LUYOR-6100-00100	100ml	Plastic bottle
LUYOR-6100-00500	500ml	Plastic bottle
LUYOR-6100-18000	18L	Iron drum

LUYOR-6100-18000

LUYOR-6100 Operation Guide

1. Inject the LUYOR-6100 into the fluid system and start the system circulation. The fluorescent leak detection dye will quickly dissolve and penetrate to all leaking parts of the system. This process takes about 5-10 minutes (depending on the oil and temperature).
2. Use a high-intensity black light to irradiate the detection area. The leakage points will show strong yellow-white fluorescence, which is clearly visible and can be easily distinguished from the natural green fluorescence of oil. The fluorescence is only visible when illuminated by UV light. As the fluorescence of different oils varies, the dosage of LUYOR-6100 depends on the oil.

Recommended Amount

- Hydraulic transmission fluid: 500 to 2000 ppm
- Automobile engine oil: 500 ppm
- Diesel engine oil: 700 to 2000 ppm
- Fuel: 700ppm

LUYOR-6100 Applications

- Engine lubrication system: cars, heavy trucks, trains, etc. (ideal for both synthetic oil and mineral oil)
- Hydraulic oil system: mineral oil, synthetic oil, and various biodegradable oils
- Fuel system: diesel and other fuel oils
- Agricultural equipment: tractors, agricultural loaders, etc.
- Construction engineering equipment: forklifts, loaders, cranes, excavators, etc.
- Gearbox: manual gearbox, automatic gearbox, etc.

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Leak Detection | **LUYOR-6200/6300 Fluorescent Dye**

LUYOR-6200/6300 Water-Based Fluorescent Dye for Leak Detection is excellent for leak detection in all water system, including static or circulating systems such as boilers, heaters, pumps, sprinkler systems, storage tanks, pipes, and related connections. After adding LUYOR-6200/6300, the leakage points will emit bright fluorescence under high-intensity UV light and become easily detectable. Typical applications include flow testing, inspection of invisible marks, welds, seals, etc. LUYOR-6200/6300 Water-Based Fluorescent Dye is economical and affordable. The recommended dilution ratio is 1000:1~500:1.

Product Features

- Efficient: emits bright fluorescence under UV light, making leakage points clearly visible.
- Versatile: ideal for all water system, including static or circulating systems.
- Reliable: able to detect small leaks that were previously undetectable.
- Quick and easy to use with a simple three-step procedure.
- Economical: recommended ratio 1000:1~500:1
- OEM approved, used by major global manufacturers.
- LUYOR-6200 emits green fluorescence under UV light.
- LUYOR-6300 emits blue fluorescence under UV light.

Configurations

Model	Amount	Package
LUYOR-6200/6300-00030	30ml	Plastic bottle
LUYOR-6200/6300-00100	100ml	Plastic bottle
LUYOR-6200/6300-00500	500ml	Plastic bottle
LUYOR-6200/6300-18000	18L	Plastic barrel

Applications

- Add to water sources or suspected pollution sources for water flow tracking and pollution detection.
- Detect sewer pipeline penetration; locate sewer pipelines; check illegal connections; identify indirect cross-connections; check drainage pipes, sewer pipes and drainage ditches to ensure that the water is diverted to the correct channel and to analyze operating time.
- Leak detection of closed systems and cooling systems in steel companies.
- Research on penetration and industrial water pipeline systems.
- Detect the water pump system process of automobiles.
- Detect sewer leaks that may enter ponds, lakes, reservoirs, etc.

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