

ILLUMINATED MAGNIFIER

ALL PRODUCTS CATALOG

2024



OTSUKA

WE USE THE REAL THING



BECAUSE WE SEE THE REAL THING

Products Category

OLED	Equipped with OLED lighting
AR^{Coat}_{standard}	AR coated lens as standard equipment
AR^{Coat}_{selectable}	AR coated lenses can be selected.

AR coated lenses are those with an anti-reflection coating on the lens surface. This reduces annoying reflections on the lens.

OLED illuminated magnifier

OLED	AR^{Coat}_{standard}	OLIGHT6 series	P. 4
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Full spectrum LED illuminated magnifier

AR^{Coat}_{selectable}	ENVL6K series	P. 6
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LED illuminated magnifier

AR^{Coat}_{standard}	MAGNALIGHT series	P. 8
AR^{Coat}_{selectable}	ENVL series	P.10
AR^{Coat}_{selectable}	SKKL series	P.12
AR^{Coat}_{standard}	OLIGHT5 series	P.14
AR^{Coat}_{selectable}	OLIGHT3L series	P.16
	LED-WIDE series	P.18
	LED-OSL series	P.20
AR^{Coat}_{selectable}	OLIGHT3L-F 6500K series	P.22

LED coaxial illumination magnifier

AR^{Coat}_{standard}	SURFLIGHT series	P.24
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OLED inspection lighting / OLED under-shelf lighting

OLED	MODELIGHT series	P.26
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LED work and inspection lighting / Dimming -Toning LED Light Box

MODELIGHT series	P.28
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LED light for checking surface flaws

BARLIGHT series	P.30
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LED illuminated loupe for checking holes, grooves, and inside walls

AR^{Coat}_{standard}	BORELOUPE series	P.32
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Option · Loupe

Option · Loupe	P.34
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Interchangeable Lens System

About Interchangeable Lens System	P.36
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Commentary on products and specifications

About Otsuka Optics Products	P.38
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Specification comparison list of the illuminated magnifier	P.40
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OLED illuminated magnifier

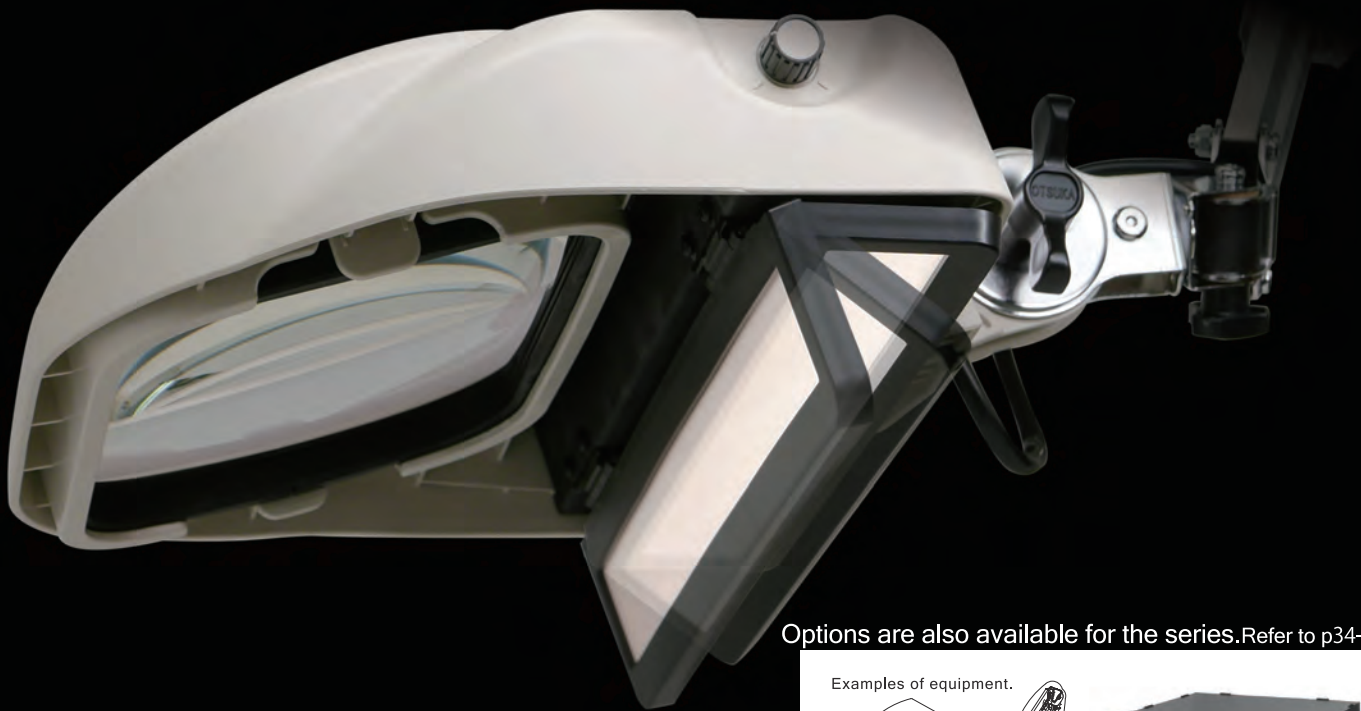
OLIGHT6

OLED

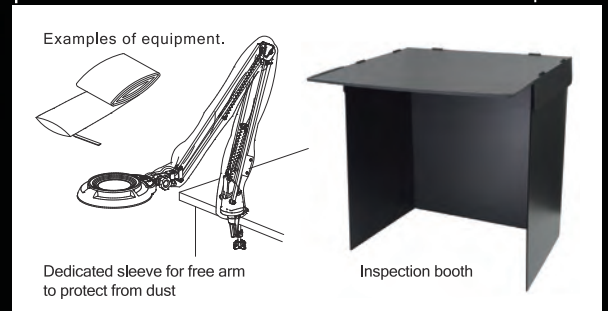
AR^{Coat}
standard

series

The OLED lighting magnifier, which is said to be the next generation of lighting, has made its debut.



Options are also available for the series. Refer to p34-35.



BIG-RECTA-LENS

2XAR

4XAR

358AR

Select the lens magnification and combine it with the main unit.

Example: **OLIGHT6-F 2XAR**
Series name Type name Magnification

We also sell only the main body without a lens.

- Lens Dimensions (mm) : 180×120
- AR-coated lens Line Up : standard feature
- Dimming function : 100% - 10%
- Input voltage range : AC100 - 240V* · 50/60Hz
(* When using at a voltage of 125V or higher, it can be handled by changing or purchasing a power cable separately.)
- AC Adapter Dimensions (mm) : 99×47×32
- Power Cord length (mm) : 1800 (AC side) 1200 (DC side)

The light source portion of the image is a composite image of the range of motion.

OLIGHT6 Series features.

The following table shows the differences between OLIGHT6 series OLED lighting and general LED lighting.



■ surface emission

OLED lighting is a surface light source that emits light evenly. Therefore, glare is reduced and shadows are less likely to form, making the lighting easy to see.

■ low reflection

Surface light source OLED lighting delivers a widely diffused light to the workpiece. Therefore, the intensity of reflection is reduced and eye fatigue become less. Also, since it is less likely to cause glare, it is easier to see what is at hand, contributing to improved work efficiency.

■ low blue light

OLED lighting has suppressed wavelengths in the blue light range. This lighting is less likely to affect biological rhythms even when working at night.

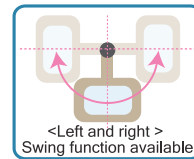
Information provided in Kaneka

Lineup



OLIGHT6-B
With table stand

Product Dimension(WxHxD):188x391x320mm
Weight:2.2kg(Excluding lens)



OLIGHT6-F
Free arm and clamp type

Product Dimension(Arm length): 856mm
Weight: 2.2kg (Excluding lens)

New " BIG-Recta 358AR" with lens magnification of 3X, 5X and 8X is now available!

Photo of the BIG-RECTA 358AR installed.



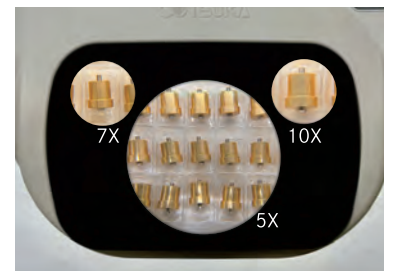
The BIG-RECTA 358AR is equipped with three different magnification lenses (3X, 5X, and 8X) in a single unit. By attaching this lens to a magnifier, visual inspection using multiple magnifications can be performed with a single unit, thereby improving work efficiency. Also, by attaching this lens to a conventional BIG-RECTA 2XAR, it is possible to increase the magnification to 5X, 7X, or 10X.

Sample images of how the BIG-RECTA 358AR looks.

OLIGHT5-B 358AR



OLIGHT5-B 2XAR + BIG-RECTA358AR



The image is a composite of the respective lenses. Visibility depends on viewing distance and individual differences.

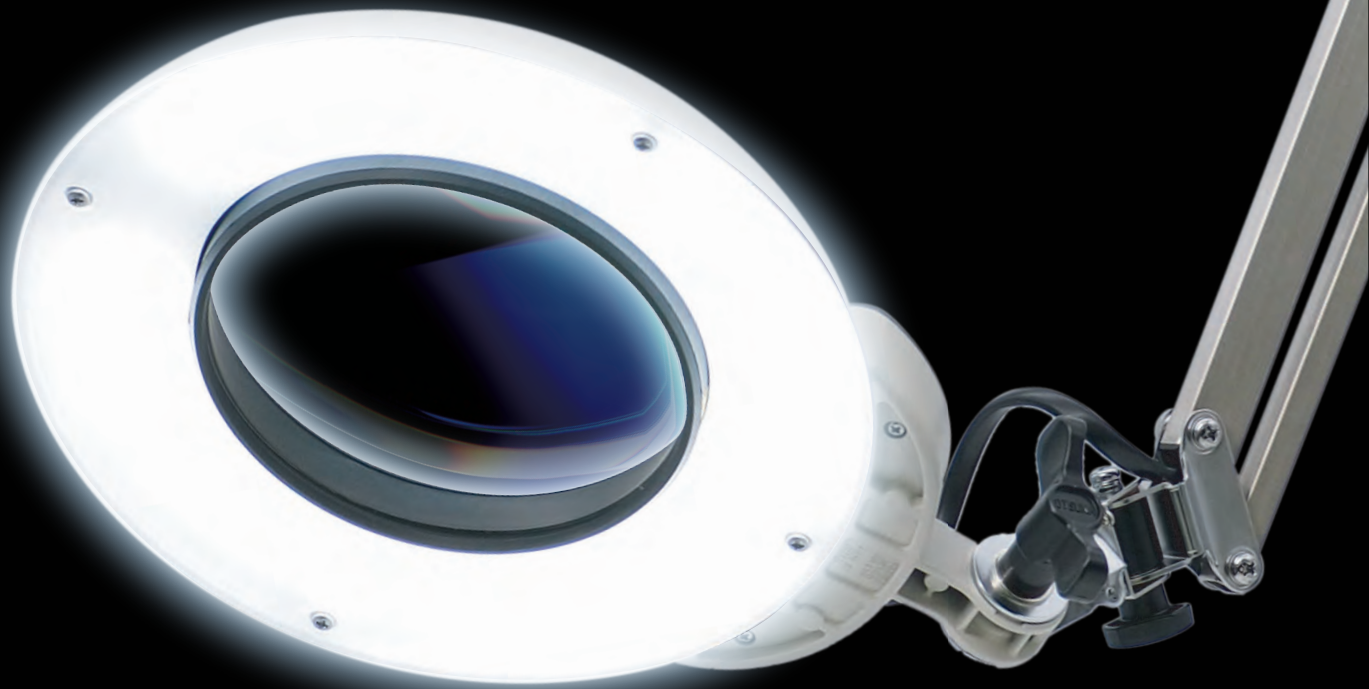
OLIGHT6

Full spectrum LED illuminated magnifier

ENVL6K series

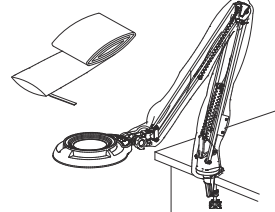
AR Coat
selectable

Full spectrum, colour temperature 6000K LEDs.



Options are also available for the series. Refer to p35.

Examples of equipment.



Dedicated sleeve for free arm to protect from dust



245 lens cover
Compatible with 2X, 3X, 4X and 6X lenses for Round Series Lens

Round Series Lens

2X	3X	4X	6X
8X	10X	12X	15X
2XAR	3XAR	4XAR	6XAR
8XAR	10XAR		

Select the lens magnification and combine it with the main unit.

Example: **ENVL6K-F 2X**

Series name Type name Magnification

We also sell only the main body without a lens.

- Lens Dimensions : Refer to p.37
- Lineup of AR-Coated lens : option
- Dimming function : 100% - 0%
- Input voltage range : AC100 - 240V* · 50/60Hz
(* When using at a voltage of 125V or higher, it can be handled by changing or purchasing a power cable separately.)
- AC Adapter Dimensions (mm) : 87×45×34
- Power Cord length (mm) : 1800 (AC side) 1200 (DC side)

ENVL6K Series features.

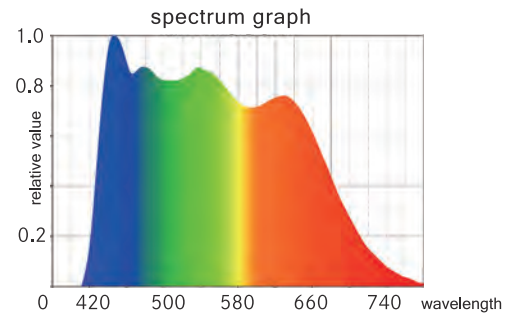
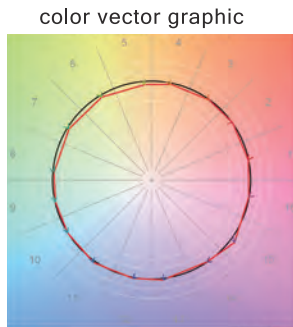
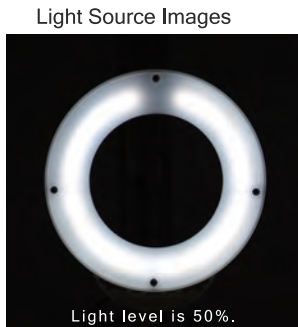
The light from ENVL6K full-spectrum LEDs "contains all colour components evenly" in the visible light range, so the light colour of the illumination magnifier appears similar to the colour seen in sunlight, with a colour temperature of approximately 6,000 K, close to that of sunlight at noon on a sunny day.

Sunlight contains all colour components evenly, but fluorescent lamps and LEDs do not. Compared to the existing ENVL series, the ENVL6K full-spectrum LEDs, which contain a wider range of wavelength components, allow you to work with light that is closer to sunlight.

Comparison of "ENVL6K" and "ENVL" light sources

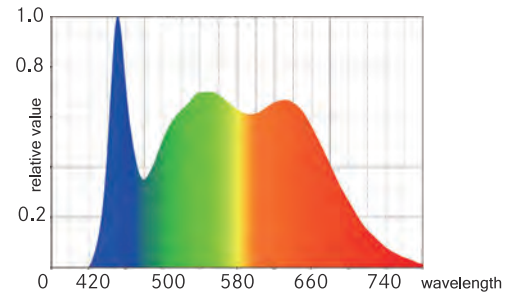
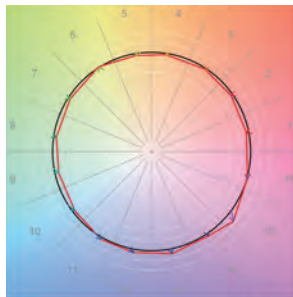
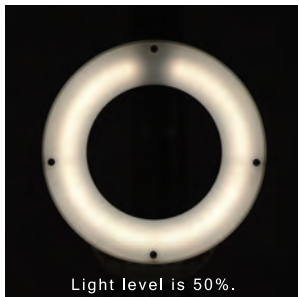
ENVL6K

color temperature(K)
: 6040
illuminance(Lx)
: 12500



ENVL

color temperature(K)
: 4820
illuminance(Lx)
: 9190



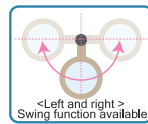
Measurements are taken in the dark, directly under the center of the lens, at a working distance of 110mm.

Lineup

ENVL6K-B

With table stand

Product Dimension(W x H x D):188x331x320mm
Weight:1.9kg (Excluding lens)



ENVL6K-F

Free arm and clamp type

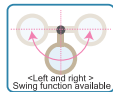
Product Dimension(Arm length): 995mm
Weight: 2kg (Excluding lens)



ENVL6K-FD

Free arm and Fixed desk holder type

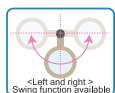
Product Dimension(Arm length):1015mm
Weight: 1.9kg(Excluding lens)



ENVL6K-MS

Magnet stand type

Product size (a pillar / a cross bar): 368mm / 130mm
Weight: 2.1kg(Excluding lens)



ENVL6K-CF

Compact free arm and clamp type

Product Dimension(Arm length): 675mm
Weight: 1.8kg (Excluding lens)



ENVL6K-D

Desk holder type

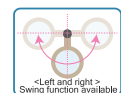
Product size (a pillar / a cross bar):376mm / 290mm
Weight: 1.1kg (Excluding lens)



ENVL6K-ST

Long bar and clamp type

Product size (a pillar / a cross bar): 345mm / 290mm
Weight: 1.2kg (Excluding lens)



ENVL6K-FL

Free-Arm Caster Stand Set

Product Dimension (Depth / Arm length)
:310mm/ 1466mm
Weight: 12.1kg (Excluding lens)



ENVL6K

Product photos do not have the same proportions.

LED illuminated magnifier

MAGNALIGHT_{series}

MAGNALIGHT series is the top-of-the-line model with round lenses.

Dedicated machine for Magna wide lens with AR coating on $\Phi 150$ large aperture lens

AR Coat
standard

MAGNA WIDE LENS

MAG2XAR

MAG3XAR

MAG4XAR

Select the lens magnification and combine it with the main unit.

Example: **MGL - F 2XAR**

Series name Type name Magnification

We also sell only the main body without a lens.



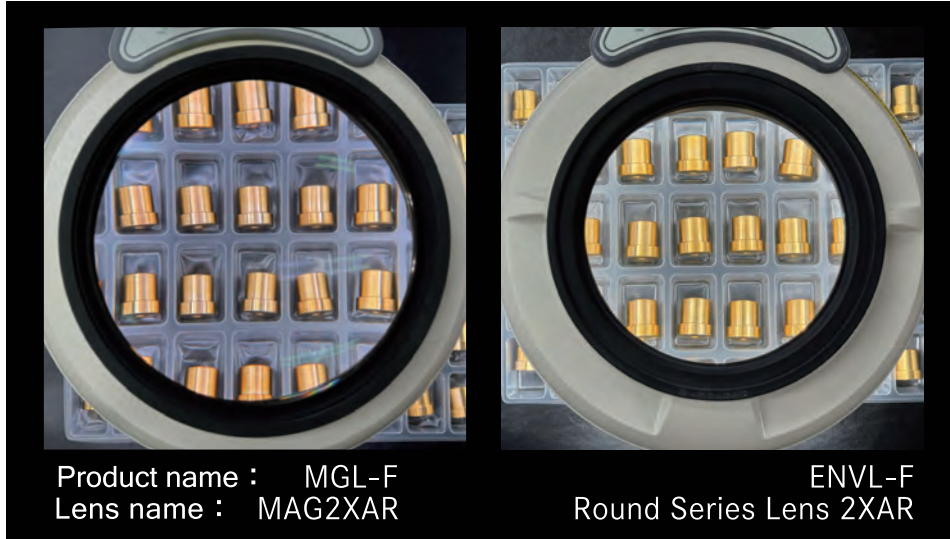
- Lens Dimensions (mm) : $\phi 150$
- Lineup of AR-Coated lens : Standard feature
- Dimming function : 100% - 0%
- Input voltage range : AC100 - 240V* · 50/60Hz
(* When using at a voltage of 125V or higher, it can be handled by changing the cord with a plug.)
- AC Adapter Dimensions (mm) : 87×45×34
Power Cord length (mm) : 1800 (AC side) 1800 (DC side)

The lens part of the image is synthetic.

MAGNALIGHT Series features.

The Magna Wide Lens System, a dedicated lens for the MagnaLight series, combines a $\Phi 150$ mm large-aperture lens with a clear AR (anti-reflection) coating to meet user expectations.

Comparison of visibility between MAGNAWIDELENS and Round series Lens.



The image shows a comparison of the field of view when the same workpiece is observed with the "MAG2XAR" (left), a lens specially designed for the Magnalight series, and the "Round Series Lens 2XAR" (right), which is compatible with the ENVL and SKKL series. Compared with the "Round Series Lens 2XAR" with a diameter of $\Phi 130$, the $\Phi 150$ "MAG2XAR" boasts a wider field of view, as can be seen from the number of workpieces that can be observed. The outer diameter of the outer frame is the same for the Magnalight and ENVL series.

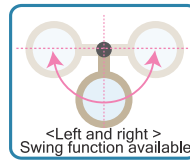
Magnification depends on the observation distance. Observation distances are adjusted for photography.

Lineup

MGL-B

With table stand

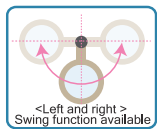
Product Dimension (W x H x D): 188x331x320mm
Weight: 2.1kg (Excluding lens)



MGL-F

Free arm and clamp type

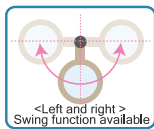
Product Dimension (Arm length): 1025mm
Weight: 2.4kg (Excluding lens)



MGL-CF

Compact free arm and clamp type

Product Dimension (Arm length): 705mm
Weight: 2.1kg (Excluding lens)



MGL-FD

Free arm and fixed desk holder type

Product Dimension (Arm length): 1015mm
Weight: 2.2kg (Excluding lens)



MGL-D

Desk holder type

Product size (a pillar / a cross bar)
: 376mm / 290mm
Weight: 1.3kg (Excluding lens)



MGL-MS

Magnet stand type

Product size (a pillar / a cross bar)
: 370mm / 290mm
Weight: 3.2kg (Excluding lens)



MGL-ST

Long bar and clamp type

Product size (a pillar / a cross bar)
: 345mm / 290mm
Weight: 1.4kg (Excluding lens)

Product photos do not have the same proportions.

MAGNALIGHT

LED illuminated magnifier

ENVL series

Standard model equipped with dimming function

AR Coat
selectable



Round Series Lens

2X	3X	4X	6X
8X	10X	12X	15X
2XAR	3XAR	4XAR	6XAR
8XAR	10XAR		

Select the lens magnification and combine it with the main unit.

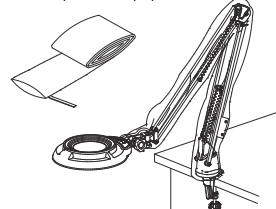
Example: **ENVL-F 2X**
Series name Type name Magnification

We also sell only the main body without a lens.

- Lens Dimensions : Refer to p.37
- Lineup of AR-Coated lens : option
- Dimming function : 100% - 10%
- Input voltage range : AC100 - 240V* · 50/60Hz
 (* When using at a voltage of 125V or higher, it can be handled by changing or purchasing a power cable separately.)
- AC Adapter Dimensions (mm) : 99×47×32
- Power Cord length (mm) : 1800 (AC side) 1200 (DC side)
 CL type is 1800

Options are also available for the series. Refer to p35.

Examples of equipment.



Dedicated sleeve for free arm to protect from dust



245J lens cover
 Compatible with 2X, 3X, 4X and 6X lenses for Round Series Lens

ENVL Series features.

Eight lens magnifications are available: 2X, 3X, 4X, 6X, 8X, 10X, 12X and 15X. AR coated lenses are also available from 2X to 10X. Standard circular lenses are equipped with LEDs with diffusers. The light intensity adjustment function is adopted as standard, making it effective for inspecting workpieces with a three-dimensional effect.

Lineup

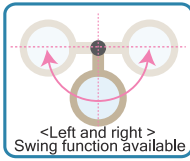


ENVL-B

With table stand

Product Dimension(W x H x D):188x331x320mm

Weight:1.9kg (Excluding lens)



ENVL-F

Free arm and clamp type

Product Dimension(Arm length): 995mm

Weight: 2kg (Excluding lens)

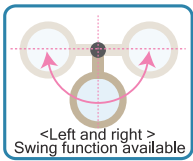


ENVL-CL

Light box With transmission illumination

Product Dimension(W x H x D):340x340x353mm

Weight: 3.2kg (Excluding lens)

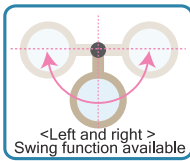


ENVL-CF

Compact free arm and clamp type

Product Dimension(Arm length): 675mm

Weight: 1.8kg (Excluding lens)

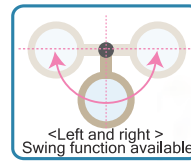


ENVL-FD

Free arm and Fixed desk holder type

Product Dimension(Arm length):1015mm

Weight: 1.9kg(Excluding lens)



ENVL-FL

Free-Arm Caster Stand Set

Product Dimension (Depth / Arm length):310mm/ 1466mm

Weight: 12.1kg (Excluding lens)



ENVL-D

Desk holder type

Product size (a pillar / a cross bar):376mm / 290mm

Weight: 1.1kg (Excluding lens)



ENVL-MS

Magnet stand type

Product size (a pillar / a cross bar): 368mm / 130mm

Weight: 2.1kg(Excluding lens)



ENVL-ST

Long bar and clamp type

Product size (a pillar / a cross bar): 345mm / 290mm

Weight: 1.2kg (Excluding lens)

Product photos do not have the same proportions.

ENVL

LED illuminated magnifier

SKKL series

AR^{Coat}
selectable

Basic model equipped with necessary and minimum functions

- Lens Dimensions : Rifer to p.37
- Lineup of AR-Coated lens : option
- Dimming function : none
- Input voltage range : AC100 - 240V* · 50/60Hz
(* When using at a voltage of 125V or higher, it can be handled by changing or purchasing a power cable separately.)
- AC Adapter Dimensions (mm) : 99×47×32
- Power Cord length (mm) : 1800 (AC side) 1200 (DC side)
CL type is 1800

Round Series Lens

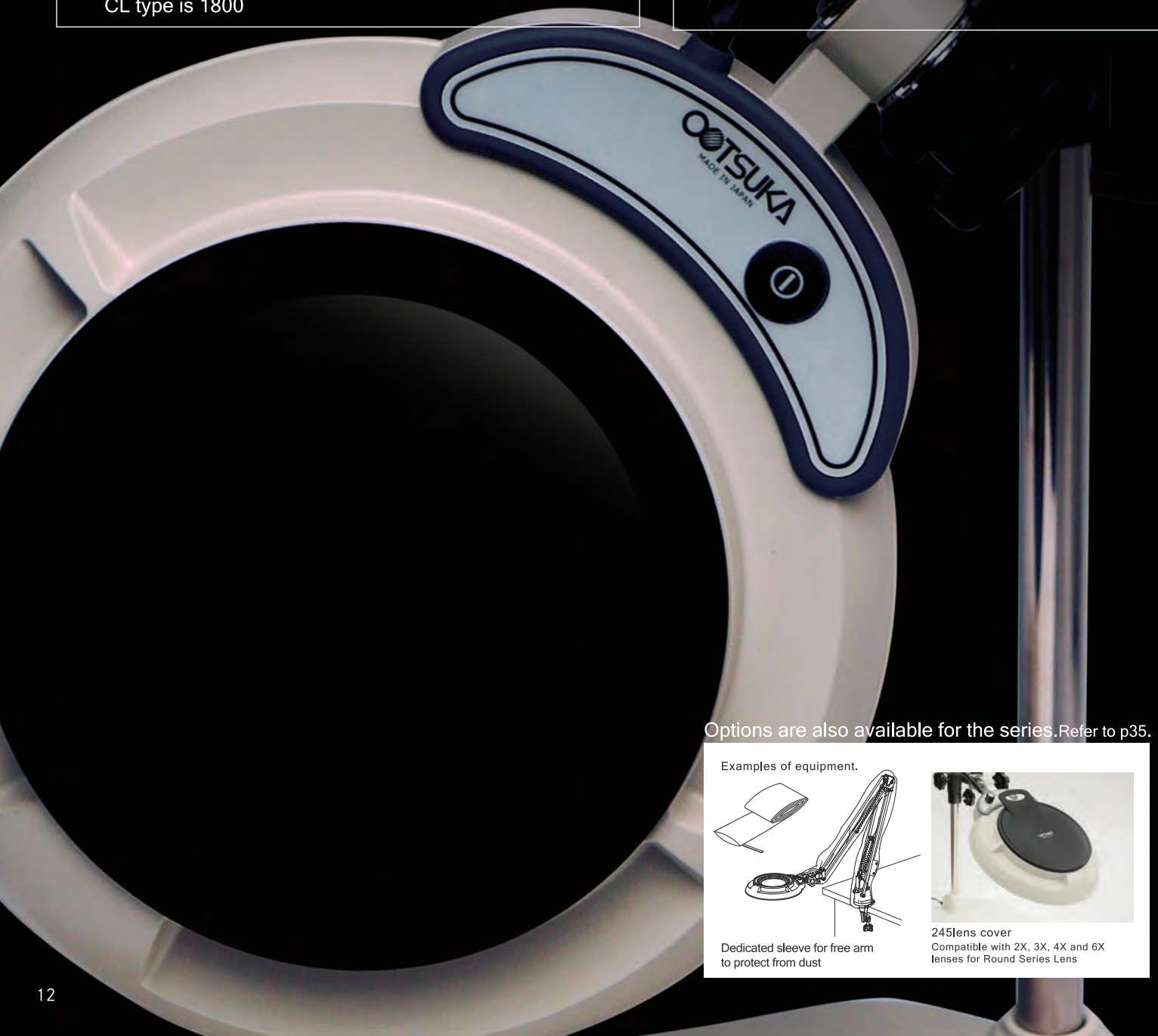
2X	3X	4X	6X
8X	10X	12X	15X
2XAR	3XAR	4XAR	6XAR
8XAR	10XAR		

Select the lens magnification and combine it with the main unit.

Example: **SKKL-B 2X**

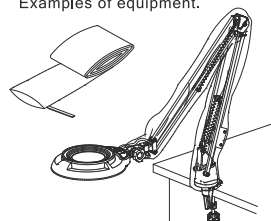
Series name Type name Magnification

We also sell only the main body without a lens.



Options are also available for the series. Refer to p35.

Examples of equipment.



Dedicated sleeve for free arm to protect from dust

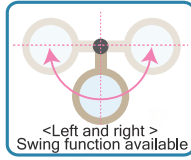


245lens cover
Compatible with 2X, 3X, 4X and 6X lenses for Round Series Lens

SKKL Series features.

Eight lens magnifications are available: 2X, 3X, 4X, 6X, 8X, 10X, 12X and 15X. AR coated lenses are also available from 2X to 10X. Standard circular lenses are equipped with LEDs with diffusers. The light intensity can be kept constant by omitting the light intensity adjustment function.

Lineup



SKKL-B

With table stand

Product Dimension(W x H x D):188x331x320mm
Weight:1.9kg (Excluding lens)

SKKL-F

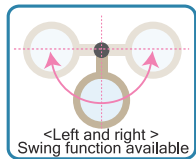
Free arm and clamp type

Product Dimension(Arm length): 995mm
Weight: 2kg (Excluding lens)

SKKL-CL

Light box With transmission illumination

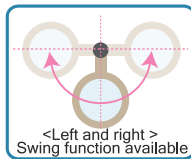
Product Dimension(W x H x D):340x340x353mm
Weight: 3.2kg (Excluding lens)



SKKL-CF

Compact free arm and clamp type

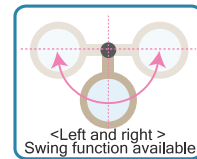
Product Dimension(Arm length): 675mm
Weight: 1.9kg (Excluding lens)



SKKL-FD

Free arm and Fixed desk holder type

Product Dimension(Arm length):1015mm
Weight: 1.9kg(Excluding lens)



SKKL-FL

Free-Arm Caster Stand Set

Product Dimension (Depth / Arm length):310mm/ 1466mm
Weight: 12.1kg (Excluding lens)



SKKL-D

Desk holder type

Product size (a pillar / a cross bar):376mm / 290mm
Weight: 1.1kg (Excluding lens)



SKKL-MS

Magnet stand type

Product size (a pillar / a cross bar): 368mm / 130mm
Weight: 2.1kg(Excluding lens)



SKKL-ST

Long bar and clamp type

Product size (a pillar / a cross bar): 345mm / 290mm
Weight: 1.2kg (Excluding lens)

LED illuminated magnifier

OLIGHT5 series

AR^{Coat}
standard

Increasing lens area by 150%. Adopting BIG-RECTA-SYSTEM that standardized AR coat Flagship model with overwhelming field of view and contrast power



- Lens Dimensions (mm) : 180×120
- AR-coated lens Line Up : standard feature
- Dimming function : 100% - 10% (CL type only 100 - 0%)
- Input voltage range : AC100 - 240V* · 50/60Hz
(* When using at a voltage of 125V or higher, it can be handled by changing or purchasing a power cable separately.)
- AC Adapter Dimensions (mm) : 87×45×34
- Power Cord length (mm) : 1800 (AC side) 1800 (DC side)
CL type is 1800

BIG-RECTA LENS

2XAR

4XAR

358AR

Select the lens magnification and combine it with the main unit.

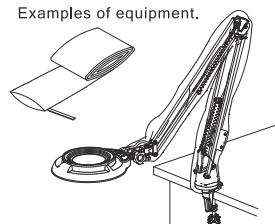
Example: **OLIGHT5-F 2XAR**

Series name Type name Magnification

We also sell only the main body without a lens.

Options are also available for the series. Refer to p34-35.

Examples of equipment.



Dedicated sleeve for free arm to protect from dust



Inspection booth

OLIGHT5 Series features.

- The area of the lens has been enlarged by 150% to compare with OLIGHT3.
- The continuous dimming has been expanded from 100% to 10%. (CL type: 100% - 10%)
- The switch has been integrated in the head to enable hand-held ON/OFF and the continuous dimming. (B,F type)
- AR coating* has been standardized to reduce eye fatigue even after long hours of use.

Comparison of conventional RECTA and BIG-RECTA

Switch is integrated in the head (B,F type)

Conventional Square Lenses
RECTA 2X
OLIGHT3
OLIGHT3L series

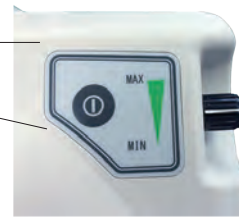


Larger square lens
BIG-RECTA 2X
OLIGHT5 series



Lens Area
150% expansion

Switch position



Light levels range from
100% to 10%.
Infinitely adjustable at hand

Lighting section



Proven success with OLIGHT3L
Equipped with a white LED light
panel

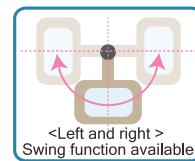
This is the actual observation and comparison of the same sample using OLIGHT3L-F2X and OLIGHT5-F2X.
Visibility may be different depending on the eye point and working distance.

Lineup



OLIGHT5-B
With table stand

Product Dimension(WxHxD):188x391x320mm
Weight:2.2kg(Excluding lens)



OLIGHT5-F
Free arm and clamp type

Product Dimension(Arm length): 856mm
Weight: 2.2kg (Excluding lens)



OLIGHT5-CL
Light box With transmission illumination

Product Dimension(WxHxD):340x340x353mm
Weight:3.3kg(Excluding lens)

New " BIG-Recta 358AR" with lens magnification of 3X, 5X and 8X is now available!

Photo of the BIG-RECTA 358AR installed.



The BIG-RECTA 358AR is equipped with three different magnification lenses (3X, 5X, and 8X) in a single unit. By attaching this lens to a magnifier, visual inspection using multiple magnifications can be performed with a single unit, thereby improving work efficiency. Also, by attaching this lens to a conventional BIG-RECTA 2XAR, it is possible to increase the magnification to 5X, 7X, or 10X.

OLIGHT5

Product photos do not have the same proportions.

LED illuminated magnifier

OLIGHT3L series

A high-grade model that adds contrast power from one-way lighting to a rectangular lens with little distortion.

AR Coat
selectable



RECTA LENS

2X

3.5X

2XAR

3.5XAR

Select the lens magnification and combine it with the main unit.

Example: **OLIGHT3L-F 2X AR**

Series name Type name Magnification

We also sell only the main body without a lens.

- Lens Dimensions (mm) : 144×108
- Lineup of AR-Coated lens : option
- Dimming function : 100% - 50%
- Input voltage range : AC100 - 240V* · 50/60Hz
(* When using at a voltage of 125V or higher, it can be handled by changing the cord with a plug.)
- Power Cord length (mm) : 1800

OLIGHT3L Series features.

The OLIGHT3L series features a diagonally-mounted white LED lighting panel to emit light at an angle in relation to the lens center. This means the product is designed with an emphasis on rendering unevenness on work-pieces visible. The model excels at detecting surface scratches and dents, etc. on metal and resin. The rectangular lens has reduced peripheral distortion to handle extended work periods. The product can reduce strain and fatigue from work through the use of optional AR-Coated Lenses which suppress refraction, increasing the volume of light that passes through.



Lineup

OLIGHT3L-B

With table stand

Product Dimension (WxHxD): 185x380x300mm

Weight: 2.3kg (Excluding lens)

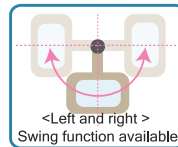


OLIGHT3L-F

Free arm and clamp type

Product Dimension (Arm length) : 905mm

Weight: 2.5kg (Excluding lens)

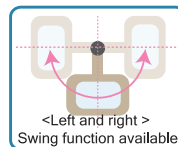


OLIGHT3L-FD

Free arm and fixed, desk holder type

Product Dimension (Arm length) : 940mm

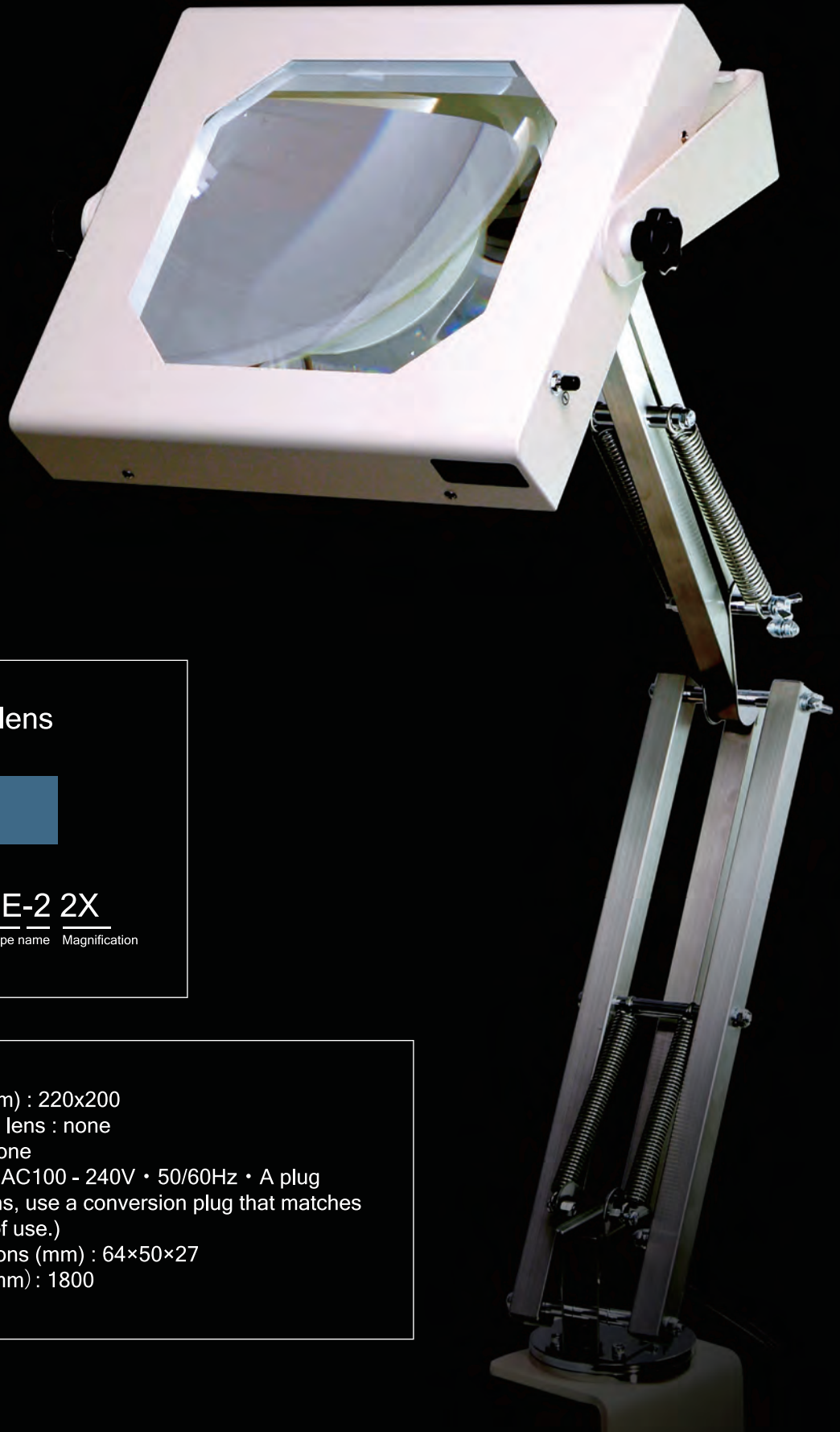
Weight: 2.4kg (Excluding lens)



LED illuminated magnifier

LED-WIDE series

Equipped with a 220x200mm ultra-large aperture lens



Fix type lens

2X

Example: LED-WIDE-2 2X

Series name Type name Magnification

- Lens Dimensions (mm) : 220x200
- Lineup of AR-Coated lens : none
- Dimming function : none
- Input voltage range : AC100 - 240V • 50/60Hz • A plug
(When using overseas, use a conversion plug that matches the country / region of use.)
- AC Adapter Dimensions (mm) : 64×50×27
- Power Cord length (mm) : 1800

LED-WIDE Series features.

Illuminated magnifier of all-metal structure, with metal used for the product housing except the lens. It shows its true potential in harsh operating environments. Equipped with a 220 x 200 mm glass lens, one of the largest in Japan. It features a large field of view.



Lineup



LED-WIDE4

Free arm and clamp type

Product Dimension (Arm length) : 940mm
Weight: 10.8kg



LED-WIDE2

With table stand

Product Dimension (W x H x D): 400x330x420mm
Weight: 12.7kg



LED-WIDE3

long bar and clamp type

Product Dimension (a cross bar / a pillar to lens center) :
375mm / 535mm
Weight: 8.9kg

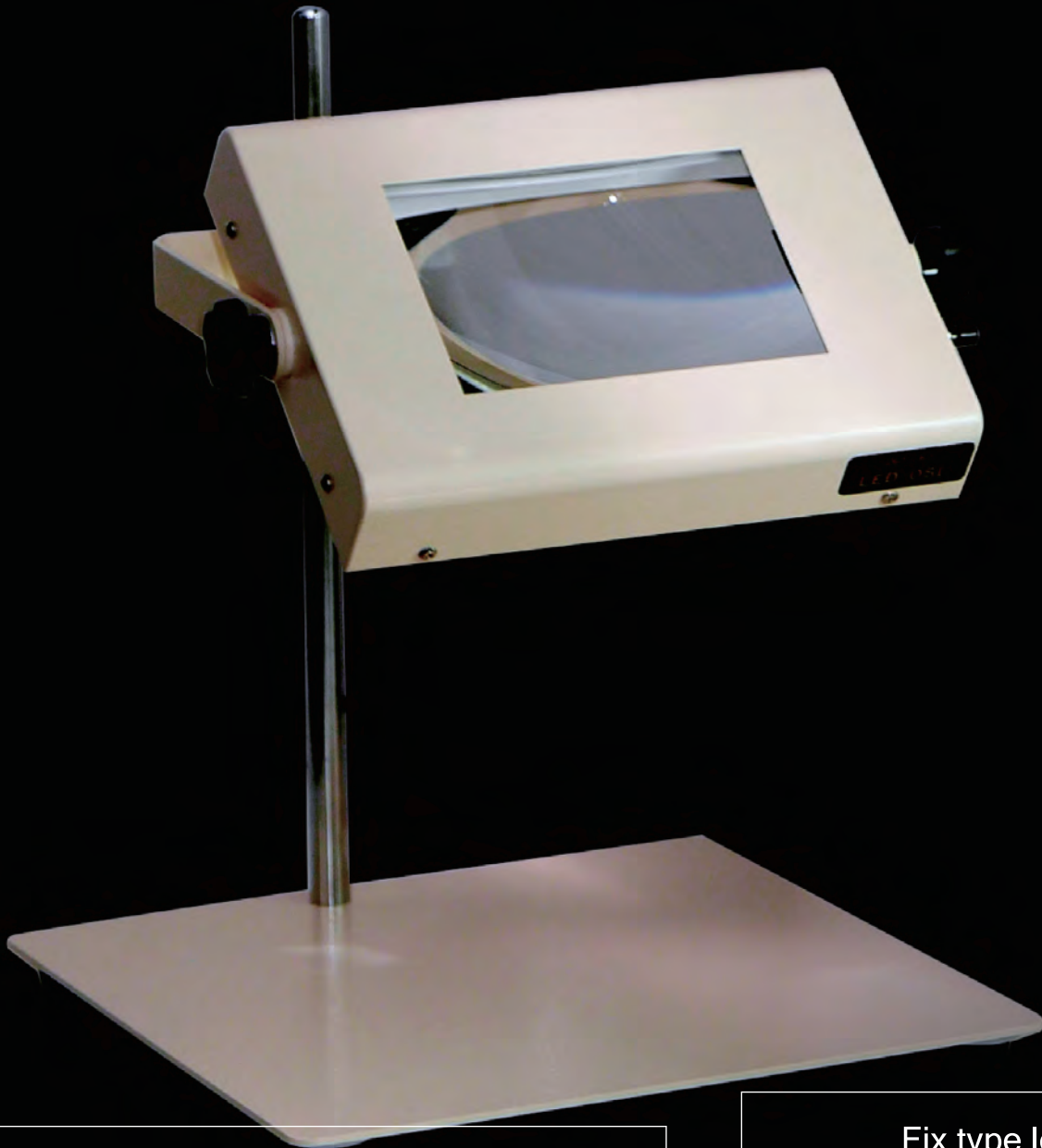
Product photos do not have the same proportions.

LED-WIDE

LED illuminated magnifier

LED-OSL series

Outstanding robustness due to full metal body



- Lens Dimensions (mm) : 140x100
- Lineup of AR-Coated lens : none
- Dimming function : none
- Input voltage range : AC100 - 240V · 50/60Hz · A plug
(When using overseas, use a conversion plug that matches the country / region of use.)
- AC Adapter Dimensions (mm) : 64×50×27
- Power cord length (mm) : 1800

Fix type lens

2X

4X

Select the lens magnification and body.
(The lens is fixed.)

Example: **LED-OSL-2 2X**

Series name Type name Magnification

LED-WIDE Series features.

Illuminated magnifier of all-metal structure, with metal used for the product housing except for the lens. It shows its true potential in harsh operating environments. Illumination is provided by straight tube LEDs with diffuser plates, ensuring the necessary brightness for work.



Lineup



LED-OSL4
Free arm and clamp type
Size of product (Arm length): 995mm
Weight: 3.5kg (2x), 4.5kg (4x)



LED-OSL2
With table stand
Product Dimension (W x H x D): 300x380x310mm
Weight: 5kg (2x), 6kg (4x)



LED-OSL3
long bar and clamp type
Product Dimension (a cross bar / a pillar to lens center) :
355mm / 475mm
Weight: 2.9kg (2x), 3.9kg (4x)

LED-OSL

LED illuminated magnifier

AR^{Coat}
selectable

OLIGHT3L-F 6500K

The OLIGHT3L-F 6500K Color temperature is 6500K



RECTA LENS

2X

3.5X

2XAR

3.5XAR

Select the lens magnification and combine it with the main unit.

Example: **OLIGHT3L-F 6500K 2X**

Series name Magnification

We also sell only the main body without a lens.

- Color temperature of LED : 6500K
- Lens Dimensions (mm) : 144×108
- Lineup of AR-Coated lens : option
- Dimming function : 100% - 0%
- Input voltage range : AC100 - 240V · 50/60Hz
- Power Cord length (mm) : 1800

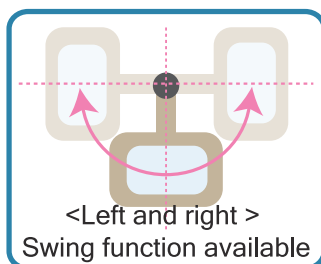
OLIGHT3L-F 6500K features.

OLIGHT3L-F 6500K color temperature is 6500K.

The OLIGHT3L-F6500K features a diagonally-mounted LED lighting to emit light at an angle in relation to the lens center. This means the product is designed with an emphasis on rendering unevenness on work-pieces visible. The model excels at detecting surface scratches and dents, etc. on metal and resin. The rectangular lens has reduced peripheral distortion to handle extended work periods. The product can reduce strain and fatigue from work through the use of optional AR-Coated Lenses which suppress refraction, increasing the volume of light that passes through.

OLIGHT3L-F 6500K

Product Dimension(Arm length) : 905mm
Weight: 2.5kg (Excluding lens)



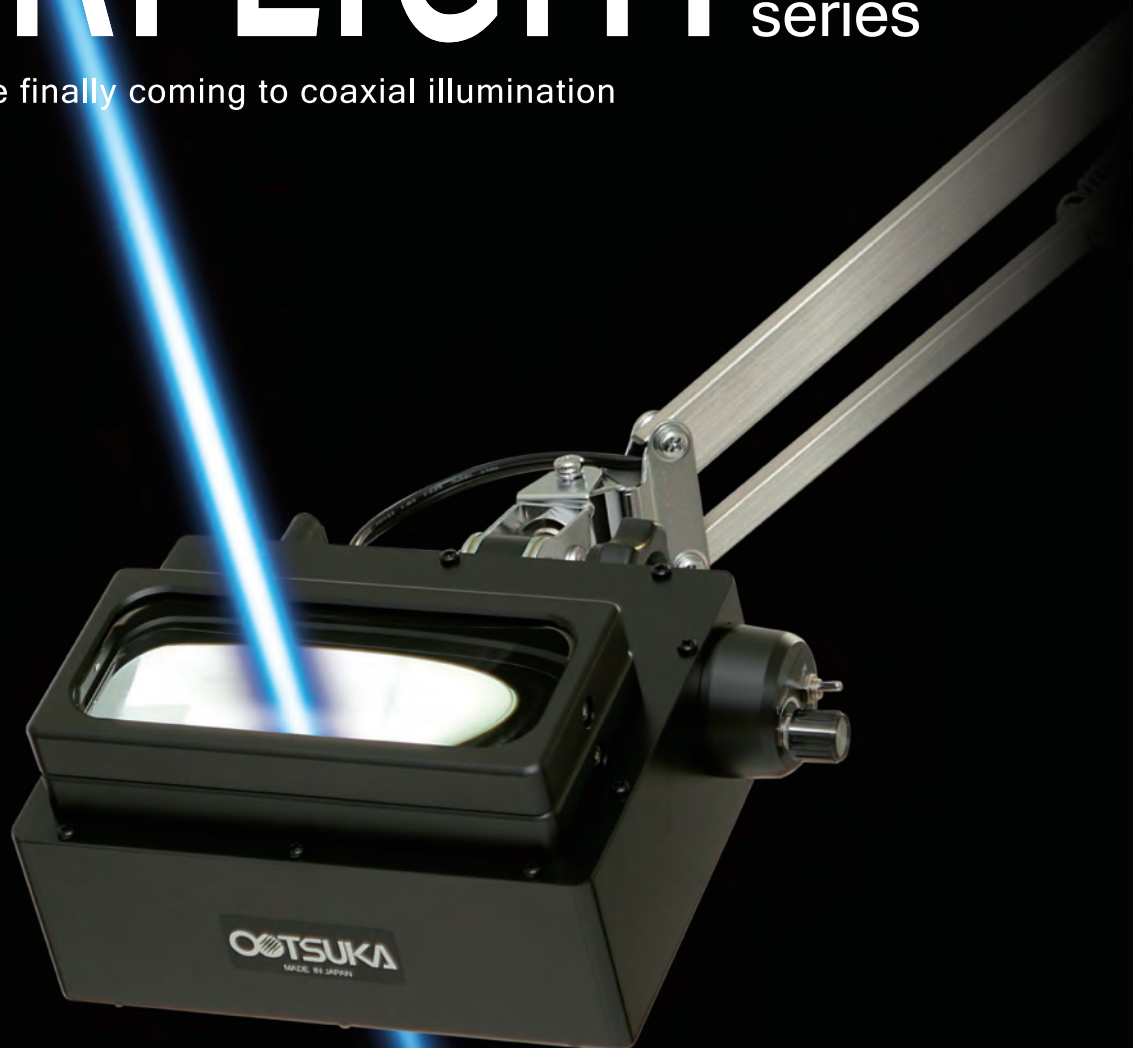
OLIGHT3L-F 6500K

LED coaxial illuminated magnifier

AR^{Coat}
standard

SURFLIGHT series

Magnifiers are finally coming to coaxial illumination



Lens magnification

SL130B · SL130F

: Switchable between 2x and 4x

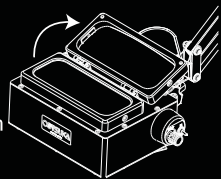
SL120B · SL120F : 2x fixed

2XAR (line magnification)

Lift the upper lens.(SL130B,SL130F)

Eye-point :150mm

Working distance :100mm



4XAR (line magnification)

Use by layering 2 lenses.(SL130B,SL130F)

Eye-point :150mm

Working distance :60mm



The light in the image is a composite of the image of coaxial illumination.

- Lens dimensions(mm) : 130×50 Effective area
- AR-coated lens Line Up : standard feature
- Dimming function : 100% - 0%
- Input voltage range : AC100 - 240V* · 50/60Hz
(* When using at a voltage of 125V or higher,
it can be handled by changing or purchasing a
power cable separately.)
- AC Adapter Dimensions(mm) : 99×47×32
- Power Cord length (mm) : 1800 (AC side) 1200 (DC side)

SURFLIGHT Series features.

It is a fusion of an illumination magnifier and coaxial epi-illumination.

It clearly captures the contours of the engravings and the unevenness of the observed object. The light irradiated on the concave area can be captured and observed as it is.

Magnification can be switched between 2X and 4X.

The lens is rectangular, close to the human field of view, and allows both eyes to see the object being observed in three dimensions.

The lens is coated with AR coating "anti-reflection coating" to reduce unpleasant glare.



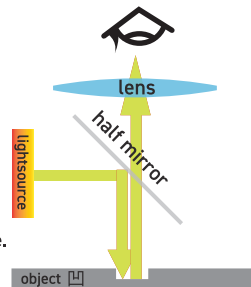
SL130B

A Comparison of Coaxial Illumination and Ring Illumination

Coaxial Fall Illumination [SURFLIGHT Series]

Features

- There is no darkening of concave areas.
- Since the irradiation direction is constant
- Since the irradiation direction is constant, reflected light from specular workpieces can easily escape.



Observe the bottom of the metal hole



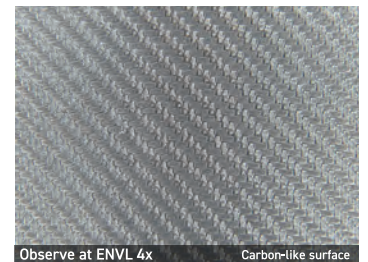
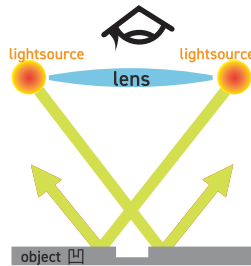
An observation of the surface of an object



Ring Illumination [ENVL Series]

Features

- Uniform illumination of the object.
- Good color reproducibility.
- Suitable for work lighting as it does not cast shadows.



Lineup



SL130B
With table stand

Product Dimension(WxHxD)
:188x331x320mm
Weight:3.0kg



SL130F
Free arm and clamp type

Product Dimension(Arm length)
: 856mm
Weight: 3.1kg



SL120B
With table stand

Product Dimension(WxHxD)
:188x331x320mm
Weight:2.7kg



SL120F
Free arm and clamp type

Product Dimension(Arm length)
: 856mm
Weight: 2.8kg

SURFLIGHT

OLED inspection lighting / OLED under-shelf lighting

MODELIGHT **OLED** series

A newly developed OLED panel made in Japan is used as the light source

OLED inspection lighting

EL270

Light source : OLED
Illuminance directly under center(lx) :
3200/150mm, 1100/300mm, 430/500mm (When the amount of light is 100%)
Ra : 90 and above
Color Temperature(K) : 4000
Rated Input Voltage : 100V 50/60Hz (When using Aplug)*
Power consumption(w) : 13
AC Adapter(mm) : 99×47×32
Power Cord length(mm) : 1800 (AC side)1200 (DC side)
Dimming function : 100% - 10%
Luminous surface size(mm) : L273 × W30 × 2panels

* 125V - 240V requires plug replacement



OLED under-shelf lighting

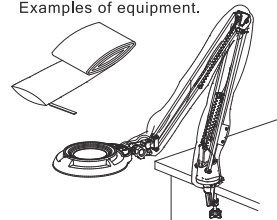
TE270

Light source : OLED
Illuminance directly under center(lx) : 5000/100mm, 2500/150mm, 750/300mm
Ra : 90 and above
Color Temperature(K) : 4000
Rated Input Voltage : 100V 50/60Hz (When using Aplug)*
AC Adapter(mm) : 99×47×32
Power Cord length(mm) : 1800 (AC side)1200 (DC side)
Dimming function : 100% - 10%

* 125V - 240V requires plug replacement

Options are also available for the series. Refer to p34-35.

Examples of equipment.



Dedicated sleeve for free arm to protect from dust



Inspection booth

MODELIGHT Series features.

OLED inspection lighting EL270F



Product Dimension(Arm length)
: 949mm
Weight : 2.6Kg

OLED inspection lighting EL270B



Product Dimension(W x H x D)
: 242x619x353mm
Weight : 3.5kg

OLED inspection lighting EL270ST



Product size (a pillar / a cross bar)
: 623/130mm
Weight : 2.4kg

Also available as a set with Inspection boot

Inspection booth with EL270B *Example



When used in combination with Inspection boot, it can block out unnecessary information and enhance concentration on work. It can also suppress static electricity, preventing the absorption of dust and the generation of static electricity.

Work assistance lens

ML-WAL *



Lens size (mm)
• 1.8X : 142x106
• 4X : Φ30
• 7X : Φ25



EL270F mounting example

The EL270F can be used as an illuminated magnifier. Ideal for detailed work and inspections that are difficult to see with the naked eye. You can freely change the angle between the observation object and lighting. It is a combination of a super-large wide lens with a high transparency of 1.8x and a high-magnification lens of 4x and 7x.

* This is an exclusive option for EL270F and ML230F.

OLED under-shelf lighting TE270D

Two OLED panels are used to allow free placement in any work environment according to the shape of the workpiece, etc. A wide variety of installation variations are available.



Power consumption(w) : 15
Intermediate cord length(mm) : controller-lightpanel 1600 / lightpanel-lightpanel 1500
Luminous surface size(mm) : L273 x W30 x 2panels
Weight(Kg) : 1.0

TE270 installation (example)



Installation on horizontal pipe



Fasten with cable ties (Note 1)



Mounting under the top panel



Fixed with screws (Note 1)

OLED under-shelf lighting TE270S

Simple type with a single OLED panel, ideal for small-space work environments and for precision work and inspections.



Power consumption(w) : 8
Intermediate cord length(mm) : controller-lightpanel 1600
Dimming function : 100% - 10%
Weight(Kg) : 0.6

(Note 1) Screws, cable ties, etc. are not included with this product.
Product photos do not have the same proportions.

MODELIGHT

LED work and inspection lighting / Dimming Toning LED Light Box

MODELIGHT series

Lighting that can be widely used from inspection to work. Toughness specifications that can be used for industrial use.

LED work and inspection lighting

ML230F



LZ-1

Dimming Toning LED Light Box



LED work and inspection lighting ML230F

Free arm and clamp type

Light source : White LED light panel

Illumination intensity (lx) : 1700/300mm, 670/500mm,
(When the amount of light is 100%)

Ra : 90 and above

Color temperature (K) : 4700

Input voltage range : 100V 50/60Hz (When using A plug)*

Power consumption (w) : 9.5

AC Adapter(mm) : 87×45×34

Power Cord length(mm) : 1800 (AC side)1800 (DC side)

Dimming function : 100% - 10%

Size of the Illumination head unit (mm) : 324x62

Clampable width (mm) : 10 - 60

Product Dimension(Arm length) : 949mm *125V - 240V requires plug replacement

Weight (Kg) : 2.3



Work assistance lens* ML-WAL



ML230F mounting example

The ML230F can be used as an illuminated magnifier.

Ideal for detailed work and inspections that are difficult to see with the naked eye.

You can freely change the angle between the observation object and lighting.

It is a combination of a super-large wide lens with a high transparency of 1.8x and a high-magnification lens of 4x and 7x.

Lens size (mm)

• 1.8X : 142×106

• 4X : Φ30

• 7X : Φ25

*This is an exclusive option for EL270F and ML230F.

Dimming / Toning LED Light Box

LZ-1

LZ-1 is an auxiliary lighting device for visual inspection with dimming / color temperature selection / toning function.

Equipped as standard with a function that allows you to select the color temperature of the light emitting part from two types, Warm White and Cool White.

It is brighter than the edge light type and has less uneven illuminance than the fluorescent light type.

It has achieved high reliability with a design that does not easily break down.

Main specifications of LZ-1

Maximum power consumption: 20W

(maximum illuminance on both sides)

Maximum illuminance : 24klux (maximum illuminance on both sides)

Rated Input Voltage : 100V 50/60Hz *125V - 240V requires plug replacement

Dimming rate : 100 - 50%

Illuminance measurement conditions : Measured at a position 0 mm at the center of the diffused plate.

Illuminance is the data measured by the cut product, not the guaranteed value.



AC cord length : 1800mm

Light emitting part dimensions : 210x298mm

Product Dimension(W x H x D) : 340x60x353mm (Excluding the switch part)

Weight(Kg) : 2.5

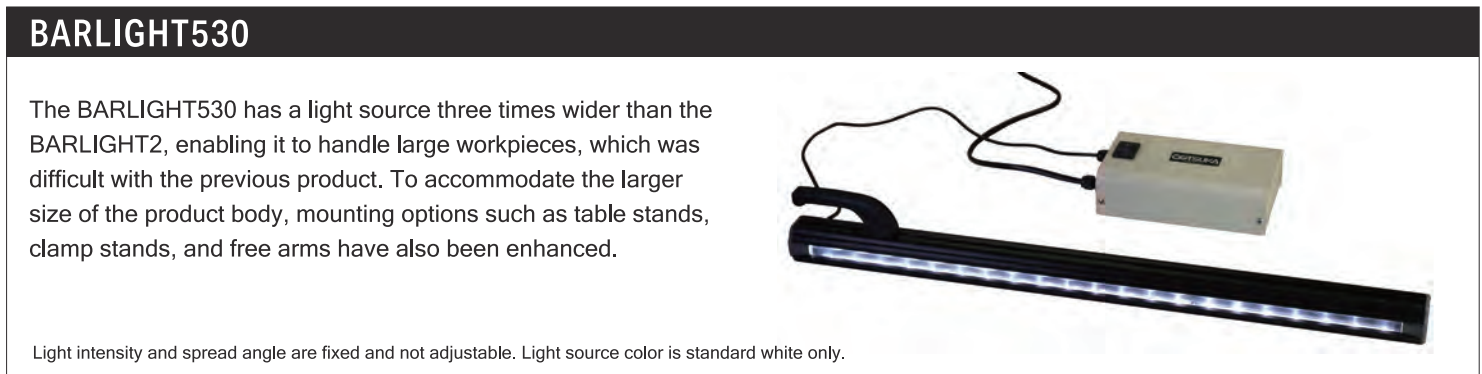


Toning image diagram

LED light for checking surface flaws

BARLIGHT series

Inspection lighting that visualizes fine irregularities on the surface, from scratches and dents to dust.



Main Specifications

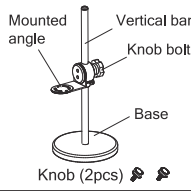
	BARLIGHT 2	BARLIGHT 3	BARLIGHT 530
Light source	High illumination white LED 7 bulbs		High illumination white LED 21 bulbs
Dimming function (100% - 50%)	×	○	×
Irradiation spread angle adjustment function	×	○	×
Illuminance *2	Irradiation spread angle 6 ° 150mm:15000Lx, 200mm:10000Lx, 300mm:5800Lx, 400mm:3600Lx		150mm:19000Lx, 200mm:15000Lx, 300mm:10300Lx, 400mm:7100Lx
	Irradiation spread angle 30 ° 150mm:10000Lx, 200mm:6500Lx, 300mm:3300Lx, 400mm:2000Lx		
Input voltage	AC100 · 50/60Hz	AC100 · 50/60Hz *1	AC100 · 50/60Hz *1
Cord length (mm)	AC adapter: 1800	Power cord: 1800 Relay code: 1500	Power cord: 1800
Power consumption	8W	9W	24W
Specification temperature range	0°C~40°C		0°C~40°C
Dustproof and waterproof protection grade	IP40		
Weight	370g	945g	1.6kg 530F:3.4kg, FL:13.5kg
Weight of irradiation head only	300g	420g	800g
Irradiation head part total length (mm)	224		570

* 1 BARLIGHT 3 and BARLIGHT 530 can be used up to 240V by changing the cord with plug.
* 2 Illuminance data is measured at the center of the irradiation head in a dark room.
It is the data extracted from one mass-produced product, not the guaranteed value.

BARLIGHT

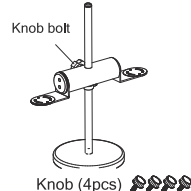
Option (BARLIGHT 2, 3)

TILT STAND (unit: mm)	
Adjusting direction	Z (Height) θ (Angle of elevation and depression) α (Horizontal angle)
Vertical bar	Φ13
Size	BaseΦ129 Height307
Weight	1.6kg
Specification temperature range	0 °C ~ 40 °C



Mounted angle
Vertical bar
Knob bolt
Base
Knob (2pcs)

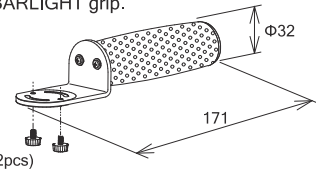
DOUBLE TILT STAND (unit: mm)	
Adjusting direction	Z (Height) θ (Angle of elevation and depression) α (Horizontal angle is adjustable)
Vertical bar	Φ13
Size	BaseΦ129 Height307
Weight	2.1kg
Specification temperature range	0 °C ~ 40 °C



Knob bolt
Knob (4pcs)

BARLIGHT GRIP

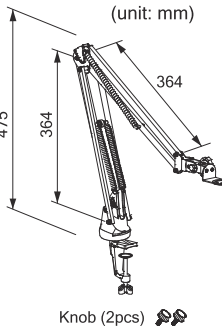
This grip is attachable to the BARLIGHT with decorative screws. It is most suitable for viewing large works or internal observation of large equipment. Innumerable mounting forms can be selected by combining the four mounting positions of the BARLIGHT and the multiple mounting holes of the BARLIGHT grip.



Knob (2pcs)

BARLIGHT FREEARM

BARLIGHT FREEARM is a movable arm type clamp stand that can attach the BARLIGHT with two decorative screws. The free arm with overwhelming degree of freedom makes it easy to finely adjust the irradiation angle of the work.



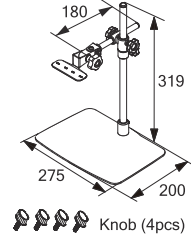
Knob (2pcs)

Clampable width: 15 - 60

Option (BARLIGHT 530)

Table stand

(unit: mm)



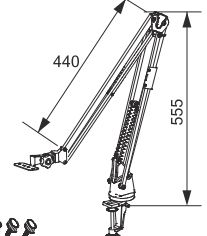
Knob (4pcs)

This table stand can be attached to the BARLIGHT 530 using 4 Knob for use after placing it up on a desk, etc.

(Warning)
Moving and tilting the illumination head beyond the specified range of motion may result in the product tipping over and damaging the object being observed.

Free arm

(unit: mm)



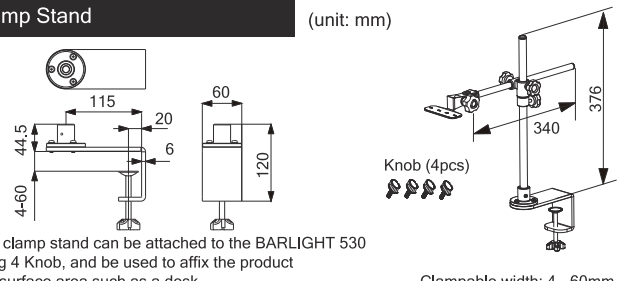
Knob (4pcs)

Free-Arm Clamp stand is a movable arm-type stand that can attached the BARLIGHT 530 using 4 Knob. The free arm with overwhelming degree of freedom makes it easy to finely adjust the irradiation angle of the work.

(Warning)
This product cannot pass the relay cord of the BARLIGHT-530 through its arm.

Clamp Stand

(unit: mm)



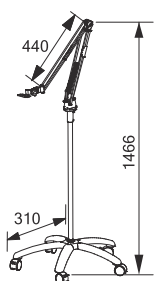
Knob (4pcs)

Clampable width: 4 - 60mm

This clamp stand can be attached to the BARLIGHT 530 using 4 Knob, and be used to affix the product to a surface area such as a desk.

Free-Arm Caster Stand Set

(unit: mm)



Knob (4pcs)

The Free-Arm Caster Stand is a movable arm-type stand that can attached the BARLIGHT 530 using 4 Knob. The free arm with overwhelming degree of freedom makes it easy to finely adjust the irradiation angle of the work.

(Warning)
This product cannot pass the relay cord of the BARLIGHT-530 through its arm.

Features and explanation

- Contrast cannot be obtained if coaxial lighting is used.
- Scratches on a painted surface or dusts before painting are not visible.
- Due to vast number of inspection for molded articles, oversights occurs.
- Scratches, etc., become visible by increasing the magnification of a magnifier, but doing so can fatigue workers' eyes.

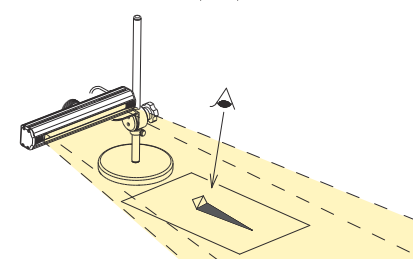


- Roughness casts shadows and enhances contrast against surroundings.
- It emphasizes the detailed roughness and fine deposits on surface.
- The workers do not need to strain their eyes to check for defects, and can work easily.
- It makes possible to find defects even with lower magnification lenses.

Two inspection methods that Otsuka proposes.

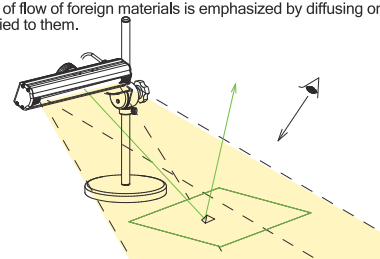
Surface irradiation method

A plane light is radiated along the surface to be inspected to emphasize unevenness and detect flaws, dust, or defects.



Diffused reflection method


A wide light radiated over the workpiece at a certain angle to check the reflected light. Unevenness of flow of foreign materials is emphasized by diffusing only the light applied to them.




Comparison of sink marks and roughness on surfaces of plastic injection molded parts.

(Surface irradiation method)

Illuminated by BARLIGHT 3



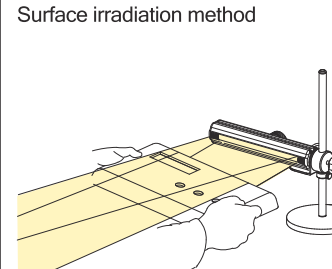
Normal indoor lighting



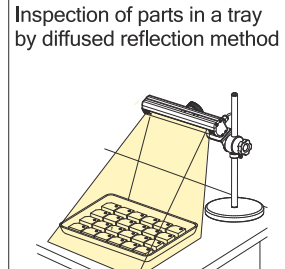
Usage examples

Tilt Stand / Double Tilt Stand, BARLIGHT Free-arm and BARLIGHT Grip are optional.

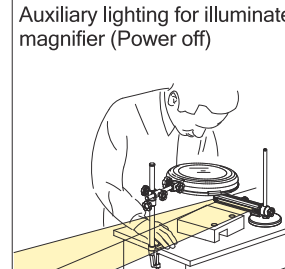
Surface irradiation method



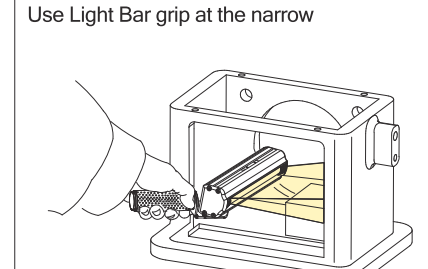
Inspection of parts in a tray by diffused reflection method



Auxiliary lighting for illuminated magnifier (Power off)



Use Light Bar grip at the narrow



LED illuminated loupe for checking holes, grooves, and inside walls

BORELOUPE

series

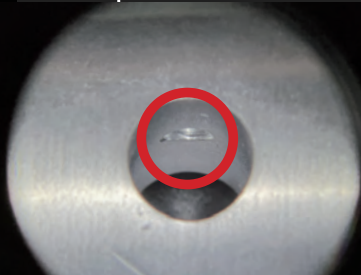
Capable of inspecting the inside of holes where light cannot reach

AR Coat
standard



- lens magnification : Switchable between 2X and 3X (Line magnification)
- AR-coated lens Line Up : standard feature
- Effective diameter of lens : Φ 40
- Light source : LED light (estimated life time: 40,000 hours)
- Input voltage range : AC 100 · 50/60 Hz
- Power consumption : 1.2W
- AC Adapter(mm) : 46x34x25
- Cord length(mm) : 1500(DC side)
- Dustproof and waterproof protection grade : IP30

Internal inspection



Observation of inner surface of metal workpiece by 3XAR

Check for burrs and cast voids on the inner surface of castings

Since the optical axis of the BORE LOUPE and the operator's line of sight are aligned, light is diffusely reflected by burrs and castings, allowing visualization of abnormal areas.

Inspection of deep grooves

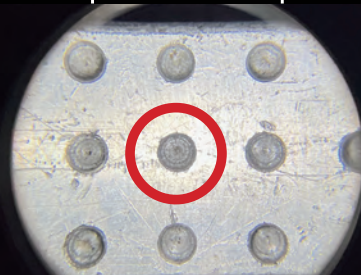


Observing grooves in metal workpieces with 3XAR

For inspection of deep grooves that are difficult to reach by light.

The optical axis of the BORE LOUPE and the operator's line of sight are aligned, making it suitable for illuminating and observing narrow or deep grooves. The shape of the groove and the presence of foreign objects can be inspected.

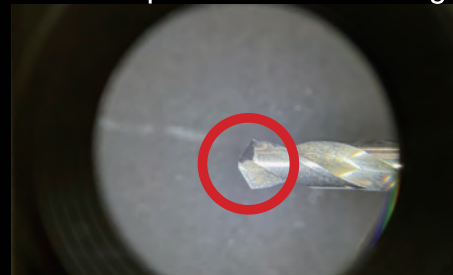
Visual inspection of stop holes



Observation of metal workpiece stop hole with 3XAR

The BORE LOUPE specializes in stop holes. It shines light down to the bottom of the hole to make it visible. Holes up to 55 mm deep can be clearly seen. With the optional working distance extender, you can see up to 100 mm to the bottom of the hole.

Visual inspection of drill cutting edge



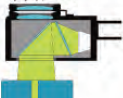


Observing drill tips with 3XAR

For inspection and polishing of drill tips. The BORE LOUPE has a lens for magnification, making it ideal for observing fine workpieces. Magnification can be switched between 2x and 3x. Magnification can be increased to 3.3x by attaching an optional power-up lens with AR coating.



BORELOUPE Series features.

The BORE LOUPE uses coaxial epi-illumination to allow observation of areas that are difficult to inspect with conventional illuminated magnifiers due to the difficulty of light penetration. In addition, the lens is coated with an AR coating to reduce reflection on the lens, and at the same time, the workpiece can be visualized more clearly.

Difference in lighting methods


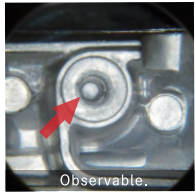
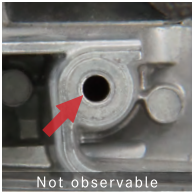

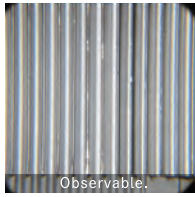




Proximity lighting system		
BORELOUPE	Illuminated loupe	LED illuminated magnifier
		
It can light up not only surface brightly but also inside deep hole.	It can light up the surface brightly. But the end of deep hole is shaded, because the light is applied obliquely.	It can light up the surface evenly and brightly, but the end of deep hole is shaded and dark since the light is applied obliquely.

Selection process and standard for lenses

Lens magnification (line magnification)	How to change lenses	Eye-point (mm)	Working distance (mm)
2 x AR	 Use by swinging the top lens. If the top lens is in the way, attach the lens cap.	10~200	147
3 x AR	 Use by layering 2 lenses.	10~200	55

Magnification is a theoretical value calculated from the lens curvature. Eye-point and working distance will vary in accordance to the eyesight and age of the viewer. The table shows the average distance that is most magnified and focused. Find the position that looks most comfortable.

Comparison of between BORELOUPE and nearby lighting method

	Object	BORELOUPE	ENVL
Deep hole made by die casting	 die-cast	 Observable.	 Not observable
grooves	 Aluminum	 Observable.	 Not observable
inside walls	 Resin	 Observable.	 Not observable

Lineup

BORELOUPE-F Free arm and clamp type

Product Dimension(Arm length): 843mm
Weight: 2.0kg



BORELOUPE-ST Long bar and clamp type

Product size (a pillar / a cross bar): 350mm / 440mm
Weight: 1.3kg



The polarizing filter for BORELOUPE
(Exclusive use for 3X lens)

The polarizing filter has a characteristic of transmitting only the light wave components in one oscillating direction among components in random oscillating directions. Using this characteristic, unnecessary surface reflecting to improved observation and inspection efficiency, and reduce fatigue. This filter also has dimming effect and can reduce the intensity of light from a fluorescent lamp.



BORELOUPE-PUL AR
(Exclusive use for 3x lens)

When 3x or large magnification is necessary, you can increase the magnification to 3.3x by simply mounting this lens onto the upper lens. If this option is used, the working distance (the distance between the bottom of the BORELOUPE and the specimen) becomes very short. Take care not to hit the specimen against the glass parts in the BORELOUPE.



Working Distance Extender WDE-B
(Exclusive use for 3x lens)

Mounting it on 3x lens could make working distance 100mm (not changing magnification, normally working distance is 55mm). If you use the power up lens for BORELOUPE with it, magnification could become 3.8x and working distance could become 38mm.

BORELOUPE

Option - Loupe

Visual Inspection Booth

Installed as a simple booth when working by shielding from ceiling lighting or outside light. For shading during precision visual work with low illumination.

- Product name: Visual inspection booth
- material properties: main body of the product: Polypropylene resin (Surface Resistance $10^3\Omega \sim 10^6\Omega^*$)
- *The values are measured values, not guaranteed values.
- cushion rubber: NBR rubber
- weight: 1.6kg

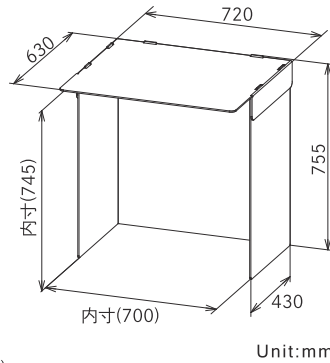


Image of the set with EL270B

Sold as a set with the following products

OLIGHT5series(Excluding Type CL) / OLIGHT6series / MODELIGHTseries (EL270F,B,ST)

Wide View Stand loupe IR-1795

Applicable to from outside inspection to magnification observation, and precision work. A super large wide lens of 1.8x with high light transmittance and small lenses of 4x and 7x are combined.

The hard-coated plastic lenses are not scratched easily and can be folded to the A5 size for easy storage and transportation.

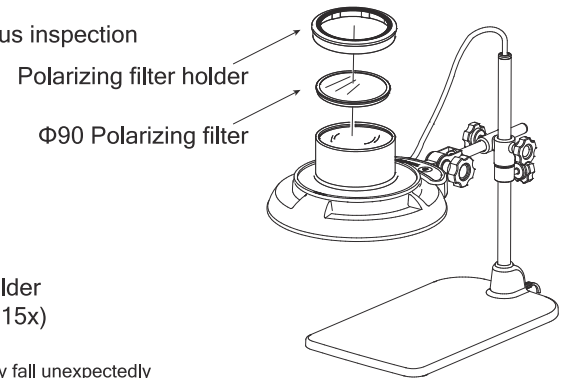
- Model: Wide View Stand loupe
- Magnification: Rectangular lenses: 1.8x, segment lens: 4x, 7x
- Weight: 1.9kg
- Size: 200x160x45mm (When folded)



Polarizing Filter

A polarizing filter as a characteristic of transmitting a component of light wave in only one direction out of random directions.

This eliminates unnecessary light reflected on the surfaces of the observed objects, thus inspection efficiency is improved and the operator is less fatigued. Since this filter has light intensity of the lighting.



The standard polarizing filter holder (for 8x to 15x) is simply placed on a lens for the normal usage and may fall unexpectedly if the lens is tilted largely. Use of this polarizing filter holder will hold the filter firmly and prevent accidents.

Big-diameter Glass Scale

This is precision rules with divisions and various gauges drawn on the glass surface.

Shapes of objects can be directly measured by contacting the magnifying glass, etc., to the objects.

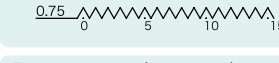
In the φ76 mm of the field of view, six kinds of scales are drawn.

An aluminum frame is used to prevent glass breakage. The periphery is covered with knurled rubber to prevent the hand from slipping during measurement.

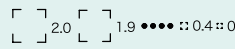
Radius gauge (1.5~0.2mm)



Pitch gauge (0.5~1.75mm)



Square gauge (2.0~0.3mm)



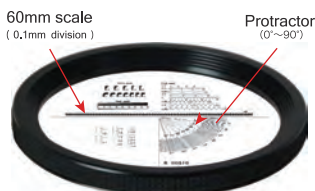
Taper gauge (0.5~0.1mm)



Glass Scale

GS-A

Diameter thickness	φ90mm、t=8mm
Effective diameter	φ74mm
Material of scale	Optical glass
Scale processing	Cr vapor deposition
Weight	50g
Precision accuracy	±0.005mm



Illuminated magnifiers, microscopes or stand-type loupes etc. are suitable as magnifying devices and 10x magnification of higher is recommended when an illuminated magnifier is used. When measuring a thick workpiece such as a screw, die-cast part, pressed part, etc., fix the lens position and hold the workpiece with the hand.

Option • Loupe

245Lens Cover

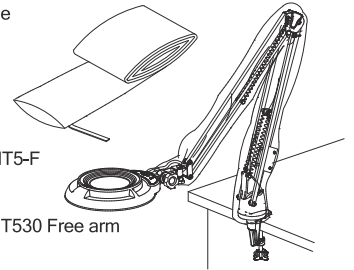
Lens cover for Round Series lenses = 2x, 3x, 4x, and 6x only. When not in use, it protects the lens from dust. It also prevents accidents caused by convergence phenomenon.



* All photos are mounting images. Illuminated magnifying lens is not be included.

Dedicated Sleeve for Free Arm to Protect from Dust

Diffuses static electricity by covering the free arm. At the same time, it prevents scattering of foreign objects due to rubbing of the arm.



Compatible models: OLIGHT6-F / OLIGHT5-F / SL130F / ENVL,SKKL-F,CF,FD,FL / LED-OSL4 / EL270F / ML230F / BORELOUPE F / BARLIGHT • BARLIGHT530 Free arm
Some products may have excess length.

Type-B Conductive Base Mat

This is the Type-B Conductive Base Mat. Use it individually to prevent stains/dirt to tables and provide protection to the work, or use it along with the ground wire set for combining static electricity,

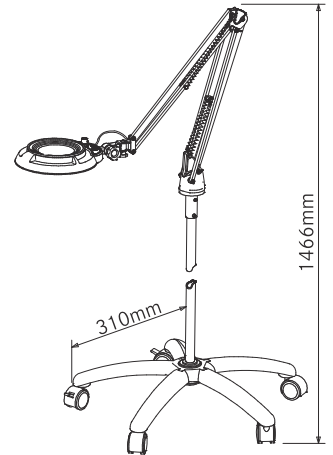
Ground Resistance (of Mat) R
 $10^6\Omega \leq R \leq 10^8\Omega$
IEC(61340-5-1/5-2 Within the required range)
SKK-B is not supported

* All photos are mounting images. Illuminated magnifying lens is not be included.



FL Caster Bases

Possible to move within range of the power cord.



Example attached to typeF

Ground Wire Set

Use this with the Type-B Conductive Base Mat by directly connecting to the ground to turn a table stand into a temporary static-free work space.



Lens Cleaner Kit

A cleaner kit exclusively for illuminated magnifiers that is actually used by in-house lens assemblers and combines carefully selected products.

Kit contents
Wiping cloth with OTSUKA logo
Large format 200 x 200mm luxury wiping cloth x 1

Water-soluble safety multi-cleaner
Contains 18 ml Herbal formulation / cleaning / antibacterial / antistatic



Offset Clamp

In situations where a wall is close by, or a clamp is too bulky, you can attach the free-arm (F-type, CF-type) on a slightly offset position.



Clampable width: 4 - 60mm

Flange Base

By attaching to a work desk using screws, F/CF/ST-type models can be used without a clamp stand.



Power Up Lens (PUL) ROUND series, OSL series, WIDE series,

Only available for 2x

SKK-PUL



■ Lens Diameter: $\phi 100\text{mm}$
Not suitable for WIDE series
■ ROUND Series 2X + PUL = 5X

OSL-PUL



■ Lens Dimensions: 50x100mm
■ OSL 2X + OSL - PUL = 4X

WIDE-PUL



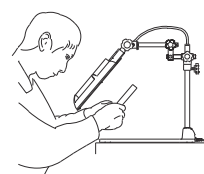
■ Lens Dimensions: 100x180mm
■ WIDE 2X + WIDE - PUL = 4X

Side Extension Stick

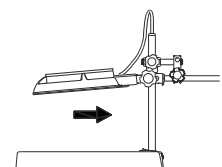
Attach this product to the side stick of the magnifying lens, then after attaching to a crank bulb, you will be able to widen and increase the range of movement of the side stick.



■ Shaft Diameter : $\phi 13\text{mm}$
■ Length of Shaft : 97mm



Example attached to typeB



Example attached to typeCL

About Interchangeable Lens System

Proposal of lenses with AR coating

Otsuka Optics' illumination magnifiers are available in a wide range of lens magnifications. Many lenses with AR (Anti-Reflection) coatings are also available, which are effective in reducing "eye fatigue" and "reduced work efficiency" of the operator. Please select the optimum lens for your application and work.

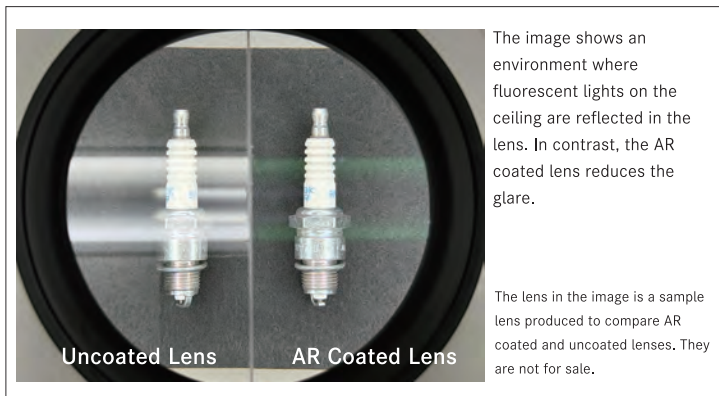
■ Explanation of AR-Coated lens

It has the effect of suppressing light ray reflections generated on the lens surface and reducing the phenomenon of indoor lighting (fluorescent lamps, etc.) being reflected in the lens of the magnifier. On the objective side, it also has the effect of increasing the amount of light rays transmitted in the magnified image. These features are expected to reduce the strain on the operator's eyes, maintain concentration, and increase the defect detection rate.

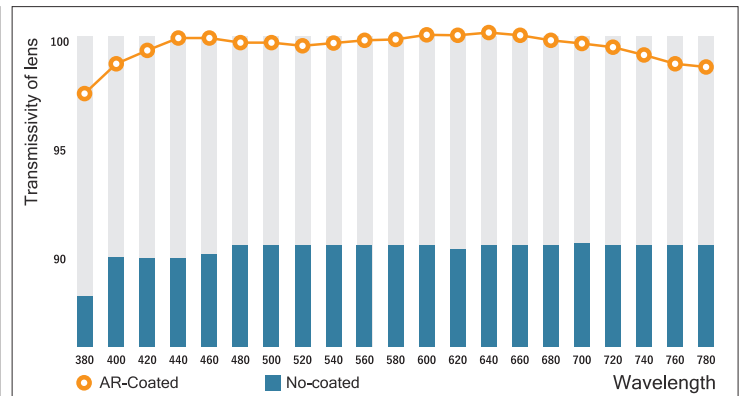
AR = Abbreviation for "Anti-Reflection". It suppresses the reflection of visible light (the frequency range visible to the human eye) on the lens surface.

We do not apply coatings to lenses in use.

Comparative images of AR coated and uncoated lenses



Comparison of transmittance between AR-Coated lens and No-coated



■ Approximate value when using the lens

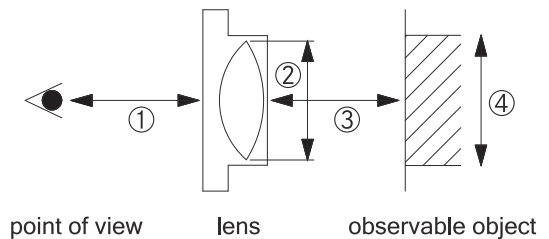
Examples of Round Series Lenses

Lens magnification	① Eye point (mm)	② Lens diameter (mm)	③ Working distance (mm)	④ View (mm)
2X	150	Φ130	160	Φ170
3X	150	Φ130	130	Φ140
4X	150	Φ130	110	Φ120
6X	100	Φ105	82	Φ70
8X	105	Φ90	54	Φ40
10X	80	Φ90	43	Φ40
12X	80	Φ90	35	Φ40
15X	65	Φ90	30	Φ30

Magnification of illuminated magnifiers is expressed in terms of area magnification.

MAGNA WIDE LENS / WIDE LENS

Lens magnification	① Eye point (mm)	② Lens diameter (mm)	③ Working distance (mm)	④ View (mm)
2X	150	Φ150	150	Φ200
3X	150	Φ150	120	Φ180
4X	150	Φ150	100	Φ160



■ Images of models Examples of Round Series Lenses

A sample of view through lens. Does not guarantee magnification.

Area magnification	2X	3X	4X	6X
Magnification Sample				
Lens diameter	Φ130	Φ130	Φ130	Φ105

Area magnification	8X	10X	12X	15X
Magnification Sample				
Lens diameter	Φ90	Φ90	Φ90	Φ90

Interchangeable Lens List

BIG - RECTA Lens



Compatible model : OLIGHT6 / OLIGHT5

Lens name,Magnification	BIG-RECTA2XAR	BIG-RECTA4XAR	BIG-RECTA358AR
Product Images			
Lens diameter(mm)	180 X 120	180 X 120	Φ100,Φ40,Φ40

BIG-RECTA358AR is equipped with three magnifications (3X, 5X, 8X). By attaching this lens, multiple magnifications can be used with a single unit. It can also be stacked on top of the BIG-Rector 2XAR to increase the magnification to 5X, 7X, or 10X.

MAGNAWIDE Lens System



Compatible model : MAGNALIGHT

Lens name,Magnification	MAG2XAR	MAG3XAR	MAG4XAR
Product Images			
Lens diameter(mm)	Φ150	Φ150	Φ150

RECTA Lens



Compatible model : OLIGHT3L / OLIGHT3L-F 6500K

Lens name,Magnification	RECTA2X	RECTA3.5X	RECTA PUL
Product Images			
Lens diameter	144 X 108	144 X 108	144 X 108

Compatible model : OLIGHT3L / OLIGHT3L-F 6500K

Lens name,Magnification	RECTA2XAR	RECTA3.5XAR	RECTA PUL AR
Product Images			
Lens diameter	144 X 108	144 X 108	144 X 108

RECTA PUL and RECTA PUL AR are optional lenses that can be stacked on top of a lens to increase magnification. Magnification is "2X/2XAR + RECTA PUL/RECTA PULAR=4X/4XAR" "3.5X/3.5XAR + RECTA PUL/RECTA PULAR=5X/5XAR"

Round Series Lens



Compatible model : ENVL6K / ENVL / SKKL

Lens name,Magnification	Round Series 2XAR	Round Series 3XAR	Round Series 4XAR	Round Series 6XAR	Round Series 8XAR	Round Series 10XAR
Product Images						
Lens diameter	Φ130	Φ130	Φ130	Φ105	Φ90	Φ90

Lens name,Magnification	Round Series 2X	Round Series 3X	Round Series 4X	Round Series 6X
Product Images				
Lens diameter	Φ130	Φ130	Φ130	Φ105

Lens name,Magnification	Round Series 8X	Round Series 10X	Round Series 12X	Round Series 15X
Product Images				
Lens diameter	Φ90	Φ90	Φ90	Φ90

WIDE Lens



Compatible model : LSK WIDE

Lens name,Magnification	WIDE 2XAR	WIDE 3XAR	WIDE 4XAR
Product Images			
Lens diameter	Φ150	Φ150	Φ150

LSK Wide Series is a discontinued product. Only the lenses are being sold. As of June 2023

About Otsuka Optics Products

Features of different types of illuminated magnifiers

Several models are available for each series of illuminated magnifiers. You can choose the one that best suits your application.

- B** **With table stand**
A product placed and used on a desk, etc.
- CL** **Light box With transmission illumination**
This product has two illuminating functions of epi-illumination and trans-illumination.
- D** **Fixed desk holder type**
A product having a box, the bottom of which is fixed with screws when used.
- MS** **Magnet stand type**
A product attached onto a metal surface by magnetic force of magnets when used.
- ST** **Long bar and clamp type**
A product consisting of a cross bar, a pillar, and a desk clamp.

- F** **Free arm and clamp type**
It has an arm with high degree of freedom, and is clamped to a desk for use.
- CF** **Compact free arm and clamp type**
A product having a shorter arm than model F, and handled easier.
- FD** **Free arm and fixed, desk holder type**
Desk holder which is fixed with screws and free arm.
- FL** **Free arm with casters stand**
A product made by combining a free-arm type illuminated magnifier and a stand with casters.

Example: **ENVL-F 2x**
Series name Type name Magnification

Main lighting used in products

OLED

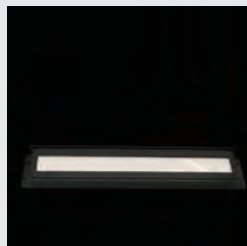
OLED lighting has features that do not cause eye fatigue. It is expected to sustain concentration and increase the detection rate of defects.



OLIGHT6series



TE270D



TE270S



EL270F

LED

LEDs are characterized by power savings and long.



MAGNALIGHTseries



SKKL/ENVLseries
ENVL6Kseries *



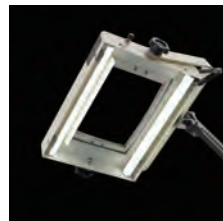
OLIGHT5series



OLIGHT3Lseries



LED-WIDESeries



LED-OSLseries



ML230F



SURFLIGHTseries



OLIGHT3L-F 6500K

* ENVL6K series LEDs have a color temperature of 6000K.

Depending on the manufacturing period, differences in LED color temperature may occur. None of this is a malfunction or defect of the product. Please understand this in advance.

Features of Products

Our products are made for uses inside Japan.
Please note the following when using outside Japan.

Matters that needs to be checked.

- ◆ Please check the input voltage, frequency, and the type of AC plug.
- ◆ Please look at the product specifications in our catalog.

Products with a specification: "Input Voltage: 100 - 240 V 50/60 Hz" cannot be changed to the specification for uses outside Japan (Excluding BARLIGHT 2 and BORELOUPE Series).

Products with a specification: "Input Voltage: Only 100 - 240 V 50/60 Hz" cannot be changed to the specification for uses outside Japan.

*Please contact us for changes in overseas specifications for "products without any input voltage notation".

Notes for When Placing Orders

- ◆ Please specify the "type of AC plug" of the country in which you will be using the product.

* Our products are equipped with AC plug cords of "A plug 125V rating for Japan" as standard specifications.

When using overseas, it is necessary to change the AC plug cord. (Paid)

- (1) For MAGNALIGHT, OLIGHT6, OLIGHT5 (Except CL type), SURFLIGHT, SKKL (Except CL type), ENVL (Except CL type), EL270F, ML230F, as shown in Fig. 1 on the right, the AC power cords of these two models can be replaced individually.

It is possible to respond by instructing the change at the time of ordering or by purchasing the power cord separately after purchasing the product.

Corresponding plug: SE plug, BF plug

- (2) For products other than the above

We accept changes to AC plug cords at the time of manufacture.

If you are unsure of the shape of the AC plug, please refer to the table below.

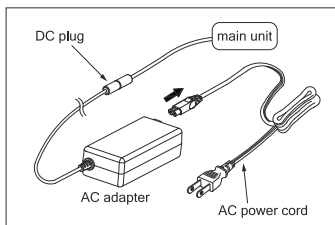


Figure 1



A plug





































grounded SE plug
















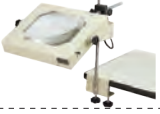

grounded BF plug

Specification comparison list of the illuminated magnifier

		OLED illuminated magnifier		Full spectrumLED illuminated magnifier		LED illuminated magnifier						
		OLIGHT6 series	P.4	ENVL6Kseries	P.6	MAGNALIGHT series	P.8	ENVL series	P.10	SKKL series	P.12	
Type name	■B With table stand A product placed and used on a desk.											
	Product name	OLIGHT6-B		ENVL6K-B		MGL-B		ENVL-B		SKKL-B		
	■CL Light box With transmission illumination This product has two illuminating functions of epi-illumination and trans-illumination											
	Product name							ENVL-CL		SKKL-CL		
	■F Free arm and clamp type It has an arm with high degree of freedom and is clamped to a desk for use.											
	Product name	OLIGHT6-F		ENVL6K-F		MGL-F		ENVL-F		SKKL-F		
	■CF Compact free arm type A product having a shorter arm than model F and is clamped to a desk for use.											
	Product name			ENVL6K-CF		MGL-CF		ENVL-CF		SKKL-CF		
	■FD Free arm and fixed, desk holder type Desk holder which is fixed with screws and free arm.											
	Product name					MGL-FD		ENVL-FD		SKKL-FD		
	■FL Free arm and caster stand type A product made by combining a free-arm type illuminated magnifier and a stand with casters.											
	Product name			ENVL6K-FL				ENVL-FL		SKKL-FL		
	■D Fixed, desk holder type A product having a box, the bottom of which is fixed with screws when used.											
Product name			ENVL6K-D		MGL-D		ENVL-D		SKKL-D			
■MS Magnet stand type A product attached onto a metal surface by magnetic force of magnets when used.												
Product name			ENVL6K-MS		MGL-MS		ENVL-MS		SKKL-MS			
■ST Long bar type A product clamped to a desk for use.												
Product name			ENVL6K-ST		MGL-ST		ENVL-ST		SKKL-ST			
Lighting	Light source/Lighting methods	OLED Irradiation from one direction		LED Ring irradiation		LED Ring irradiation		LED Ring irradiation		LED Ring irradiation		
	Light intensity adjustment function	100 ~ 10%		100~0%		100 ~ 0%		(100 - 10%),(CL type only 100 - 50%)		x		
Lens	[Lineup of lens] Size · Magnification AR = Anti-reflective coated lens	[BIG-RECTA-Lens] 180×120mm(2xAR,4xAR)		[ROUND-Series Lens] 130Φ(2x,3x,4x,2xAR,3xAR,4xAR) 105Φ(6x,6xAR) 90Φ(8x,10x,12x,15x,8xAR,10xAR)		[MAGNAWIDE lens system] 150Φ(2xAR,3xAR,4xAR)		[ROUND-Series Lens] 130Φ(2x,3x,4x,2xAR,3xAR,4xAR) 105Φ(6x,6xAR) 90Φ(8x,10x,12x,15x,8xAR,10xAR)		[ROUND-Series Lens] 130Φ(2x,3x,4x,2xAR,3xAR,4xAR) 105Φ(6x,6xAR) 90Φ(8x,10x,12x,15x,8xAR,10xAR)		
	Input power supply	AC100V - 240V · 50/60 Hz 125V - 240V requires plug replacement		AC100V - 240V · 50/60 Hz 125V - 240V requires plug replacement		AC100V - 240V · 50/60 Hz 125V - 240V requires plug replacement		AC100V - 240V · 50/60 Hz 125V - 240V requires plug replacement		AC100V - 240V · 50/60 Hz 125V - 240V requires plug replacement		
Power supply	Power consumption	7W		14W		14W		10W(CL type only 20W)		7W(CL type only 12W)		
	[Power up lens] You can increase the magnification by stacking lenses.			[SKK-PUL (Only for 2x)] ROUND SERIES 2x + PUL = 5x				[SKK-PUL (Only for 2x)] ROUND SERIES 2x + PUL = 5x		[SKK-PUL (Only for 2x)] ROUND SERIES 2x + PUL = 5x		
Option	[The polarizing filter] By stacking lenses, unnecessary surface reflected light is removed from the observed object. It has a dimming effect.			[130ΦPolarizing filter](2x,3x,4x,6x,2xAR,3xAR,4xAR,6xAR) [90ΦPolarizing filter](8x,10x,12x,15x,8xAR,10xAR)				[130ΦPolarizing filter](2x,3x,4x,6x,2xAR,3xAR,4xAR,6xAR) [90ΦPolarizing filter](8x,10x,12x,15x,8xAR,10xAR)		[130ΦPolarizing filter](2x,3x,4x,6x,2xAR,3xAR,4xAR,6xAR) [90ΦPolarizing filter](8x,10x,12x,15x,8xAR,10xAR)		

LED illuminated magnifier

LED Coaxial Illumination Magnifier

OLIGHT5 series P.14	OLIGHT3L series P.16	LED-WIDE series P.18	LED-OSL series P.20	OLIGHT3L-F 6500K P.22	SURFLIGHTseries P.24
 <p>OLIGHT5-B</p>	 <p>OLIGHT3L-B</p>	 <p>LED-WIDE2</p>	 <p>LED-OSL2</p>		 <p>SL130B · SL120B</p>
 <p>OLIGHT5-CL</p>					
 <p>OLIGHT5-F</p>	 <p>OLIGHT3L-F</p>	 <p>LED-WIDE4</p>	 <p>LED-OSL4</p>	 <p>OLIGHT3L-F 6500K</p>	 <p>SL130F · SL120F</p>
	 <p>OLIGHT3L-FD</p>				
		 <p>LED-WIDE3</p>	 <p>LED-OSL3</p>		
<p>LED Irradiation from one direction (100 - 10%),(CL type only 100 - 50%)</p>	<p>LED Irradiation from one direction 100 ~ 50%</p>	<p>LED Front and back irradiation ×</p>	<p>LED Front and back irradiation ×</p>	<p>LED Irradiation from one direction 100 ~ 0%</p>	<p>LED Coaxial Fall Illumination 100 ~ 0%</p>
<p>[BIG-RECTA-Lens] 180×120mm(2xAR,4xAR)</p>	<p>[RECTA-Lens] 144×108mm (2x,3.5x,2xAR,3.5xAR)</p>	<p>[Fix type lens] 180x220mm(2x)</p>	<p>[Fix type lens] 100x140mm(2x,4x)</p>	<p>[RECTA-Lens] 144×108mm (2x,3.5x,2xAR,3.5xAR)</p>	<p>[Lens is switchable] 130x50mm(2xAR,4xAR)</p>
<p>AC100V - 240V · 50/60 Hz 125V - 240V requires plug replacement</p>	<p>AC100V - 240V · 50/60 Hz 125V - 240V requires plug replacement</p>	<p>AC100V~240V 50/60Hz</p>	<p>AC100V~240V 50/60Hz</p>	<p>AC100V - 240V · 50/60 Hz 125V - 240V requires plug replacement</p>	<p>AC100V - 240V · 50/60 Hz 125V - 240V requires plug replacement</p>
<p>9W(CL type only 10W+10W)</p>	<p>9W</p>	<p>9W</p>	<p>9W</p>	<p>12W</p>	<p>16W</p>
	<p>[RECTA-PUL] [RECTA-PUL AR] RECTA-SYSTEM2x/2xAR + RECTA-PUL/AR=4x/4xAR RECTA-SYSTEM3,5x/3,5xAR + RECTA-PUL/AR=5x/5xAR</p>	<p>[WIDE-PUL (Only for 2x)] 2x + WIDE-PUL = 4x</p>	<p>[OSL-PUL (Only for 2x)] 2x + OSL-PUL = 4x</p>	<p>[RECTA-PUL] [RECTA-PUL AR] RECTA-SYSTEM2x/2xAR + RECTA-PUL/AR=4x/4xAR RECTA-SYSTEM3,5x/3,5xAR + RECTA-PUL/AR=5x/5xAR</p>	

memo

Lined writing area consisting of multiple horizontal lines for text entry.

Lined writing area consisting of 30 horizontal lines.

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