

HEINE headlights

Overview

It goes without saying that all of our headlights are premium products. But, still, they differ in one or two details. Read on for a summary of what these different details are and all their benefits:



	MicroLight2	ML4 LED HeadLight
Illumination	LED ^{HQ}	
Light intensity*	typ. 55,000 lux	typ. 90,000 lux
Colour temperature (kelvin)	typ. 4,000 K	typ. 5,500 K
Spot size	81 mm	30 – 80 mm
Power sources operating time	mPack mini typ. 9 hours	mPack UNPLUGGED typ. 3.5 hours mPack typ. 8.5 Std.
Weight	80 g with S-FRAME spectacle frame 190 g with Lightweight headband	260 g 460 g with mPack UNPLUGGED
Angle of declination	fully-adjustable	
Brightness control	0 – 100 %	
Features	waterproof, optional yellow filter, head- or spectacle-worn,	adjustable spot size, optional yellow filter, polarisation filter, expandable with HR and HRP loupes, head-worn,
Catalogue page	139-140	143-144

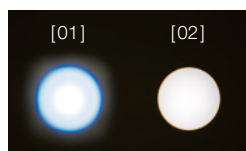
*Measured at a working distance of 180 mm from the light emission to the object.

HEINE ML4 LED HeadLight

Ultra bright coaxial LED^{HQ} illumination



- ▶ **There's LED. And there's LED^{HQ}.** 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^{HQ}**
- ▶ **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
- ▶ **Flexibility.** Flexible power source options: 100 % mobility with a choice of cable-free mPack UNPLUGGED head-worn battery or mPack belt-worn battery pack
- ▶ **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



[01] Competitor product
[02] HEINE ML4 LED HeadLight

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

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

HEINE ML4 LED HeadLight

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 – 240 V compatible transformer** incl. 4 plugs for world wide compatibility

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

▶ For the optional EN 50 table | wall unit please see [page 167](#).

HEINE ML4 LED HeadLight

Ordering information



[01]



[02]



[03]



[04]



[05]



[06]



[07]



[08]



[09]

ML4 LED HeadLight with Professional L headband

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

ML4 LED HeadLight accessories

detachable yellow filter [06]	J-000.31.321
extension cord from plug-in transformer UNPLUGGED to mPack UNPLUGGED, 2 m [07]	X-000.99.668
polarisation filter P2 for ML4 LED and HR loupes [08] + [09]	J-000.31.326
spare polarisation filter P2 for HR loupes (2 pairs) [09]	C-000.32.536

Power supplies may deviate in size and shape.