

# ri-scope<sup>®</sup> LED

high performance for life



## ri-scope® LED PREMIUM HAND HELD LED DIAGNOSTIC INSTRUMENTS.

Consistent light output of white and bright LED over service life of battery for more efficient diagnosis. The new LED / Li-ion technology resulting in more reliable instruments due to significantly longer service life of batteries and LEDs.

### greenefficiency

- More efficient diagnosis by natural LED.
- Low maintenance cost thanks to long LED and battery service lives.



### High-Performance LED illumination – bright light with a nearly unlimited lifetime!

- Available for all **ri-scope® L** instruments and dermatoscopes, except retinoscopes.
- Maintenance-free High-Performance LED technology.
- CRI > 90, colour temperature 4.000 Kelvin.
- Lifetime 100.000 hours compared to 20-30 hours of halogen / xenon lamps.

### Lithium-Ion batteries – light-weight and durable .

- 50 hours operational lifecycle of LED with fully charged Li-Ion battery.
- Rechargeable battery lifetime: up to 1.200 charging cycles.

### rheotronic® – electronic light intensity adjustment for LEDs and light bulbs

- 100% light output after short switch activation.
- Continuously variable light adjustment.
- Automatic safety shut-down after 180 seconds.

### Renowned high performance optics

#### Otoscopies

- Glass optics with high depth of focus and precise 3-times magnification up to the image margin.
- Reflection minimized, consistent illumination.
- Fiberoptics provide highest light efficiency.

#### Ophthalmoscopes

- Dust-proof.
- Aspherical condenser lens.
- Coaxial observational and illuminational light beams .
- Reflection-reduced view even with small pupils.

# ri-scope® LED

## LIGHT AND PERFORMANCE LIKE NEVER BEFORE



### Lithium-ion battery – The power plus.

Memory effect and self-discharge are no match: the lightweight lithium-ion battery used in the **ri-scope® L** has an unsurpassed lifetime – with higher loading capacity and sustained high-power performance, even after well over 1.000 charge cycles.



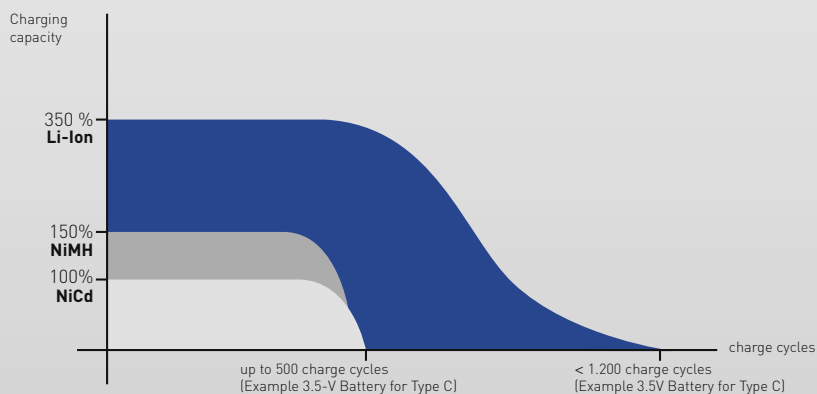
### LED technology – performance for life.

#### Next Generation LED Illumination – Performance for life.

Available in **ri-scope® L** instruments and **ri-former®** modular wall stations.

Nearly unlimited lifetime with the highest luminosity: these advantages make the LED technology used with the **ri-scope® L** so unique. Moreover, the lamp inside the **ri-scope® L** never gets hot, provides true-colour and even illumination of the area under examination and is practically guaranteed never to fail, in contrast to conventional halogen or xenon lamps.

- Maintenance-free High-Performance LED technology - low running cost.
- CRI > 90, colour temperature 4.000 Kelvin - excellent colour rendering close to natural daylight conditions for more efficient diagnosis.
- LED's aligned with optical systems in instrument heads - homogenous light distribution across the field of view without reflections or shadows.
- Designed for optimal heat dissipation - longer lifetime and brilliant illumination over the entire lifespan of the LED (100.000 hrs).
- High energy efficiency - three-times longer operation time than with conventional XL illumination.

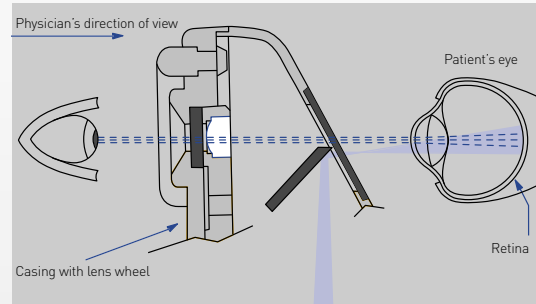




## ri-scope® L OPHTHALMOSCOPES PRODUCT RANGE

### Optical path

Corneal and iris reflexes are avoided by separation of the parallel observation and illumination beams (Gull strand's principle). The illuminated retinal area is fully visible – even with narrow pupils. Optimum conditions are achieved for ophthalmological examinations.



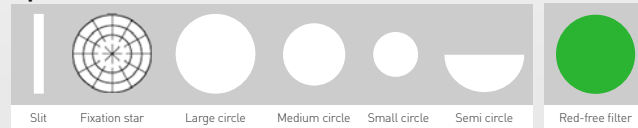
### Dioptre disc

Corrective lenses L1/L2 Corrective lenses L3

D+ 1-10 | 12 | 15 | 20 | 40  
D- 1-10 | 15 | 20 | 25 | 30 | 35

D+ 1- 45 in single steps  
D- 1- 44 in single steps

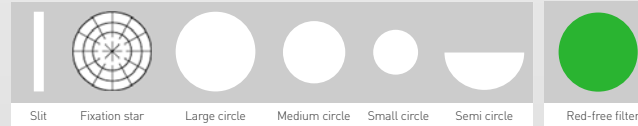
### Apertures L1



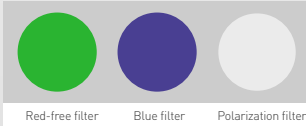
### Filters



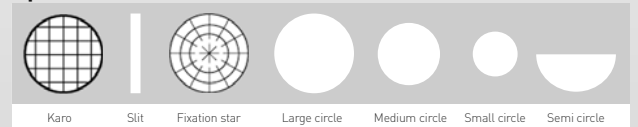
### Apertures L2



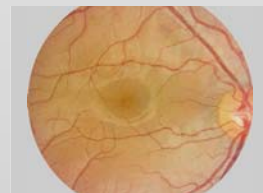
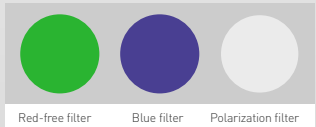
### Filters



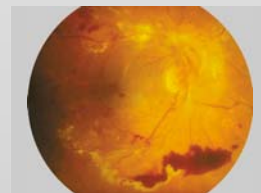
### Apertures L3



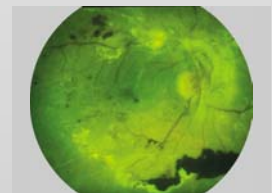
### Filters



Healthy fundus



Pathological fundus



Fundus with red free filter

# ri-scope® L OPHTHALMOSCOPES

**Premium-Class Direct Ophthalmoscope with renowned high-performance optics and LED / Li-Ion technology.**

## ri-scope® L1

**The inexpensive basic model with all the important basic functions.**

without anti-theft device  
XL 2.5 V **No. 10568**  
XL 3.5 V **No. 10569**  
LED 3.5 V **No. 10569-203**

- Dioptre wheel with 29 corrective lenses Plus 1-10, 12, 15, 20, 40  
Minus 1-10, 15, 20, 25, 30, 35
- Easy-to-operate aperture hand-wheel with semi-circle, Small/medium/large circle fixation star, slit and red-free filter with contrast-enhancing effect.
- Includes filter wheel engageable for all apertures with symbol display, red-free filter.
- Optimized high-performance optics with aspherical condenser lens.
- Parallel beam path.
- Dust-proof.
- Large selection of power sources: handy and stable handles, practical chargers and well-conceived diagnostic stations.

with anti-theft device  
XL 3.5 V **No. 10569-301**  
LED 3.5 V **No. 10594-301**

## ri-scope® L2

**The enhanced basic model with separately engageable red-free, blue and polarization filters for each aperture.**

without anti-theft device  
XL 2.5 V **No. 10570**  
XL 3.5 V **No. 10571**  
LED 3.5 V **No. 10571-203**

- Dioptre wheel with 29 corrective lenses Plus 1-10, 12, 15, 20, 40  
Minus 1-10, 15, 20, 25, 30, 35
- Easy-to-operate aperture hand-wheel with semi-circle, small/medium/large circle, fixation star, and slit.
- Includes filter wheel engageable for all apertures with symbol display, red-free filter, blue filter and polarization filter.
- Optimized high-performance optics with aspherical condenser lens.
- Parallel beam path.
- Dust-proof.
- Large selection of power sources: handy and stable handles, practical chargers and well-conceived diagnostic stations

with anti-theft device  
XL 3.5 V **No. 10571-301**  
LED 3.5 V **No. 10595-301**

## ri-scope® L3

**The maximized model with additional focussing device and 89 single-step dioptre values.**

without anti-theft device  
XL 2.5 V **No. 10572**  
XL 3.5 V **No. 10573**  
LED 3.5 V **No. 10573-203**

- Corrective lenses for 89 dioptre values Plus 1-45 in single steps, Minus 1-44 in single steps.
- Easy-to-operate aperture hand-wheel with semi-circle, small/medium/large circle, fixation star, slit and grid.
- Includes filter wheel engageable for all apertures with symbol display, red-free filter, blue filter and polarization filter.
- Focussing device with zero retention force for the quick correction of ametropias.
- Dust-proof.
- Large selection of power sources: handy and stable handles, practical chargers and well-conceived diagnostic stations.

with anti-theft device  
XL 3.5 V **No. 10573-301**  
LED 3.5 V **No. 10596-301**

**ri-scope® L**  
OPHTHALMOSCOPES

# ri-scope® RETINOSCOPES PRODUCT RANGE

## ri-scope® retinoscope (skiascope)

Slit  
without anti-theft device  
HL 2.5 V **No. 10543**  
XL 3.5 V **No. 10544**

with anti-theft device  
XL 3.5 V **No. 10544-301**

Spot  
without anti-theft device  
HL 2.5 V **No. 10545**  
XL 3.5 V **No. 10546**

with anti-theft device  
XL 3.5 V **No. 10546-301**

- The **ri-scope®** retinoscope (skiascope) measures the refractive power of the eye. Refractive flaws, such as near- and far-sightedness, as well as astigmatism can be detected and diagnosed.

- With XL 3.5 V xenon lamp or HL 2.5 V halogen lamp.

- Two models are available:

- The spot-light retinoscope projects a circular light beam.

- The slit-light retinoscope with a light beam in the form of a line, simplifies detection and diagnosis of astigmatic refractive flaws.

The reflex in the form of a line is moved vertically to the axis across the pupils of the patient with a slight oscillating movement. A shadow moves in the same or opposite direction.

Co-movement (plus lines): The patient is far-sighted.

Counter-movement (minus lines): The patient is nearsighted.

- Easy to operate with knurled thumb screw. The line and spot image can be focussed with the controls and turned 360°, angle read-out displayed on the integrated scale.

- Holder for hanging and placement of the fixation card into position for dynamic retinoscopy.

- Delivered with two fixation cards. The patient's eye can adjust optimally to the distance to the retinoscope.

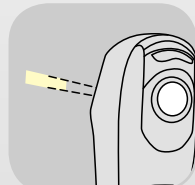
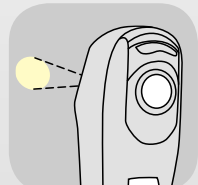
- Integrated eyeglass protection.

- Bayonet fitting for quick and secure attachment to the handle.

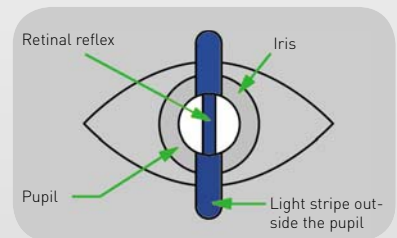
- Dust-proof, very sturdy and light casing made of impact-resistant ABS plastic.

- Bulbs can be quickly replaced at the base of the instrument head.

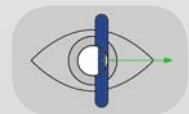
- Large selection of power sources: handy and stable handles, practical chargers and well-conceived diagnostic stations.



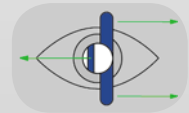
The **ri-scope®** retinoscope (skiascope) is available with circular light beam or light beam in the form of a line.



Co-movement  
Far-sightedness



Counter- movement  
Near-sightedness



Line outside the  
axis  
Astigmatism



The slit and spot image can be turned 360° with the knurled thumb screw. The respective angle read-out is displayed directly on the scale.



The fixation cards may be placed on the holder and be attached.



**ri-scope® L**  
RETINOSCOPE

# ri-scope® LAMPS

**Riester** LED's, XL xenon and HL halogen lamps bring more light into the diagnosis. They always ensure optimal illumination of the area under examination. The latest technology provides illumination that is similar to daylight.

## XL/HL 2.5 V lamps

### XL 2.5 V xenon lamp

For **ri-scope**® Otoscope L1  
Pack contains 6 units

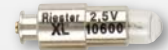
**No.10489**



### XL 2.5 V xenon lamp

For **ri-scope**® F.O. OtoscopeL2/L3,  
Light conductor, nasal speculum and tongue blade  
holder. Pack contains 6 units

**No.10600**



### HL 2.5 V halogen lamp

For **ri-scope**® operation otoscope human  
Pack contains 6 units

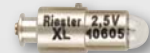
**No.10602**



### XL 2.5 V xenon lamp

For **ri-scope**® ophthalmoscope L1/L2/L3 and  
**ri-derma**. Pack contains 6 units

**No.10605**



### HL 2.5 V halogen lamp

For **ri-scope**® retinoscope slit lamp  
Pack contains 6 units

**No.10615**



### HL 2.5 V halogen lamp

For **ri-scope**® retinoscope spot lamp  
Pack contains 6 units

**No.10620**



## 2.5 V / 3.5 V LED / XL 3.5 V Xenon Lamps

### LED 2.5 V

For **ri-scope**® otoscope L2/L3/, **ri-derma**  
Pack contains 1 unit

No.10626



### LED 2.5 V

For **ri-scope**® ophthalmoscope L1/L2/L3  
Pack contains 1 unit

No.10624



### LED 3.5 V

For **ri-scope**® ophthalmoscope L1/L2/L3  
Pack contains 1 unit

No.10627



### LED 3.5 V

For **ri-scope**® otoscope L2/L3, **ri-derma**,  
Light conductor, nasal speculum and tongue blade  
holder. Pack contains 1 unit

No.10625



### XL 3.5 V xenon lamp

For **ri-scope**® otoscope L1  
Pack contains 6 units

No.10487



### XL 3.5 V xenon lamp

For **ri-scope**® F.O. otoscope L2/L3,  
**ri-derma**, Light conductor, nasal speculum  
and tongue blade holder. Pack contains 6 units

No.10607



### XL 3.5 V xenon lamp

For **ri-scope**® ophthalmoscope L1/L2/L3,  
**ri-derma**. Pack contains 6 units

No.10608



### XL 3.5 V xenon lamp

For **ri-scope**® operation otoscope human  
Pack contains 6 units

No.10609



### XL 3.5 V xenon lamp

For **ri-scope**® retinoscope slit lamp  
Pack contains 6 units

No.10610



### XL 3.5 V xenon lamp

For **ri-scope**® retinoscope spot lamp  
Pack contains 6 units

No.10611





## ri-scope® POWER SOURCES

The **Riester ri-scope®** line includes a large selection of high-quality and long-lasting power sources. The 230-V or 120-V instruments shown here are standard versions. If you require other voltages or specialized plugs for your country, we request that you make this information available to us when inquiring or ordering.

### Handles

Handy **Riester**-handles with continuously adjustable **rheotronic®** for regulating light intensity are the basis for a safe examination. The well-conceived ergonomically plug and battery handles guarantee comfortable handling.

- Solid metal handles, black chrome-plated.
- Practical bayonet fitting for quickly switching instrument heads.
- Batteries are easy to replace at the base of the handle.
- For 3.5 V and 2.5 V **ri-scope®** and **ri-derma** instrument heads.

for alkaline battery,  
for Li-ion battery  
**No. 10670**

### Battery handles Type C

- Handle diameter: 28 mm.
- Easy to charge with new plug-in charger or **ri-charger®L**
- With **rheotronic®**
- Without batteries

#### Batteries

Alkaline battery Type C (2 pieces)	<b>No. 10686</b>	2.5 V
Li-ion battery <b>ri-accu® L</b>	<b>No. 10691</b>	3.5 V
Li-ion battery <b>ri-accu® L</b> for plug-in charger	<b>No. 10694</b>	3.5 V



for alkaline battery,  
for Li-ion battery  
**No. 10642**

### Battery handles Type AA

- Handle diameter: 19 mm
- Easy to charge in the **ri-charger®L** base
- With **rheotronic®**
- Without batteries

#### Batteries

Alkaline battery Type C (4 pieces)	<b>No. 10685</b>	2.5 V
Li-ion battery <b>ri-accu® L</b>	<b>No. 10690</b>	3.5 V



# ri-scope® L

HANDLES

## CHARGING BASES

**ri-charger®L** is the perfect charging base for all rechargeable handles, Type C/AA.

- Table or wall model
- Practical storage container for two replacement lamps and ear specula.
- Charging status displayed on the device:  
Yellow: charging in progress.  
Green: charging completed.

**No. 10705** 230 V

**No. 10706** 120 V

**ri-charger®L**

complete, with wall holder

- for all rechargeable handles with Li-Ion batteries 3.5 V (10690+10691)



### Plug-in charger

- Plug-in charger for 3.5 V Li-ion rechargeable batteries .
- Wide-range plug-in charger (120 V – 240 V).
- Large selection of different power plugs on request.
- Also available with 3.5 V **ri-accu® L** rechargeable Li-ion battery included.
- Latest charging technology (less than 3 hours charging time).
- Up to 9 hrs operating time (LED) when fully charged.

**No. 10707**

Plug-in charger FOR Li-Ion rech. battery 3.5 V **ri-accu® L** (10694)  
for battery handle type C, with EU-plug

**No. 10708**

Plug-in charger WITH Li-Ion rech. battery 3.5 V **ri-accu® L** (10694)  
for battery handle type C, with EU-plug



**ri-scope® L**  
CHARGING BASES

### ri-scope® L Ophthalmoscopes

- Deluxe hard case with safety catch.
- Separate magnifying glass with 5-fold magnification.
- One spare lamp, for Xenon sets only.



#### Battery handle, Type AA with rheotronic®

For 2 alkaline batteries Type AA  
**No. 3727** L1 XL 2.5 V

For **ri-accu®** L  
**No. 3728-550** L1 XL 3.5 V  
**No. 3814-203** L2 LED 3.5 V  
**No. 3815-203** L3 LED 3.5 V

#### Battery handle, Type C with rheotronic®

For 2 alkaline batteries Type C  
**No. 3722** L1 XL 2.5 V  
**No. 3723** L2 XL 2.5 V

For **ri-accu®** L  
**No. 3724-550** L1 XL 3.5 V  
**No. 3811-203** L2 LED 3.5 V  
**No. 3812-203** L3 LED 3.5 V

### ri-scope® L otoscope/ophthalmoscope

- Tubes with 4 black, re-usable ear specula sizes 2 - 5 mm and each with 3 black 2.5-mm (L1/L2) or 2-mm (L3) and 4-mm disposable ear specula.
- Operation lens with 4-fold magnification available only with L3.
- Deluxe hard case with safety catch.
- Two spare lamps, for Xenon sets only.



#### Battery handle, Type AA with rheotronic®

For 2 alkaline batteries Type AA  
**No. 3747**  
L2 Oto./L1 Oph. XL 2.5 V  
**No. 3748-203**  
L2 Oto./L1 Oph. LED 2.5 V

For **ri-accu®** L  
**No. 3818-203**  
L2 Oto./L1 Oph. LED 3.5 V

#### Battery handle, Type C with rheotronic®

For 2 alkaline batteries Type C  
**No. 3743**  
L1 XL 2.5 V  
**No. 3745**  
L3 Oto./L2 Oph. XL 2.5 V  
**No. 3746-203**  
L3 Oto./L2 Oph. LED 2.5 V

For **ri-accu®** L  
**No. 3744-550**  
L1 XL 3.5 V  
**No. 3817-203**  
L3 Oto./L2 Oph. LED 3.5 V

ri-scope® L

SETS

### ri-scope® slit/spot retinoscope

- Two fixation cards for dynamic retinoscopy.
- Deluxe hard case with safety catch.
- One spare lamp.



### Battery handle, Type C with rheotronic®

For 2 alkaline batteries Type C

**No. 3410** Slit HL 2.5 V

**No. 3430** Spot HL 2.5 V

For ri-accu® L

**No. 3782-550** Slit XL 3.5 V

**No. 3787-550** Spot XL 3.5 V

**ri-vision with spot retinoscope**

**ri-scope®** Retinoscope with spot lamp and ophthalmoscope L2

- Two fixation cards for dynamic retinoscopy.
- Two spare lamps.



**Battery handle, Type C with rheotronic®**

For 2 alkaline batteries Type C

**No. 3799** HL 2.5 V

For **ri-accu®** L

**No. 3801-550** XL 3.5 V

**ri-scope®** L

SETS

