

**Once you've  
TRIED  
it, you'll never  
WANT  
to do  
without it  
AGAIN.**



Various magnifications (from 2.3x to 6x), working distances, wearing options (unique S-FRAME, Lightweight headband and Professional L headband) and LoupeLight2 illumination systems are available. They provide homogeneous, reflex-free illumination even in deep cavities. State-of-the-art LED<sup>HO</sup> technology and design!

HEINE binocular loupes are used in many disciplines: e.g. general medicine, dermatology, surgery, cosmetic surgery, neurosurgery, ENT, ophthalmology, veterinary medicine, dentistry etc.

### Definitions:

#### ∴ Working distance (x)

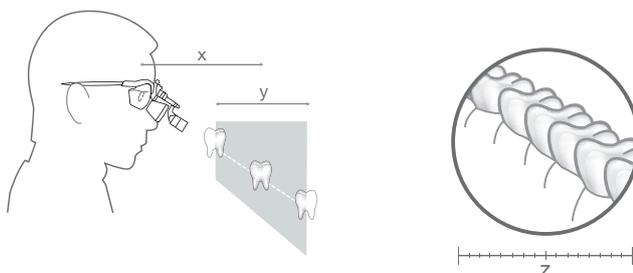
The distance, at which the optics of a loupe are sharply-focused.

#### ∴ Depth of field (y)

The range over which the image remains sharply-focused.

#### ∴ Field of view (z)

The area that can be seen under magnification at the nominal working distance.



More information can be found on [www.heine.com](http://www.heine.com)

### How to choose the correct loupe:

#### ∴ Choose your magnification

Choose the lowest magnification that meets your needs. The lower the magnification, the larger the field of view and the easier the loupe will be to use.

#### ∴ Choose your optics

**HR:** High resolution achromatic optics with excellent optical qualities.

**HRP:** High resolution prismatic optics with excellent optical qualities for 3.5x magnification and higher.

**C:** Economy.

#### ∴ Choose your working distance

This is an individual choice depending on the examiner's size and working position. The longer the working distance, the bigger the field of view.

#### ∴ Choose your mounting option

Spectacle frame or headband.

#### ∴ Add illumination

Coaxial bright light is especially-important when using magnification.

HEINE binocular loupes



	HR	HRP	C
Magnification / working distance	<ul style="list-style-type: none"> <li>• 2.5x/340 mm</li> <li>• 2.5x/420 mm</li> <li>• 2.5x/520 mm</li> </ul>	<ul style="list-style-type: none"> <li>• 3.5x/420 mm</li> <li>• 4x/340 mm</li> <li>• 6x/340 mm</li> </ul>	<ul style="list-style-type: none"> <li>• 2.3x/340 mm</li> <li>• 2.3x/450 mm</li> </ul>
Mounting options	<ul style="list-style-type: none"> <li>• S-FRAME spectacle frame [01]</li> <li>• Professional L headband [02]</li> </ul>	<ul style="list-style-type: none"> <li>• S-FRAME spectacle frame [01]</li> <li>• Professional L headband [02]</li> </ul>	<ul style="list-style-type: none"> <li>• Lightweight headband [04]</li> <li>• Simple metal frame [05]</li> </ul>
Further articles	<ul style="list-style-type: none"> <li>• Protective lenses</li> <li>• Close-up lenses (To reduce the working distance from 350 mm to 250 mm)</li> <li>• LoupeLight2 [03] (Pages 113 / 114)</li> </ul>	<ul style="list-style-type: none"> <li>• Protective lenses</li> <li>• LoupeLight2 [03] (Pages 113 / 114)</li> </ul>	<ul style="list-style-type: none"> <li>• Protective lenses</li> </ul>
Features	<ul style="list-style-type: none"> <li>• i-View function*</li> <li>• Modular</li> <li>• Water-resistant</li> <li>• Achromatic optics</li> <li>• Optional prescription correction</li> </ul>	<ul style="list-style-type: none"> <li>• i-View function*</li> <li>• Modular</li> <li>• Water-resistant</li> <li>• Achromatic optics</li> <li>• Optional prescription correction</li> </ul>	<p>–</p>
Catalogue page	106 – 107	108 – 109	110

\*i-View function: Provides any angle of view and flips up the optics independently of the illumination beam.



[01]



[02]



[03]



[04]



[05]



## HEINE HR 2.5x high resolution binocular loupes

### With i-View loupe mount



#### HR 2.5x optics with i-View

- ∴ **Achromatic optics** for crisp, bright images with colour-correction.
- ∴ **Lightweight** (51 g).
- ∴ **Water-resistant.**
- ∴ **Independent adjustment** of left and right optics for perfect PD adjustment.
- ∴ **High magnification** with a large field of view and excellent depth of field.
- ∴ **i-View loupe mount** provides any angle of view and flips up the optics independently of the optional LoupeLight2.

#### HR 2.5x specifications

Working distance in mm	340	420	520
Field of view in mm	90	130	180
Depth of field in mm	110	180	260



Optional clip-in correction frame

#### Mounting options:

#### ∴ HEINE S-FRAME

- ∴ **Maximum comfort** with a modern, ergonomic design.
- ∴ **Malleable temples and nose pad** can be customized to fit any face perfectly.
- ∴ **Innovative materials** – Carbon-Kynetium reduces weight (24 g).
- ∴ **Tough polycarbonate protective lenses.**
- ∴ **Optional clip-in correction frame** for prescription lenses.



Professional L headband with S-GUARD

#### ∴ HEINE Professional L headband with S-GUARD

- ∴ **S-GUARD splash protection.**
- ∴ **Ergonomic nose pad** for comfort during long procedures.
- ∴ **Fully-adjustable for height and width to fit any head.**
- ∴ **Hygienic and comfortable leather cushions.**
- ∴ **Optional clip-in correction frame** for prescription lenses.



Professional L headband without S-GUARD

#### ∴ HEINE Professional L headband without S-GUARD

- ∴ **Ideal for spectacle-wearers in combination with their own spectacles.**
- ∴ **Fully-adjustable for height and width to fit any head.**
- ∴ **Hygienic and comfortable leather cushions.**

HEINE HR 2.5x high resolution binocular loupes

With i-View loupe mount



Set A



Set B  
with S-GUARD



Set C  
without  
S-GUARD

HR 2.5x sets with i-View loupe mount

Working distance in mm	340	420	520
<b>Set A:</b> HR 2.5x optics with i-View on S-FRAME protective lenses 2 sterilisable swivel levers retaining cord cleaning cloth carrying case	C-000.32.355	C-000.32.356	C-000.32.567
<b>Set B:</b> HR 2.5x optics with i-View on Professional L headband S-GUARD splash protection protective lenses 2 sterilisable swivel levers cleaning cloth	C-000.32.365	C-000.32.366	C-000.32.367
<b>Set C (without S-GUARD):</b> HR 2.5x optics with i-View on Professional L headband protective lenses 2 sterilisable swivel levers	C-000.32.865	C-000.32.866	C-000.32.867

For details of accessories and LoupeLight2 see pages 112 – 114.



## HEINE HRP high resolution prismatic binocular loupes

### With i-View loupe mount



#### HRP optics with i-View

- ∴ **Achromatic optics** for crisp, bright images from edge-to-edge.
- ∴ **Lightweight** (85g).
- ∴ **Water-resistant.**
- ∴ **Independent adjustment** of left and right optics for perfect PD adjustment.
- ∴ **Highest magnification:** Choice of 3.5x, 4x and 6x.
- ∴ **i-View loupe mount** provides any angle of view and flips up the optics independently of the optional LoupeLight2.

#### HRP specifications

Working distance in mm	HRP 3.5x/420	HRP 4x/340	HRP 6x/340
Field of view in mm	65	50	40
Depth of field in mm	60	40	30

#### Mounting options:



#### ∴ HEINE S-FRAME

- ∴ **Maximum comfort** with a modern, ergonomic design.
- ∴ **Malleable temples and nose pad** can be customized to fit any face perfectly.
- ∴ **Innovative materials** – Carbon-Kynetium reduces weight (24g).
- ∴ **Tough polycarbonate protective lenses.**
- ∴ **Optional clip-in correction frame** for prescription lenses.



#### ∴ HEINE Professional L headband with S-GUARD

- ∴ **S-GUARD splash protection.**
- ∴ **Ergonomic nose pad** for comfort during long procedures.
- ∴ **Fully-adjustable for height and width to fit any head.**
- ∴ **Hygienic and comfortable leather cushions.**
- ∴ **Optional clip-in correction frame** for prescription lenses.



#### HEINE Professional L headband without S-GUARD

- ∴ **Ideal for spectacle-wearers in combination with their own spectacles.**
- ∴ **Fully-adjustable for height and width to fit any head.**
- ∴ **Hygienic and comfortable leather cushions.**

HEINE HRP high resolution prismatic binocular loupes

With i-View loupe mount



Set A



Set B  
with S-GUARD



Set C  
without  
S-GUARD

HRP sets with i-View loupe mount

Working distance in mm	HRP 3.5x/420	HRP 4x/340	HRP 6x/340
<b>Set A:</b> HRP optics with i-View on S-FRAME protective lenses 2 sterilisable swivel levers retaining cord cleaning cloth carrying case	C-000.32.430	C-000.32.431	C-000.32.432
<b>Set B:</b> HRP optics with i-View on Professional L headband S-GUARD splash protection protective lenses 2 sterilisable swivel levers cleaning cloth	C-000.32.440	C-000.32.441	C-000.32.442
<b>Set C (without S-GUARD):</b> HRP optics with i-View on Professional L headband protective lenses 2 sterilisable swivel levers	C-000.32.840	C-000.32.841	C-000.32.842

For details of accessories and LoupeLight2 see pages 112 – 114.



## HEINE C2.3 binocular loupes

### The cost-effective all-purpose loupe

Ideal for dental laboratories and general medical examination.



C2.3

- ∴ **Crisp, clear images.** Multi-coated, scratch-resistant silica glass lenses produce crisp, clear images.
- ∴ **Flexibility for precise adjustment.** Independently adjustable PD controls ensure precise alignment of the optics.
- ∴ **Super lightweight and comfortable – only 46g.** Flexible coil temples wrap-around to fit the user's anatomy securely and comfortably. Spring-loaded temples will adjust to the user's anatomy. Lightweight metal frame.
- ∴ **The ideal all-purpose loupe.** The feather-light weight, low-profile design and low cost of the C2.3 loupe make it the ideal all-purpose loupe.
- ∴ **Working distance.** 340mm or 450mm (13 or 18 inches).
- ∴ Also available as C2.3K on Lightweight headband.



C2.3K

Specifications	C2.3x/340 mm	C2.3x/450 mm
Magnification	2.3x	2.3x
Working distance	340 mm	450 mm
Field of view Ø	110 mm	130 mm
Weight	46 g	46 g
Depth of field	120 mm	190 mm

User's refractive error	Effective working distance C2.3x/340 mm	Effective working distance C2.3x/450 mm
+2	440 mm	670 mm
+1	390 mm	560 mm
0	340 mm	450 mm
-1	300 mm	420 mm
-2	270 mm	370 mm

#### Important information for those who wear glasses:

The C2.3K Series loupe can also be worn without the use of spectacles. Should you prefer to examine without glasses, the charts illustrate how your refractive error will affect the loupe working distance. If you are unsure of your prescription, please consult your eye care provider.

#### C2.3/C2.3K binocular loupes

C2.3/340 loupe in case	C-000.32.039
C2.3/450 loupe in case	C-000.32.202
C2.3K/340 headband loupe in case	C-000.32.230
C2.3K/450 headband loupe in case	C-000.32.231

## Accessories



C2.3/C2.3K binocular loupe accessories	
Protective case for the C2.3 loupes and accessories	C-000.32.038
Detachable protective lenses for C2.3 and C2.3K. To protect the optics.	C-000.32.097

HEINE binocular loupes

Ordering information



Optics with i-View loupe mount for S-FRAME in carrying case

Working distance in mm	340mm	420mm	520mm
HR 2.5x	C-000.32.595	C-000.32.596	C-000.32.597

HRP 3.5x HRP 4x HRP 6x	C-000.32.721 C-000.32.722	C-000.32.720	
------------------------------	------------------------------	--------------	--



Optics with i-View and S-GUARD for Professional L headband

Working distance in mm	340mm	420mm	520mm
HR 2.5x	C-000.32.585	C-000.32.586	C-000.32.587

HRP 3.5x HRP 4x HRP 6x	C-000.32.711 C-000.32.712	C-000.32.710	
------------------------------	------------------------------	--------------	--



Optics with i-View for Professional L headband (without S-GUARD)

Working distance in mm	340mm	420mm	520mm
HR 2.5x	C-000.32.733	C-000.32.734	C-000.32.735

HRP 3.5x HRP 4x HRP 6x	C-000.32.737 C-000.32.738	C-000.32.736	
------------------------------	------------------------------	--------------	--

## HEINE binocular loupes accessories

## Ordering information



[01]



[02]



## Mounting options

**S-FRAME\***

For HR and HRP binocular loupes incl. retaining cord

C-000.32.302

\* with protective lenses, large (lg).

**Professional L headband**

For HR and HRP optics

C-000.32.549

## Accessories for optics

**HR close-up lenses in case**

HR 2.5x/340 mm to 250 mm. The close-up lenses reduce the working distance of the binocular loupes.

Close-up lenses for HR 2.5x/340 mm optics

C-000.32.523

**Protective lenses**

To protect the optics of the HR and the HRP loupes

Protective lenses for HR loupes (5 pairs) [01]

C-000.32.537

Protective lenses for HRP loupes [02]

C-000.32.027

**Sterilisable swivel levers**

For HR and HRP loupes with i-View

C-000.32.551

**Carrying case**

For binocular loupe optics or for all sets with S-FRAME

C-000.32.552

## Accessories for S-FRAME

**S-FRAME retaining cord**

C-000.32.305

**S-FRAME replacement part set**

with side rubbers, nose pad (1 piece) and screw

C-000.32.308

**Clip-in correction frame**

for prescription lenses

C-000.32.309

**Protective lenses, large (lg), 1 pair (Standard)**

C-000.32.306

**Protective lenses, small (sm), 1 pair**

C-000.32.307

## HEINE LoupeLight2

### Compact LED<sup>HQ</sup> headlight – now even brighter

**LED<sup>HQ</sup>**  
LED IN HEINE QUALITY.



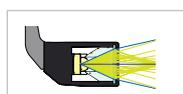
- ∴ **There's LED. And there's LED<sup>HQ</sup>.** HEINE has set a new standard which maintains that only the best is good enough, from the selection of materials to processing, from light intensity to dimmability, and from thermal management to a colour rendering index as high as possible. **That's what we call LED in HEINE Quality – or LED<sup>HQ</sup>.**
- ∴ **Compact, lightweight (50 g).** Ensures perfect comfort.
- ∴ **Aluminium housing.** Exclusive aluminium housing protects the optics against dust and moisture to ensure an extraordinary long lifespan and optimal thermal management.
- ∴ **Coaxial illumination:** Compact coaxial design ensures a completely shadow-free image and allows for excellent illumination of difficult to see areas.
- ∴ **Optional filter.** Polarisation filter P2 improves contrast and yellow filter reduces blue light.
- ∴ **Replaceable connecting cord** with high-quality splashproof threaded connector with a length of 1.5 m. Connects the LoupeLight2 with the mPack mini.
- ∴ **Incl. coloured attachment clips for personalisation.** To fixate the cable and to identify your LoupeLight.

#### Technical specification

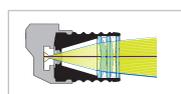
Illumination	Typ. 55 000 lux*
Colour temperature	Typ. 4 000 kelvin
LED operating life	Typ. 50 000 hours
Spot size	The illuminated field is designed to complement the HR/HRP loupes. 81 mm Ø at 420 mm, 95 mm Ø at 520 mm working distance
Angle of declination	Stepless and individually adjustable for every examination
Operating time	Typ. 9 h with mPack mini (in continuous operation at full power typ. 4 hours)

\*Measured at a working distance of 180 mm from the light emission to the object.

- ∴ **Precision multiple lens optical system** consisting of four high-quality lenses. Completely homogeneous illumination of the whole field of view and a clearly defined light spot.



Conventional system [02]



HEINE precision 4-lens system [03]



Comparison of homogeneity

## HEINE mPack mini

### Compact and lightweight power source for LoupeLight2 / MicroLight2



- ∴ **Operating time typ. 9 hours.** In continuous operation at full power typ. 4 hours.
- ∴ **Charging time typ. 4 hours.**
- ∴ **Compact and lightweight.** With a weight of just 95 g and dimensions of 44 x 23 x 101 mm the power source can be easily stowed.
- ∴ **For further information on the mPack mini, please see pages 117 and 137.**



HEINE LoupeLight2 and accessories

Ordering information



LoupeLight2	
LoupeLight2 for HR/HRP loupes for i-View loupe mount [01]	C-008.32.226*
Detachable yellow filter [02]	C-000.32.241
Polarisation filter P2 for LoupeLight2 and HR loupes [03] + [04]	C-000.32.535
Spare polarisation filter P2 for HR loupes (2 pairs) [04]	C-000.32.536
Connecting cord SC1 (1,5m/Ø 2,4mm) for LoupeLight2/mPack mini [05]	C-000.32.240
Connecting cord SC2 (1,5m/Ø 3,2mm) for LoupeLight2/mPack mini [06]	C-000.32.243



LoupeLight2 with power source for i-View loupe mount (HR / HRP)	
LoupeLight2 with mPack mini and E4-USB plug-in transformer [07]	C-008.32.265*
mPack mini belt clip [08]	X-000.99.006

\*Not suitable for HR/HRP loupes with a rigid loupe mount.

For further information on the mPack mini, please see pages 117 and 137. Power supplies may deviate in size and shape.

HEINE LoupeLight2 sets

With mPack mini and E4-USB plug-in transformer



LoupeLight2 sets with HR binocular loupes			
Magnification / working distance in mm	HR 2.5x/340	HR 2.5x/420	HR 2.5x/520
HR 2.5x optics with i-View on S-FRAME and LoupeLight2 detachable yellow filter mPack mini mPack mini belt clip E4-USB plug-in transformer connecting cord protective lenses 2 sterilisable levers retaining cord, cleaning cloth, case	C-008.32.450	C-008.32.451	C-008.32.452



LoupeLight2 sets with HRP binocular loupes			
Magnification / working distance in mm	HRP 3.5x/420	HRP 4x/340	HRP 6x/340
HRP optics with i-View on S-FRAME and LoupeLight2 detachable yellow filter mPack mini mPack mini belt clip E4-USB plug-in transformer connecting cord protective lenses 2 sterilisable levers retaining cord, cleaning cloth, case	C-008.32.453	C-008.32.454	C-008.32.455

HEINE headlights

LED<sup>HQ</sup>



LED<sup>HQ</sup>



	MicroLight2	ML4 LED HeadLight
Illumination	LED <sup>HQ</sup>	LED <sup>HQ</sup>
Light intensity*	typ. 55,000 lux	typ. 90,000 lux
Colour temperature (kelvin)	typ. 4,000K	typ. 5,500K
Spot size	81 mm	30 – 80mm
Power sources / operating time	<ul style="list-style-type: none"> <li>• mPack mini / typ. 9 hours</li> </ul>	<ul style="list-style-type: none"> <li>• mPack UNPLUGGED / typ. 3,5 hours</li> <li>• mPack / typ. 8,5 hours</li> </ul>
Weight	<ul style="list-style-type: none"> <li>• 80g with S-FRAME spectacle frame</li> <li>• 190g with Lightweight headband</li> </ul>	<ul style="list-style-type: none"> <li>• 260g</li> <li>• 460g with mPack UNPLUGGED</li> </ul>
Angle of declination	Fully-adjustable	Fully-adjustable
Brightness control	0 – 100%	0 – 100%
Features	<ul style="list-style-type: none"> <li>• Waterproof</li> <li>• Optional yellow filter</li> <li>• Head- or spectacle-worn</li> </ul>	<ul style="list-style-type: none"> <li>• Adjustable spot size</li> <li>• Optional yellow filter</li> <li>• Polarisation filter</li> <li>• Expandable with HR and HRP loupes</li> <li>• Head-worn</li> </ul>
Catalogue page	116 – 117	118 – 121

\*Measured at a working distance of 180mm from the light emission to the object.

## HEINE MicroLight2

Compact LED<sup>HQ</sup> headlight – now even brighter


LED<sup>HQ</sup>  
LED IN HEINE QUALITY.



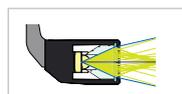
- ∴ **There's LED. And there's LED<sup>HQ</sup>.** HEINE has set a new standard which maintains that only the best is good enough, from the selection of materials to processing, from light intensity to dimmability, and from thermal management to a colour rendering index as high as possible. **That's what we call LED in HEINE Quality – or LED<sup>HQ</sup>.**
- ∴ **Compact and lightweight.** Ensures perfect comfort.
- ∴ **Aluminium housing.** Exclusive aluminium housing protects the optics against dust and moisture to ensure an extraordinary long lifespan and optimal thermal management.
- ∴ **Coaxial illumination:** Compact coaxial design ensures a completely shadow-free image and allows for excellent illumination of difficult to see areas.
- ∴ **Homogeneity:** An absolutely bright light spot that is uniform from edge-to-edge for the perfect illumination in all examination situations.
- ∴ **Replaceable connecting cord** with high-quality splashproof threaded connector with a length of 1.5m. Connects the MicroLight2 with the mPack mini.
- ∴ **Incl. coloured attachment clips for personalisation.** To fixate the cable on the S-FRAME and to identify your headlight.

## Technical specification

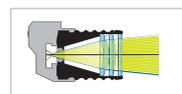
Illumination	<b>Typ. 55 000 lux*</b>
Colour temperature	<b>Typ. 4 000 kelvin</b>
LED operating life	<b>Typ. 50 000 hours</b>
Weight	80g together with S-FRAME, 190g together with Lightweight headband
Angle of declination	Stepless and individually adjustable for every examination
Operating time	<b>Typ. 9h with mPack mini</b> (in continuous operation at full power typ. 4 hours)

\*Measured at a working distance of 180mm from the light emission to the object.

- ∴ **Precision multiple lens optical system** consisting of four high-quality lenses. Completely homogeneous illumination of the whole field of view, and a clearly defined light spot.



Conventional system [01]



HEINE precision 4-lens system [02]



Comparison of homogeneity

## Mounting Options:

## ∴ HEINE S-FRAME

- ∴ **Maximum comfort** with a modern, ergonomic design.
- ∴ **Malleable temples and nose pad.** Can be customized to fit any face perfectly.
- ∴ **Innovative materials** – Carbon-Kynetium reduces weight (80g together with MicroLight2).
- ∴ **Tough polycarbonate protective lenses.**

## ∴ HEINE Lightweight headband

- ∴ **Lightweight** (190g together with MicroLight2.) Ideal for spectacle wearers.
- ∴ **Fully-adjustable for width to fit any head.**
- ∴ **Hygienic and comfortable leather cushions.**



HEINE mPack mini

Compact and lightweight power source for LoupeLight2 / MicroLight2



[01]

- ∴ **Freedom from cables** that tie the user to desk, wall or static power supplies.
- ∴ **Operating time typ. 9 hours.** In continuous operation at full power typ. 4 hours.
- ∴ **Charging time typ. 4 hours.**
- ∴ **Charge status indicator.** Display of remaining battery power with three LEDs. The flashing of the last LED indicates that immediate charging is required. During charging the LEDs light up one after the other.
- ∴ **Stepless light intensity control.** Optimum brightness setting between 100% and 3% reduces reflexes.
- ∴ **USB cord** with E4-USB medical approved plug-in power supply.
- ∴ **The integrated galvanic separation module** protects the battery and the user against the consequences of defective power supplies, thus preventing the possibility of the full mains voltage flowing directly to the housing. We recommend the use of a medical approved plug-in power supply.
- ∴ **Simple cleaning.** Closed housing, no seams at the sides, few edges.
- ∴ **Compact and lightweight.** With a weight of just 95 g and dimensions of 44 x 23 x 101 mm the power source can be easily stowed.
- ∴ **Optimised mPack mini belt clip** for easy attachment of the power source to the belt or coat pocket. The mPack mini can also be charged in the belt clip [01].
- ∴ **Li-ion technology.** No "memory effect", without worrying about charge level or battery condition.
- ∴ **Integrated rechargeable battery.** Can be exchanged at authorised specialist dealers.

∴ **For further information on the mPack mini, please see page 137.**

HEINE MicroLight2

Ordering information



[01]



[02]



[03]



[04]



[05]

MicroLight2

on S-FRAME with mPack mini, mPack mini belt clip, E4-USB plug-in transformer with USB cord, connecting cord, retaining cord, in case [01]

J-008.31.276

on Lightweight headband with mPack mini, mPack mini belt clip, E4-USB plug-in transformer with USB cord, connecting cord, in case [02]

J-008.31.277

Detachable yellow filter [03]

C-000.32.241

Connecting cord SC1 (1,5m/Ø 2,4 mm) for MicroLight2/mPack mini [04]

C-000.32.240

Connecting cord SC2 (1,5m/Ø 3,2 mm) for MicroLight2/mPack mini [05]

C-000.32.243



## HEINE ML4 LED HeadLight

### Ultra bright coaxial LED<sup>HQ</sup> illumination

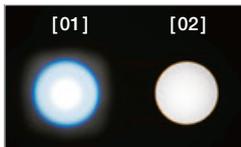
**LED<sup>HQ</sup>**  
LED IN HEINE QUALITY.



- ⌘ **There's LED. And there's LED<sup>HQ</sup>.** HEINE has set a new standard which maintains that only the best is good enough, from the selection of materials to processing, from light intensity to dimmability, and from thermal management to a colour rendering index as high as possible. **That's what we call LED in HEINE Quality – or LED<sup>HQ</sup>.**
- ⌘ **Adjustable illumination spot size:** 30 mm to 80 mm spot size range (at 420 mm working distance) to fit any examination situation.
- ⌘ **Bright and homogenous illumination.** Absolutely bright light spot that is uniform from edge-to-edge for the perfect illumination in all examination situations.
- ⌘ **Stepless light intensity control.** Optimal brightness setting prevents reflexes.
- ⌘ **Flexibility.** Flexible power source options: 100 % mobility with a choice of cable-free mPack UNPLUGGED head-worn battery or mPack belt-worn battery pack.
- ⌘ **Coaxial illumination.** Coaxial design ensures a completely shadow-free image and allows for excellent illumination of difficult to see areas.
- ⌘ **Comfortable and secure fit.** The Professional L headband has multiple adjustment points and soft padding for comfort and stability – even during long examinations.
- ⌘ **Optional filters.** Polarisation filter P2 improves contrast and yellow filter reduces blue light.

#### Technical specification

Illumination	Typ. 90,000 lux*
Colour temperature	Typ. 5,500 kelvin
LED operating life	Typ. 50,000 hours
Spot adjustment	30 mm to 80 mm at 420 mm working distance
Angle of declination	Stepless and individually adjustable for every examination
Rheostat	Headband-mounted
Operating time	Typ. 8.5 hours with mPack and typ. 3.5 hours with mPack UNPLUGGED of continuous ON time at full power



**Comparison of homogeneity**  
[01] Competitor product  
[02] HEINE ML4 LED HeadLight

\*Measured at a working distance of 180mm from the light emission to the object.

#### Power options:

##### ⌘ HEINE mPack

- ⌘ **Portable power pack.** Does not tie the user to desk, wall or static power supplies.
- ⌘ **Li-ion technology. Triple capacity** compared with current NiCd systems.  
No memory effect, autonomy for typ. 8.5 hours of continuous ON time at full power.
- ⌘ **Fast charge.** Charges to full capacity in typ. 2 hours.
- ⌘ **Charge status indicator.** Always lets you know how much operating charge you have left.
- ⌘ **Brightness control.** Optimal adjustment of light intensity.
- ⌘ **Flexible charging options:** EN 50 Desk and wall charger, or plug-in transformer.
- ⌘ **Intelligent.** Can be used as mains power supply even while in “charge” mode.
- ⌘ **100 – 240V compatible transformer** incl. 4 plugs for world wide compatibility.

For the optional EN 50 table/wall unit please see page 136.

##### ⌘ HEINE mPack UNPLUGGED. Headband-mounted rechargeable battery.

- ⌘ **Wireless.** 100 % mobility for absolute freedom of movement.
- ⌘ **Rechargeable battery integrated on the headband.**
- ⌘ **Lightweight with balanced weight distribution.** High level of comfort.
- ⌘ **Charge status indicator** indicates remaining operating time.
- ⌘ **Intelligent.** Can be used as mains power supply even in “charge” mode.
- ⌘ **Fast charge.** Charges to full capacity in typ. 2 hours. Operating time typ. 3.5 hours of continuous ON time at full power.
- ⌘ **Top safety standards.** Integrated charge and performance checks during operation. Lithium polymer technology. UL compliant.



HEINE ML4 LED HeadLight

Ordering information



**ML4 LED HeadLight with Professional L headband**

ML4 LED HeadLight without power source [01]	<b>J-008.31.410</b>
ML4 LED HeadLight with plug-in transformer [01] + [02]	<b>J-008.31.411</b>
ML4 LED HeadLight with mPack and plug-in transformer [01] + [03]	<b>J-008.31.413</b>
ML4 LED HeadLight with mPack UNPLUGGED and plug-in transformer UNPLUGGED [01] + [04]	<b>J-008.31.415</b>
ML4 LED HeadLight with wall mounted EN 50 UNPLUGGED charger and 2x mPack UNPLUGGED [01] + [05]	<b>J-008.31.416</b>

Power supplies may deviate in size and shape.

**ML4 LED HeadLight accessories**

Detachable yellow filter [06]	<b>J-000.31.321</b>
Extension cord from plug-in transformer UNPLUGGED to mPack UNPLUGGED, 2 m [07]	<b>X-000.99.668</b>
Polarisation filter P2 for ML4 LED and HR loupes [08] + [09]	<b>J-000.31.326</b>
Spare polarisation filter P2 for HR loupes (2 pairs) [09]	<b>C-000.32.536</b>

## HEINE ML4 LED HeadLight with HR/HRP Optics



The ML4 LED HeadLight is optionally supplied with HR/HRP binocular loupes incl. i-View loupe mount and with or without S-GUARD. The binocular loupe is fully adjustable for every examiner and for every examination axis.

- ∴ **HEINE S-GUARD:** Rapid and simple symmetric adjustment of binocular loupes with splash protection by protective lenses.
- ∴ **HEINE i-View for ML4 LED HeadLight:** Provides any angle of view and flips up the optics independently of the illumination beam.



[01]

### ML4 LED HeadLight kits with S-GUARD and power source

The following kits contain: ML4 LED HeadLight on Professional L headband, HR/HRP optics with i-View and S-GUARD, mPack and plug-in transformer [01]

Kit 1:	with <b>HR</b> binocular loupe	2.5x/340mm	<b>J-008.31.440</b>
Kit 2:	with HR binocular loupe	2.5x/420mm	<b>J-008.31.441</b>
Kit 11:	with HR binocular loupe	2.5x/520mm	<b>J-008.31.450</b>
Kit 3:	with <b>HRP</b> binocular loupe	3.5x/420mm	<b>J-008.31.442</b>
Kit 4:	with HRP binocular loupe	4x/340mm	<b>J-008.31.443</b>
Kit 5:	with HRP binocular loupe	6x/340mm	<b>J-008.31.444</b>



[01]



### ML4 LED HeadLight kits with power source without S-GUARD

The following kits contain: ML4 LED HeadLight on Professional L headband, HR/HRP optics with i-View, mPack and plug-in transformer [01]

Kit 1c:	with <b>HR</b> binocular loupe	2.5x/340mm	<b>J-008.31.452</b>
Kit 2c:	with HR binocular loupe	2.5x/420mm	<b>J-008.31.453</b>
Kit 11c:	with HR binocular loupe	2.5x/520mm	<b>J-008.31.463</b>
Kit 3c:	with <b>HRP</b> binocular loupe	3.5x/420mm	<b>J-008.31.454</b>
Kit 4c:	with HRP binocular loupe	4x/340mm	<b>J-008.31.456</b>
Kit 5c:	with HRP binocular loupe	6x/340mm	<b>J-008.31.457</b>



[03]

### ML4 LED HeadLight UNPLUGGED kits with S-GUARD and power source

The following kits contain: ML4 LED HeadLight on Professional L headband, HR/HRP optics with i-View and S-GUARD, wall transformer EN 50 UNPLUGGED [03], 2x mPack UNPLUGGED

Kit 6:	with <b>HR</b> binocular loupe	2.5x/340mm	<b>J-008.31.445</b>
Kit 7:	with HR binocular loupe	2.5x/420mm	<b>J-008.31.446</b>
Kit 12:	with HR binocular loupe	2.5x/520mm	<b>J-008.31.451</b>
Kit 8:	with <b>HRP</b> binocular loupe	3.5x/420mm	<b>J-008.31.447</b>
Kit 9:	with HRP binocular loupe	4x/340mm	<b>J-008.31.448</b>
Kit 10:	with HRP binocular loupe	6x/340mm	<b>J-008.31.449</b>



[03]

### ML4 LED HeadLight UNPLUGGED kits with power source without S-GUARD

The following kits contain: ML4 LED HeadLight on Professional L headband, HR/HRP optics with i-View, wall transformer EN 50 UNPLUGGED [03], 2x mPack UNPLUGGED

Kit 6c:	with <b>HR</b> binocular loupe	2.5x/340mm	<b>J-008.31.458</b>
Kit 7c:	with HR binocular loupe	2.5x/420mm	<b>J-008.31.459</b>
Kit 12c:	with HR binocular loupe	2.5x/520mm	<b>J-008.31.464</b>
Kit 8c:	with <b>HRP</b> binocular loupe	3.5x/420mm	<b>J-008.31.460</b>
Kit 9c:	with HRP binocular loupe	4x/340mm	<b>J-008.31.461</b>
Kit 10c:	with HRP binocular loupe	6x/340mm	<b>J-008.31.462</b>

HR/HRP binocular loupes – retrofitting sets

For HEINE ML4 LED HeadLight



Pos. 1



Pos. 2



[01]

**Retrofitting set HR/HRP binocular loupes for ML4 LED HeadLight**

The sets enable you to equip your existing ML4 LED HeadLight with a binocular loupe. The set contains HR/HRP optics with i-View and S-GUARD splash protection.

with <b>HR</b> binocular loupe	2.5x/340mm	<b>J-000.31.370</b>
with HR binocular loupe	2.5x/420mm	<b>J-000.31.371</b>
with HR binocular loupe	2.5x/520mm	<b>J-000.31.365</b>
with <b>HRP</b> binocular loupe	3.5x/420mm	<b>J-000.31.372</b>
with HRP binocular loupe	4x/340mm	<b>J-000.31.373</b>
with HRP binocular loupe	6x/340mm	<b>J-000.31.374</b>

5 sterilisable swivel levers for i-View loupe mount for ML4 LED HeadLight [01]	<b>C-000.32.399</b>
--	---------------------

Power sources



[01]



[02]



[03]

mPack and plug-in transformer [01]	<b>X-007.99.672</b>
Plug-in transformer for ML4 LED HeadLight [02]	<b>X-095.16.330</b>

mPack with EN 50 table/wall unit (incl. 90° angled adaptor, instrument support for Professional L headband) [03]	<b>X-095.17.302</b>
--	---------------------

Power supplies may deviate in size and shape

