Fluorescent Leak Detection Products for HVAC/R Systems

ISO 9001:2008 CERTIFIED COMPANY

Residential Systems  Commercial Systems  Refrigeration Systems

View our “Eco-friendly”, full line catalog online at www.spectroline.com
**AR-GLO® Fluorescent AC&R Dyes**

All Spectroline® fluorescent dyes can remain safely in the system. This makes it fast and easy to pinpoint leaks, confirm repairs and perform future preventive maintenance checks. AR-GLO® AC&R dyes are the only dyes that give you all these benefits:

- **Universal (POE)** – Dyes are compatible with all refrigerants and lubricants
- **Lubricant-specific** – Dyes exactly match the lubricant in the system
- **Co-solvent free** – Dyes will not impair lubricant properties, which could lead to excessive wear or damage to system components
- **NSF Certified** – Registered to meet food-grade processing requirements for category codes HTX-2 and HX-2*

*Universal/POE dyes only

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**How It Works**

Just add a small amount of dye to the system and let it circulate. The dye/oil mixture escapes with the refrigerant wherever there is a leak and glows brightly when inspected with a high-intensity Spectroline® leak detection lamp.

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**Small to Medium Size Systems**

**EZ-Ject™ Multi-Dose Dye Injection System** *(Patented)*

Convenient and economical. Works in all systems, including high-pressure R-410A systems!

- Each prefilled, disposable EZ-Ject dye cartridge treats up to 2 gallons (7.6 L) of lubricant, 25 lbs (11.3 kg) of refrigerant or 12 tons of cooling. No pouring and no refrigerant required for injection.
- One calibrated cartridge provides exact dosing for multiple systems
- Easily overcomes system pressure. Inject dye with a turn of the handle.

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**GLO-STICK® Dye Capsules** *(Patented)*

Fast and easy servicing. Works in all systems, including high-pressure R-410A systems!

- Prefilled, single-dose, self-cleaning, disposable dye capsules eliminate measuring, pouring and messy spills
- Available in 4 sizes/concentrations to match the capacity of the system. Treats up to 2 gallons (7.6 L) of lubricant, 25 lbs (11.3 kg) of refrigerant or 12 tons of cooling.
- Inject dye while charging with refrigerant, or when connecting from the high side to the low side.
- Metering orifice prevents slugging of the compressor

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**Medium to Large Size Systems**

**BigEZ™ Multi-Dose Dye Injection System** *(Patented)*

Most economical for larger systems. Works in all systems, including high-pressure R-410A systems!

- Each prefilled, disposable 4 oz (118 ml) BigEZ dye cartridge treats up to 16 gallons (60.8 L) of lubricant, 400 lbs (180 kg) of refrigerant or 150 tons of cooling. No pouring and no refrigerant required for injection.
- One calibrated cartridge provides exact dosing for multiple systems
- Easily overcomes system pressure. Inject dye with a turn of the handle.

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See back cover for recommended dosages
Violet Light LED Leak Detection Flashlights and Kits

**Budget Friendly!**

**OPX-400CS**

**OPTIMAX™ 400** Economical, Cordless, Violet Light LED Leak Detection Flashlight

Yellow fluorescence-enhancing glasses not required for most applications!

• Provides optimal fluorescent dye response and contrast
• For use with universal/POE dyes only
• Power comparable to high-intensity 150-watt lamps
• Inspection range of 25 feet (7.6 m) or more
• 100,000-hour LED service life
• 5 hours of continuous inspection time
• Lightweight, compact design easily gets into tight, cramped spaces
• Powered by 3 “AAA” batteries
• Includes lanyard, holster and fluorescence-enhancing glasses

**OLX-400**

**OPTI-LUX™ 400** Rechargeable, Cordless, Violet Light LED Leak Detection Flashlight

Yellow fluorescence-enhancing glasses not required for most applications!

• Provides optimal fluorescent dye response and contrast
• For use with universal/POE dyes only
• Power comparable to high-intensity 150-watt lamps
• Inspection range of 25 feet (7.6 m) or more
• 100,000-hour LED service life
• 4 hours of continuous inspection time
• Lightweight, compact design easily gets into tight, cramped spaces
• Powered by one rechargeable lithium-ion battery (included)
• Includes smart battery charging cradle with AC and DC cord sets, lanyard and fluorescence-enhancing glasses

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**OPK-40EZ/E**

Complete EZ-Ject™ Kit

Features the OPX-400 OPTIMAX™ 400 economical, cordless, violet light LED leak detection flashlight

FOR SMALL TO MEDIUM SIZE AC&R SYSTEMS.

Versatile, multi-dose dye cartridges. Injector easily overcomes system pressure. Add fluorescent dye with system off or running!

Treats up to 50 lbs (22.7 kg) of refrigerant, 4 gallons (15 L) of lubricant, or 24 tons of cooling!

Kit contains:

• EZ-50 EZ-Ject™ dye injector assembly
• EZ-25 hose/coupler with check valve, low-loss and purge fittings
• (2) EZ-4/E 0.5 oz (14.8 ml) universal/POE dye cartridges
• (3) Drip plugs for hose/coupler
• 8 oz (237 ml) spray bottle GLO-AWAY™ dye cleaner
• Fluorescence-enhancing glasses and rugged carrying case

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**OLK-400EZ/E**

Complete EZ-Ject™ Kit

Features the OLX-400 OPTI-LUX™ 400 rechargeable, cordless, violet light LED leak detection flashlight

FOR SMALL TO MEDIUM SIZE AC&R SYSTEMS.

Versatile, multi-dose dye cartridges. Injector easily overcomes system pressure. Add fluorescent dye with system off or running!

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• (3) Drip plugs for hose/coupler
• 8 oz (237 ml) spray bottle GLO-AWAY™ dye cleaner
• Smart battery charging cradle with AC and DC cord sets
• Fluorescence-enhancing glasses and rugged carrying case

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**OPK-40GS/E**

Complete GLO-STICK® Kit

Features the OPX-400 OPTIMAX™ 400 economical, cordless, violet light LED leak detection flashlight

FOR SMALL TO MEDIUM SIZE AC&R SYSTEMS.

Convenient, mess-free, single-dose dye capsules. Add refrigerant and fluorescent dye in one simple step!

Treats up to 50 lbs (22.7 kg) of refrigerant, 4 gallons (15 L) of lubricant, or 24 tons of cooling!

Kit contains:

• (1) BV-50 bleed valve for attaching GLO-STICK® capsules to service hose
• (1) PC-0249 purge capsule
• EZ-25 hose/coupler with check valve, low-loss and purge fittings
• (1) GS-1/E universal/POE GLO-STICK® dye capsule
• (2) GS-2/E universal/POE GLO-STICK® dye capsules
• (1) GS-3/E universal/POE GLO-STICK® dye capsule
• 8 oz (237 ml) spray bottle GLO-AWAY™ dye cleaner
• Fluorescence-enhancing glasses and rugged carrying case

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**OLK-400BEZ/E**

Complete BigEZ™ Kit

Features the OLX-400 OPTI-LUX™ 400 rechargeable, cordless, violet light LED leak detection flashlight

FOR MEDIUM TO LARGE SIZE AC&R SYSTEMS.

Versatile, multi-dose dye cartridges. Injector easily overcomes system pressure. Add fluorescent dye with system off or running!

Treats up to 400 lbs (181 kg) of refrigerant, 16 gallons (60.8 L) of lubricant or 150 tons of cooling!

Kit contains:

• BEZ-50 BigEZ™ dye injector assembly
• BEZ-25 hose/coupler with check valve, low-loss and purge fittings
• (1) BEZ-4/E 4 oz (118 ml) universal/POE dye cartridge
• (3) Drip plugs for hose/coupler
• 8 oz (237 ml) spray bottle GLO-AWAY™ dye cleaner
• Smart battery charging cradle with AC and DC cord sets
• Fluorescence-enhancing glasses and rugged carrying case

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**OPX-400CS**

OPTIMAX™ 400 Economical, Cordless, Violet Light LED Leak Detection Flashlight

Yellow fluorescence-enhancing glasses not required for most applications!

• Provides optimal fluorescent dye response and contrast
• For use with universal/POE dyes only
• Power comparable to high-intensity 150-watt lamps
• Inspection range of 25 feet (7.6 m) or more
• 100,000-hour LED service life
• 5 hours of continuous inspection time
• Lightweight, compact design easily gets into tight, cramped spaces
• Powered by 3 “AAA” batteries
• Includes lanyard, holster and fluorescence-enhancing glasses

**OLX-400**

OPTI-LUX™ 400 Rechargeable, Cordless, Violet Light LED Leak Detection Flashlight

Yellow fluorescence-enhancing glasses not required for most applications!

• Provides optimal fluorescent dye response and contrast
• For use with universal/POE dyes only
• Power comparable to high-intensity 150-watt lamps
• Inspection range of 25 feet (7.6 m) or more
• 100,000-hour LED service life
• 4 hours of continuous inspection time
• Lightweight, compact design easily gets into tight, cramped spaces
• Powered by one rechargeable lithium-ion battery (included)
• Includes smart battery charging cradle with AC and DC cord sets, lanyard and fluorescence-enhancing glasses
Blue Light LED Leak Detection Flashlights and Kits

**OPX-500CS**
OPTIMAX Jr™ Ultra-Compact, Cordless, Blue Light LED Leak Detection Flashlight

*Perfect for tight spaces!*
- Power comparable to 75W lamps
- Inspection range of 6 feet (1.8 m) or more
- Compatible with all leak detection dyes
- 100,000-hour LED service life
- 5.5 hours of continuous inspection time
- Powered by 3 “AA” batteries
- Fluorescence-enhancing glasses (required)

Green “U” symbol indicates that flashlight works best with universal, “/E” polyol ester (POE) AC&R dyes
Red “CS” part number suffix denotes full-color, hanging clamshell packaging

**OPX-3000**
OPTIMAX™ 3000 Rechargeable, Cordless, Blue Light LED Leak Detection Flashlight

*15 times brighter than standard LED lights!*
- Power comparable to high-intensity 150W lamps
- Inspection range of 25 feet (7.6 m) or more
- Compatible with all leak detection dyes
- 100,000-hour LED service life
- 3 hours of continuous inspection time
- Powered by rechargeable NiMH battery (included)
- Smart AC and DC chargers
- Fluorescence-enhancing glasses (required)

Also available: OPK-300 OPTIMAX™ 3000 Lamp Kit
Features all of the above in a rugged carrying case

**OPK-50EZ/E**
Complete EZ-Ject™ Kit
Features the OPX-500CS OPTIMAX Jr™ ultra-compact, cordless, blue light LED leak detection flashlight

*FOR SMALL TO MEDIUM SIZE AC&R SYSTEMS, including high-pressure R-410A systems!*

Treats up to 50 lbs (22.7 kg) of refrigerant, 4 gallons (15 L) of lubricant, or 24 tons of cooling!

Kit contains:
- EZ-50 EZ-Ject™ dye injector assembly
- EZ-25 hose assembly with check valve, low-loss and purge fittings
- (2) EZ-4/E 0.5 oz (14.8 ml) universal/POE cartridges
- (3) Drip plugs for hose/coupler
- 8 oz (237 ml) spray bottle GLO-AWAY™ dye cleaner
- Fluorescence-enhancing glasses and rugged carrying case

Also available: OPK-300 OPTIMAX™ 3000 Lamp Kit
Features all of the above in a rugged carrying case

**OPK-300EZ/E**
Complete EZ-Ject™ Kit
Features the OPTIMAX™ 3000 rechargeable, cordless, blue light LED leak detection flashlight

*FOR SMALL TO MEDIUM SIZE AC&R SYSTEMS, including high-pressure R-410A systems!*

Treats up to 50 lbs (22.7 kg) of refrigerant, 4 gallons (15 L) of lubricant, or 24 tons of cooling!

Kit contains:
- EZ-50 EZ-Ject™ dye injector assembly
- EZ-25 hose assembly with check valve, low-loss and purge fittings
- (2) EZ-4/E 0.5 oz (14.8 ml) EZ-Ject™ universal/POE dye cartridges
- (3) Drip plugs for hose/coupler
- 8 oz (237 ml) spray bottle GLO-AWAY™ dye cleaner
- Smart AC and DC chargers
- Fluorescence-enhancing glasses and rugged carrying case

**OPK-50GS/E**
Complete GLO-STICK® Kit
Features the OPX-500CS OPTIMAX Jr™ ultra-compact, cordless, blue light LED leak detection flashlight

*FOR SMALL TO MEDIUM SIZE AC&R SYSTEMS, including high-pressure R-410A systems!*

Treats up to 50 lbs (22.7 kg) of refrigerant, 4 gallons (15 L) of lubricant, or 24 tons of cooling!

Kit contains:
- (1) BV-50 bleed valve for attaching GLO-STICK® capsule to service hose
- (1) PC-0249 purge capsule
- EZ-25 hose/coupler with check valve, low-loss and purge fittings
- (1) GS-1/E universal/POE GLO-STICK® dye capsule
- (2) GS-2/E universal/POE GLO-STICK® dye capsules
- (1) GS-3/E universal/POE GLO-STICK® dye capsule
- 8 oz (237 ml) spray bottle GLO-AWAY™ dye cleaner
- Fluorescence-enhancing glasses and rugged carrying case

**OPK-300BEZ/E**
Complete BigEZ™ Kit
Features the OPTIMAX™ 3000 rechargeable, cordless, blue light LED leak detection flashlight

*FOR MEDIUM TO LARGE SIZE AC&R SYSTEMS, including high-pressure R-410A systems!*

Treats up to 400 lbs (181 kg) of refrigerant, 16 gallons (60.8 L) of lubricant or 150 tons of cooling!

Kit contains:
- BEZ-50 BigEZ™ dye injector assembly
- BEZ-25 hose assembly with check valve, low-loss and purge fittings
- (1) BEZ-4/E 4 oz (118 ml) universal/POE dye cartridge
- (3) Drip plugs for hose/coupler
- 8 oz (237 ml) spray bottle GLO-AWAY™ dye cleaner
- Smart AC and DC chargers
- Fluorescence-enhancing glasses and rugged carrying case

Super Affordable!

Rechargeable!
Attractive, Full-Color Hanging Display Packaging

Cool Seal™ A/C Leak Sealer
Seals slow leaks as large as 0.020 inch (0.5 mm) in compressors, condensers, evaporators, O-rings and hoses—quickly and permanently. Non-polymer, oil-soluble formula is safe for AC&R system components and recovery equipment. Ideal for preventive maintenance!

**CS-100CS**
Cool Seal™ EZ-Ject™ A/C Leak Sealer Kit

- Works in all popular AC&R systems, including high-pressure R-410A systems
- An alternative to expensive parts replacement on older AC&R systems
- Meets ASHRAE 97 standard for chemical stability

Contains:
- EZ-50 EZ-Ject injector assembly
- CS-25 hose/coupler with check valve and purge fitting
- (2) CS-1 0.5 oz (14.8 ml) EZ-Ject cartridges prefilled with Cool Seal™ A/C leak sealer. Each cartridge treats up to 2 tons of cooling.

Cool Seal™ Cartridges
- **CS-1CS** 0.5 oz (14.8 ml) EZ-Ject™ cartridge
- **CS-2CS** 2 oz (50 ml) BigEZ™ cartridge. Works with BigEZ™ injector using CS-50 adapter and CS-35 hose/coupler. Full cartridge treats 6 to 12 tons of cooling.

AB-100CS
ACID-BUSTER™ Injection Kit
Acid Scavenging Solution — prevents compressor burnout!

Contains:
- EZ-50 EZ-Ject injector assembly
- CS-25 hose assembly with check valve and ¼ inch flare low-loss fitting
- (2) AB-5 0.5 oz (14.8 ml) EZ-Ject cartridges prefilled with ACID-BUSTER acid scavenging solution

Also available: **AB-400CS** ACID-BUSTER™ Injection Kit. Features BEZ-50 BigEZ injector assembly, BEZ-25 hose assembly with check valve and ¼ inch flare low-loss fitting, and (1) 4 oz (118 ml) AB-4 BigEZ cartridge prefilled with ACID-BUSTER acid scavenging solution.

EZ-100/ECS
Universal Dye Injection Kit
For all AC&R systems, including high-pressure R-410A systems!
Compatible with Mineral Oil, Polyol Ester, PVE and Alkyl Benzene Lubricants
Treats up to 50 lbs (22.7 kg) of refrigerant, 4 gallons (15 L) of lubricant, or 24 tons of cooling!

Contains:
- EZ-50 EZ-Ject dye injector assembly
- EZ-25 hose assembly with check valve and ¼ inch flare low-loss fitting
- (2) EZ-4/E 0.5 oz (14.8 ml) EZ-Ject universal/POE dye cartridges
- Service labels

EZ-Ject™ Dye Cartridges
- **EZ-4/ECS** (Universal/POE)
  - **GS-1/ECS** 0.5 oz (14.8 ml) cartridge
  - **GS-2/ECS** 2 oz (50 ml) cartridge
  - **GS-3/ECS** 4 oz (118 ml) cartridge

BEZ-400/ECS
Universal Dye Injection Kit
For all AC&R systems, including high-pressure R-410A systems!
Compatible with Mineral Oil, Polyol Ester, PVE and Alkyl Benzene Lubricants
Treats up to 400 lbs (181 kg) of refrigerant, 16 gallons (60.8 L) of lubricant, or 150 tons of cooling!

Contains:
- BEZ-50 dye injector assembly
- BEZ-25 hose assembly with check valve and 1/4 inch flare low-loss fitting
- (1) 4 oz (118 ml) BEZ-4/E universal/POE dye cartridge
- Service labels

BigEZ™ Dye Cartridges
- **BEZ-4/ECS** (Universal/POE)
  - **BEZ-4/ECS** 0.5 oz (14.8 ml) cartridge
  - **BEZ-4/ECS** 2 oz (50 ml) cartridge

GLO-STICK® Dye Capsules

- **GS-1/ECS** (Universal/POE)
- **GS-2/ECS** (Universal/POE)
- **GS-3/ECS** (Universal/POE)

Note: Available in other sizes/formulations.

TES-31
Tamper-Evident Straps
Protect AC&R systems against refrigerant cross-contamination and unqualified repairs. Warranty your work and ensure return business.

- Fast and easy to use
- No special tools required
- Packaged in convenient zip-lock storage bag
- Comes complete with 10 tamper-proof tie straps with unique serial numbers and matching labels

Red “CS” part number suffix denotes full-color, hanging clamshell packaging.
Dosage Charts

GLO-STICK® A/C Dye Capsules

GLO-STICK® dye capsules require the use of two BV-50 bleed valves (for use on 1/4 inch flare hose fittings)

<table>
<thead>
<tr>
<th>SYSTEM TYPE</th>
<th>Small systems, e.g., ice machines, window A/C units and refrigerators</th>
<th>Residential systems</th>
<th>Light commercial and large residential systems</th>
<th>Commercial and light industrial, including all split systems</th>
</tr>
</thead>
<tbody>
<tr>
<td>Refrigeration Oil Charge</td>
<td>Up to 15 fl oz (445 ml)</td>
<td>15.1 fl oz to 1.6 qt (445 ml to 1.5 L)</td>
<td>1.7 to 3.2 qt (1.6 to 3.0 L)</td>
<td>3.3 qt to 2 gal (3.1 to 7.6 L)</td>
</tr>
<tr>
<td>Refrigerant Charge</td>
<td>Up to 2.9 lb (1.3 kg)</td>
<td>3 to 4.9 lb (1.4 to 2.2 kg)</td>
<td>5 to 9.9 lb (2.3 to 4.5 kg)</td>
<td>10 to 25 lb (4.6 to 11.3 kg)</td>
</tr>
<tr>
<td>Tons of Cooling</td>
<td>Up to 1 ton</td>
<td>1.1 to 2 tons</td>
<td>2.1 to 6 tons</td>
<td>6.1 to 12 tons</td>
</tr>
<tr>
<td>Horsepower</td>
<td>Up to 1 Hp</td>
<td>1.1 to 4 Hp</td>
<td>4.1 to 10 Hp</td>
<td>10.1 to 25 Hp</td>
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</tbody>
</table>

LUBRICANT TYPE

<table>
<thead>
<tr>
<th></th>
<th>Polyol Ester (Universal/POE)</th>
<th>Mineral Oil</th>
<th>PVE</th>
</tr>
</thead>
<tbody>
<tr>
<td>GS-1/POE</td>
<td>GS-1/ECS</td>
<td>GS-1CS</td>
<td>GS-1/PVE</td>
</tr>
<tr>
<td>GS-3/POE</td>
<td>GS-3/ECS</td>
<td>GS-3CS</td>
<td>GS-3/PVE</td>
</tr>
</tbody>
</table>

Note: All universal/POE dye cartridges and capsules are NSF Certified and registered to meet food-grade processing requirements for category codes HTX-2 and HX-2.

ACID-BUSTER™ Acid Scavenging Solution

<table>
<thead>
<tr>
<th>Product Number</th>
<th>Injector</th>
<th>Cartridge Size</th>
<th>Dosage ①</th>
</tr>
</thead>
<tbody>
<tr>
<td>AB-5CS</td>
<td>EZ-Ject™</td>
<td>0.5 oz (14.8 ml)</td>
<td>4 lines, 1/8 oz (3.7 ml) per 8 oz (237 ml) of refrigerant oil. One cartridge treats up to 1 qt (946 ml) of oil.</td>
</tr>
<tr>
<td>AB-4CS</td>
<td>BigEZ™</td>
<td>4 oz (118 ml)</td>
<td>1 line, 1/8 oz (3.7 ml) per 8 oz (237 ml) of refrigerant oil. One cartridge treats up to 2 gal (7.6 L) of oil.</td>
</tr>
</tbody>
</table>

① On severely acidic systems, double the dosage shown.