

Light Guides

Universal Ringlights

For 33 to 81 mm Objective Diameters

SCHOTT ringlights emit intense, uniform, and shadow-free illumination for Machine Vision and Microscopy applications.



Universal Ringlight A08600 (classic clamp style)



Universal Ringlight, A08600.1 (new clamp style)

- Fits microscope and camera objectives from 33 to 81 mm with appropriate clamps
- Working distance is 1.5" to 6" (38 to 152 mm)
- 33" (838 mm) bundle length on all models
- Two unique clamping/mounting systems for precise positioning, most ringlights fit directly onto the microscope and camera objective without adapters
- Inputs fit all ColdVision light sources; ringlights can be used with other manufacturer's continuous light sources although adapters may be necessary
- Use ringlights with our dichroic color filters, diffusers, polarizer/analyzers, and reflector rings for alternative lighting effects
- Vertical exit bundle option increases work space and prevents the bundle from interfering with surrounding objects
- Modified standard and custom ringlights are also available for your unique requirements
- ESD (Electro Static Discharge) option is available on custom basis



Anti-Slip Ringlight Clamps, A08614



Anti-Slip Ringlight Clamps, A08601



Anti-Slip Ringlight Clamps, A08602

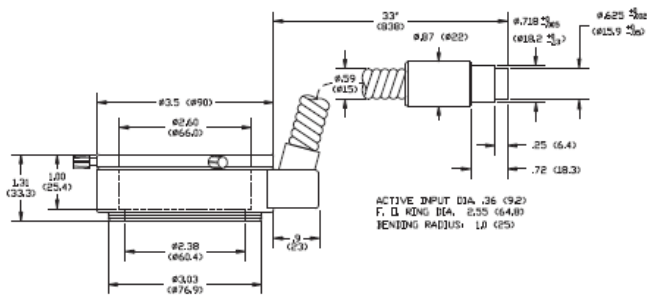
Anti Slip Ringlight Clamps:
For accurate positioning when using fiber optic components in industrial and laboratory environments.

Universal Ringlights

Dimensions in () are in mm

Ringlight Input: Black Anodized Aluminum or Conductive Finish
Bundle Sheathing: PVC Covered Metal Tubing or Stainless Steel
Working Distance: 1.5" to 6" (38 to 152)

: This product is manufactured with glass fiber.
 Not for use in cable/hose carrier.
 Call MORITEX to discuss moving cable/hose carrier applications.

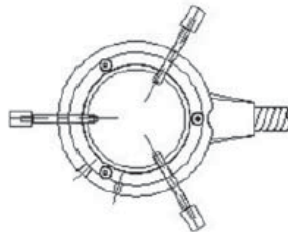
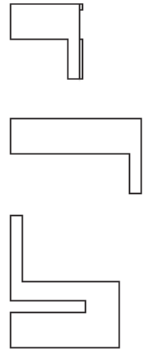


A08620 - 47 mm / 62 mm Ringlight with vertical exit
 (classic clamp)

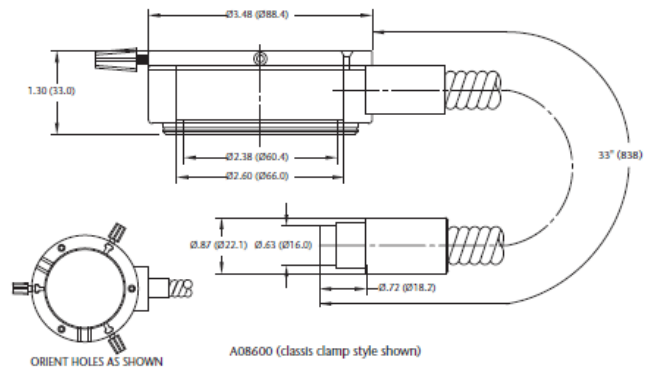
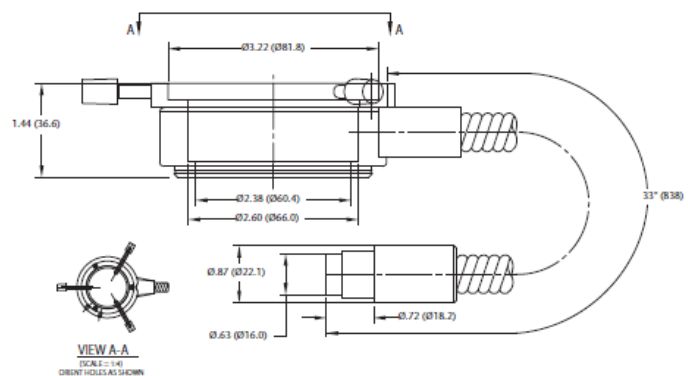
Clamp(s) for
 A08611 Clamp Ring,
 A08600 and A22000
 Ringlights and A08614, Set of
 3 Clamps 1.8 / 2.4" (47/62)

Clamp(s) for
 A08612 Clamp Ring, A08603
 Ringlight and A08601, Set of
 3 Clamps 1.3 / 1.8" (33/46)

Clamp(s) for
 A08613 Clamp Ring, A08604
 Ringlight, and A08602, Set of
 3 Clamps 2.4 / 3.2" (62/81)



A08690 Clamp Style (Clamp Only)



A08600 Clamp Style

Universal Ringlight

Part No.	Standard Exit	Vertical Exit	Minimum Working Distance	Objective diameter Camera and Microscope	Mounting	Polarizer/ System Analyzer
A08600	X		1.5" - 6"	47 to 62 mm	Clamps (classic)	A08615
A08600.1	X		1.5" - 6"	47 to 62 mm	Clamps (new)	A08615
A08620		X	1.5" - 6"	47 to 62 mm	Clamps (classic)	A08615
A08601.1	Ringlight Screw					

Holders, Clamp Rings, and Anti-slip Pads

Part No.	Description
A08614	Anti-slip Ringlight Clamps for ringlight models A08600, A08620. (3 clamps in package) (47 mm to 62 mm)
A08601	(33 mm to 46 mm)
A08602	(62 mm to 81 mm)

Midi, Mini and Maxi Ringlights

For 19 to 53 mm Objective Diameters

SCHOTT ringlights emit intense, uniform, and shadow-free illumination for Machine Vision and Microscopy applications.

Mini Features

- Fit microscope and camera objectives from 19 to 32.5 mm
- Working distance is .5" to 4" (13 to 102)

Midi Features

- Fit microscope and camera objectives from 38 to 53 mm
- Working distance is 1.25" to 3.5" (32 to 89)*

Midi & Mini Ringlight Features

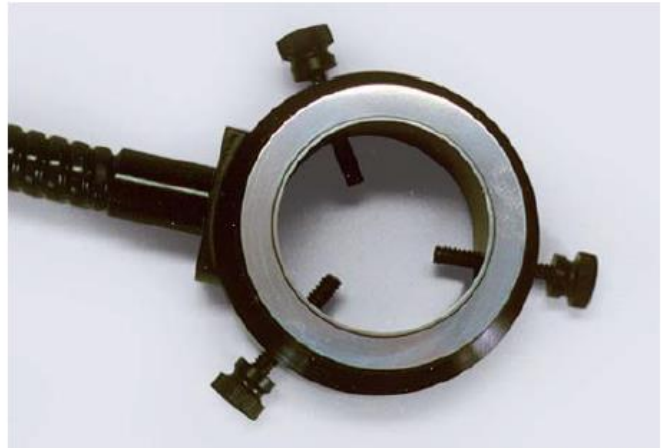
- Thumbscrew mounting system for precise positioning, ringlights fit directly on most microscope and camera objectives without adapters
- See the accessories section of the catalog for adapters
- Vertical exit bundle option increases work space and prevents the bundle from interfering with surrounding objects

4" Ringlight

- Fiber ring diameter is 4.5" (114*)
- Working distance ranges from 2" to 8" (51 to 203)
- Light exits at 40 degree angle for specular-free illumination
- Randomized fiber bundle maximizes uniformity

8" Ringlight

- Low Profile ringlights for working distances from 2.5" to over 4.5 (64 to 114)
- #1/4-20 mounting threads in the coupler (front and top) and the fiber bundle is protected with stainless steel tubing



Mini Ringlight, A08650



4" Ringlight, A08700



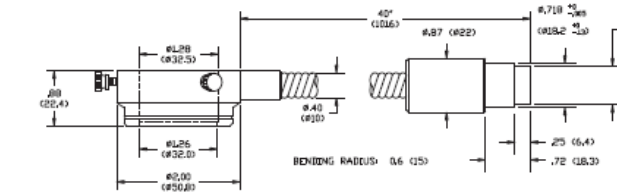
8" Ringlight, A08710

Midi, Mini and Maxi Ringlights

Dimensions in () are in mm

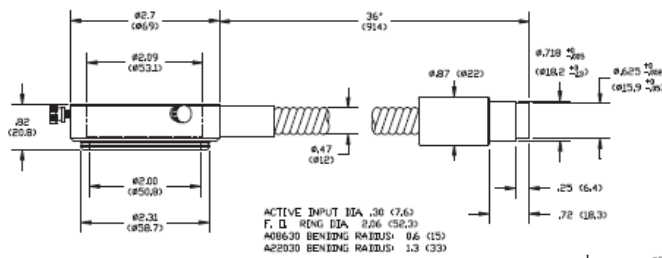
Ringlight Input: Black Anodized Aluminum or Conductive Finish
Bundle Sheathing: PVC Covered Metal Tubing or Stainless Steel

Warning : This product is manufactured with glass fiber. Not for use in cable/hose carrier. Call MORITEX to discuss moving cable/hose carrier applications.

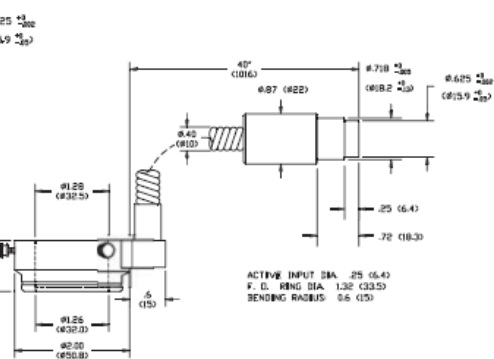


Notes:
A08650 has an active fiber dia. of .22 (5.6) for a working distance of .5 to 1.5' (13 to 38mm).
A08660 has an active fiber dia. of .25 (6.4) for a working distance of 1.5 to 4' (38 to 102mm).
Both have F.D. ring dia. of 1.32 (33.5).

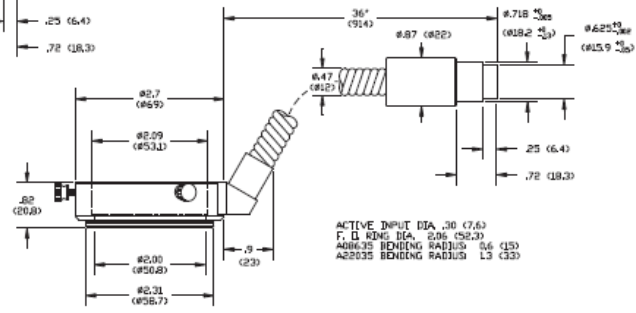
A08650 - A08660 - 19 / 32.5 mm Ringlights



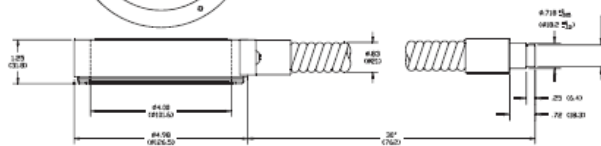
A08630 - 38 / 53 mm Ringlight with Standard Exit



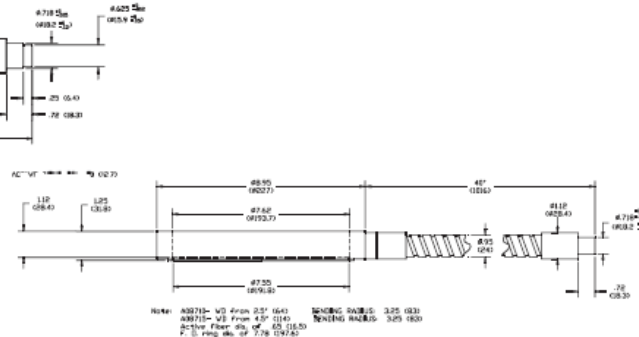
A08670 - 19 / 32.5 mm Ringlight with Vertical Exit



A08635 - 38 / 53 mm Ringlight with Vertical Exit



A08700 4" Ringlights



A08710 8" Ringlights

Maxi Ringlights

Part No.	ID	OD	Working Distance	Bundle Length	Polarizer/ Analyzer
A08700	4" (102)	9.98" (127)	2" - 8" (51 - 203)	30" (762)	A08705
★ A08710	7.5" (191)	8.95" (227)	2.5" - 4.5" (64 - 114)*	40" (1016)	★ A08712

★ Made-to-order products.

Use ringlights with our Dichroic color filters, diffusers, and polarizers for alternative lighting effects. Maxi Ringlights will require an adapter, part number A08931, due to the size of the input.

Mini Ringlights

Part No.	Standard Exit	Vertical Exit	Working Distance	Polarizer/ Analyzer
A08650	X		.5" - 1.5" (13 - 38)	A08632
A08660^	X		1.5" - 4" (38 - 102)*	★ A22032
A08670^		X	1.5" - 4" (38 - 102)*	A08627
Midi Ringlights				
A08630	X		1.25" - 3.5" (32 - 89)*	A08632
A08635		X	1.25" - 3.5" (32 - 89)*	A22032

^ 29% more fiber than A08650 ringlight

*Dimensions in () are in mm

* ESD (Electro Static Discharge) option is available

★ Made-to-order products.

Ringlights, 66mm / 58mm

- 33" (838) bundle length on all models, working distance is 1.5" to 6" (38 to 152)
- ESD ringlights are made conductive by replacing the black anodized finish with a conductive finish and the PVC metal tubing with stainless steel tubing; each ringlight is checked for conductivity from inner body to light source adapter (Available custom)
- Thumbscrew clamping/mounting system for precise positioning (except for model number A22040), ringlights fit directly onto most microscope and camera objectives without adapters
- Input fits all ColdVision light sources; Ringlights can be used with other manufacturer's continuous light sources (Adapters may be required)
- Use ringlights with our dichroic color filters, diffusers, polarizer/analyzers and reflector rings for alternative lighting effects
- Modified standard and custom ringlights are also available for all your unique requirements



Basic 66 mm Ringlight, A08625



Tapered Ringlight with Retaining Ring, A22040

For intense, uniform, and shadow-free illumination

- Ringlights fit 66 mm microscope and camera objectives, with options such as a tapered inner-body ringlight for the Nikon SMZ 645/600 microscopes (See A22040 model)
- Clamp rings for the Universal ringlights also fit the 66 mm ringlights for use with a different diameter microscope objectives or with the Ringlight Holder (See the Support Apparatus for Ringlights section)

Ringlights, 66mm

Part No.	Standard Exit	Vertical Exit	ESD	Objective Diameter	Mounting System	Polarizer/Analyzer
A08625	X			66 mm	Thumbscrew	A08615*
A08680		X		66 mm	Thumbscrew	A08615*
Custom			X	66 mm	Thumbscrew	N/A

* If using the A08626 adapter, use A08627 polarizer/analyzer

Designed to fit Nikon SMZ and Leica S4E and S6E microscopes

- Vertical exit bundle increases work space and prevents the bundle from interfering with surrounding objects
- Retaining ring mounting for the A22040 ringlight offers secure positioning

Ringlights, 58mm

Part No.	ESD	Objective Diameter	Mounting System	Polarizer/Analyzer
A22040*		Nikon SMZ 645/660	Retaining Ring	★ A22042
A22050		Leica S4E/S6E	Thumbscrew	★ A22052
A22060	X	Leica	Thumbscrew	Custom

★ Made-to-order products.

*The A22040 ringlight has a tapered ring diameter to use with SMZ 645/660 microscope.

A retaining ring is used for mounting instead of a thumbscrew

Ringlights, 66mm and 58mm

Ringlight Input: Black Anodized Aluminum or Conductive Finish
Bundle Sheathing: FPVC Covered Metal Tubing or Stainless Steel
Working Distance: 1.5" to 6" (38 to 152)



Vertical Exit 66 mm Ringlight, A08680



66 mm Ringlight, A08625



Nikon Compatible Ringlight, A22040

Ringlights 58mm



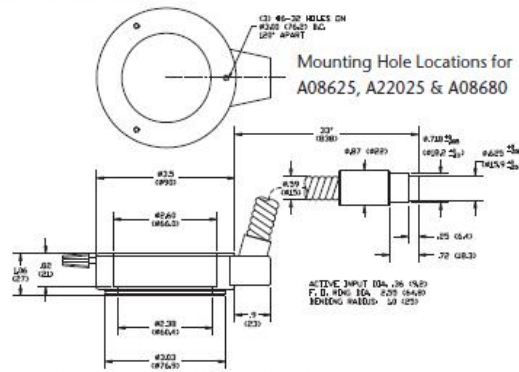
Leica Compatible Ringlight, A22050



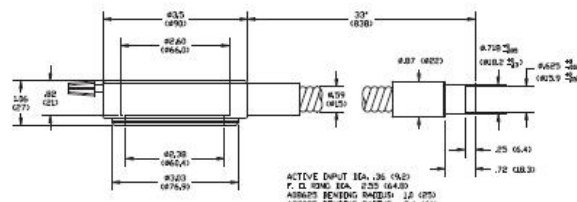
ESD 66mm Ringlight, A22060
(Made-to-order product)

Ringlights 66mm

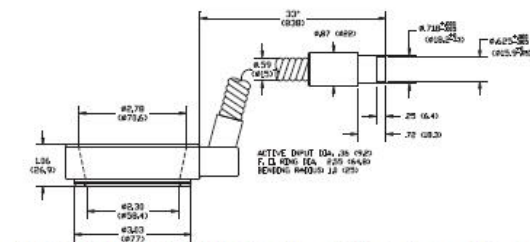
Dimensions in () are in mm



A08680 - 66 mm Ringlight with Vertical Exit



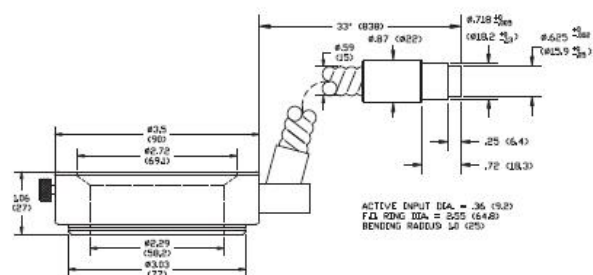
A08625 - 66 mm Ringlights



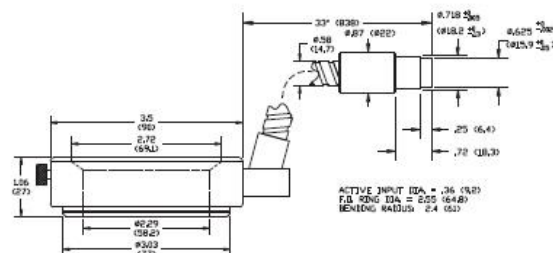
A22040 - Nikon SMZ 645/660 Ringlight with Vertical Exit and Retaining Ring

Ringlights 58mm

Dimensions in () are in mm



A22050 - Ringlight with Vertical Exit for Leica S4E/S6E Microscopes



A22060 - ESD Ringlight with Vertical Exit for Leica S4E/S6E Microscopes

Darkfield Ringlights

Unique parabolic reflector ring creates a radial "light sheet" for oblique lighting effects.



Darkfield Ringlight, A22780

- Eliminates need for a quad lightline and mounting hardware to create similar lighting effects
- Randomized bundle creates extremely uniform light output
- Remove the reflector ring to create a long working distance ringlight
- Can be used with continuous or strobe light sources, standard input adapter accepts the full range of all our color filters
- Three #8-32 threaded mounting holes in the top of the ringlight body facilitate fixturing

Typical Applications

- BGA (Ball Grid Array) inspection
- Illuminating scratches on highly reflective surfaces
- Water contamination inspection



Actual image of BGA (Ball Grid Array) chip illuminated by a Darkfield ringlight clearly identifies where solder balls are missing.

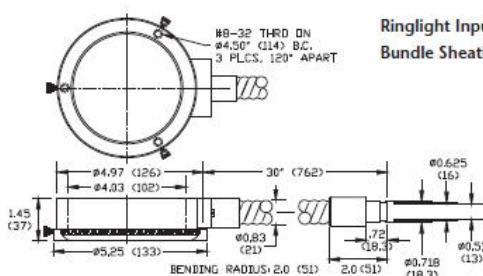
Darkfield Ringlights

Part No.	Standard Exit	ID	OD	Working Distance	Bundle Length
A22780	X	4.03" (102)	5.25" (134)	0" - .25" (0"-6.35)	30" (762)

*Dimensions in () are in mm

Darkfield Ringlight

Dimensions in () are in mm



Ringlight Input: Black Anodized Aluminum

Bundle Sheathing: PVC Covered Metal Tubing or Stainless Steel

A22780
Darkfield Ringlight

Warning : This product is manufactured with glass fiber. Not for use in cable/hose carrier. Call MORITEX to discuss moving cable/hose carrier applications.

Diffuse Dome

For use with 4" Fiber Optic Ringlight A08700



Diffuse Dome A25045 with Ringlight, A08700 (Ringlight not included)

Diffuse dome to eliminate specular reflection on shiny surfaces.

Standard Features

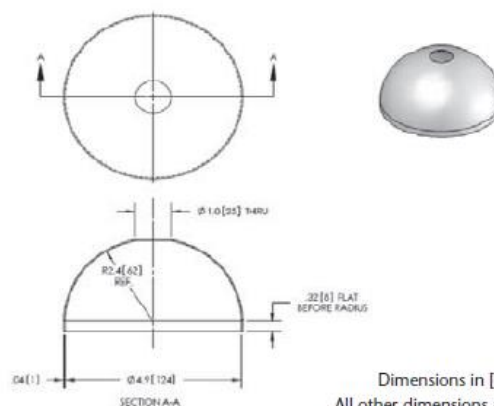
- Eliminates specular glints and/or shadows on reflective parts
- Used with 4" diameter ringlight A08700
- 4.9" (124 mm) diameter x 2.70" (69 mm) height (without ringlight)
- Viewing aperture: 0.98 (25 mm)

Typical Applications

- Data matrix code reading, OCR/OCV
- Semiconductor wafer inspection
- Foil inspection
- Can or bottle inspection

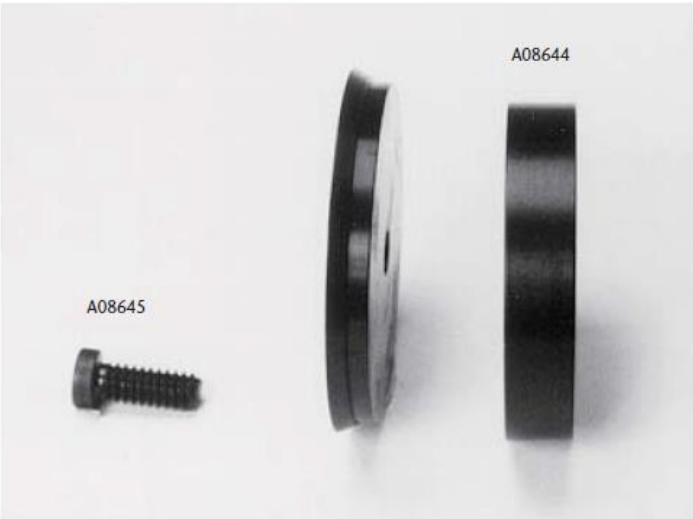
Diffuse Dome

Dimensions in () are in mm



Darkfield Illuminator / Ringlight Adapters

Ringlight adapters for microscope objectives and darkfield lighting.



Darkfield Illuminator, Adapter, A08645 and Spacer Ring, A08644

- Fiber optic full annular ring configurations
- Dovetail adapters for a variety of microscopes attach to slide the illuminator into place under the microscope stage and avoid interference (See chart on left for adapter specifications)
- Please note that a spacer ring, A08644, is required for the A08645 model adapter
- Light exits at a nominal 20° horizontal angle and will illuminate a 1" (25.4)* diameter area
- Ringlight comes with a fixed size aperture to shield optic from light
- Working distances from .10" (2.5) to .38" (9.7)
- Optional made-to-order iris aperture allows adjustment of the darkfield spot size for light sensitive applications

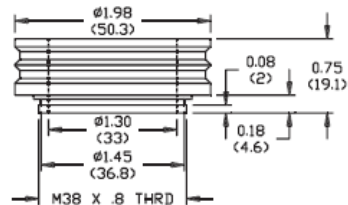
Darkfield Illuminator & Accessories

Part No.	Description
★ A08644	Darkfield Spacer Axio 2 for A08645 Adapter
Dovetail Adapters	
★ A08645	Dovetail Adapter for Zeiss Axioplan (see A08644)
★ A08646	Dovetail Adapter for Leitz Laborlux, DMR
★ A08647	Dovetail Adapter for Olympus
★ A08649	Dovetail Adapter for Zeiss Axioskop

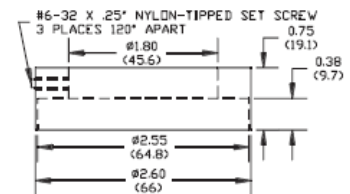
★ Made-to-order products.

Ringlight to Microscope Adapters

A08606

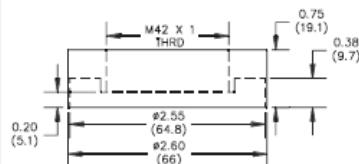


A08607

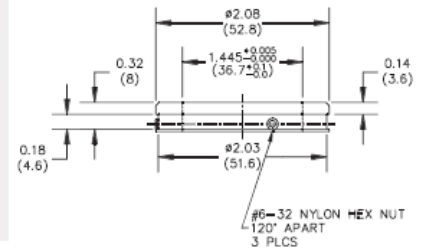


Dimensions in () are in mm

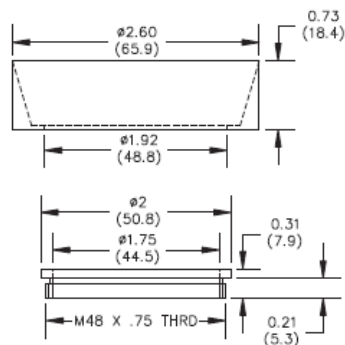
A08608



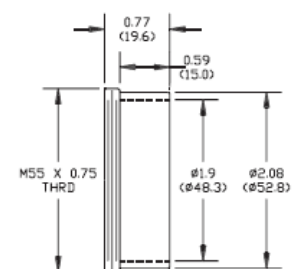
A08609



A08626



A08628



Ringlight Adapters

Part No.	Ringlight	Microscope	Mounting
A08606	A08600	B&L Zoom 4	Screws into Objective
A08607	A08625	Leica SZ4/SZ6 with auxiliary lens	Three Thumscrews
A08608	A08625	Leica SZ4/SZ6 without auxiliary lens	Screws into objective
A08609	A08630	Leica SZ7	#6 - 32 Hex Set Screw
A08626	A08625	Olympus SZ	Screw-on Retaining Ring
A08628	A08600, A08620	SMZ 645/660	Screws on Objective

Note:Adapters are machined to order. Pricing and Availability subject to market conditions.

Drawings are available.

Ringlight Polarizers & Analyzers

The polarizing effect enhances contrast on highly reflective surfaces for Microscopy and Machine Vision Applications.



Polarizer/Analyzer, A08615

- Polarizer/analyzer combinations reduce reflection and glare
- The A08615 and A08632 polarizers were designed to easily snapfit onto the ringlight, the analyzer is dropped through the top of the ringlight and positioned on top of the polarizer
- To prevent the polarizer/analyzer from moving due to vibration, a knurled thumb-screw locks the polarizer assembly into position which also makes the holder easier to adjust
- To further prevent vibration, a set-screw stops the polarizer disk from turning within the assembly, features are found on polarizer / analyzer model numbers A08615 and A08627

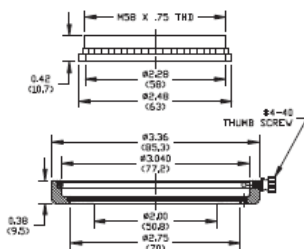
Polarizers & Analyzers

Part No.	Corresponding Ringlights
A08615	A08600, A08620, A08625, A08680, A08600.1
A08627	A08625 & Olympus Adapter, part number A08626
A08632	A08630, A08635
A08652	A08650, A08660, A08670
A08705^	A08700

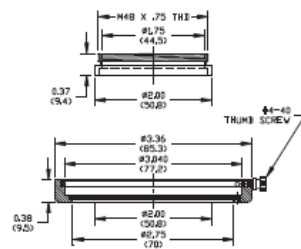
^Polarizer ring only. User must supply analyzer.

Ringlight Polarizers & Analyzers

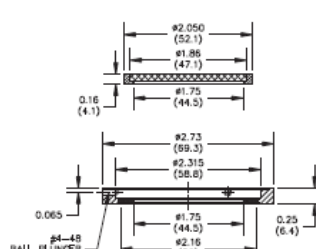
Dimensions in () are in mm



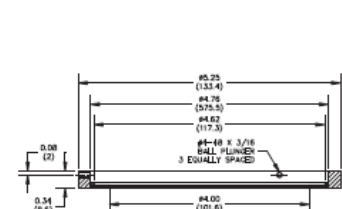
A08615
Polarizer/Analyzer



A08627
Polarizer/Analyzer



A08632
Polarizer/Analyzer



A08705
Polarizer/Analyzer

Ringlight Reflector Rings / Ringlight Accessories

For use with Universal and 66mm Ringlights

Reflector ring illuminates scratches on reflective surfaces.



Reflector Ring, A08616

- The A08616 reflector ring fits the Universal and 66 mm Series ringlights
- Two separate parts are included, the black anodized retaining ring and the mirror polished reflector ring, the reflector ring drops inside the retaining ring which snap-fits onto the ringlight

Ringlight Reflector Rings

Part No.	Ringlights
A08616	A08600, A08603, A08604, A08620, A08625, A08680, A08600.1

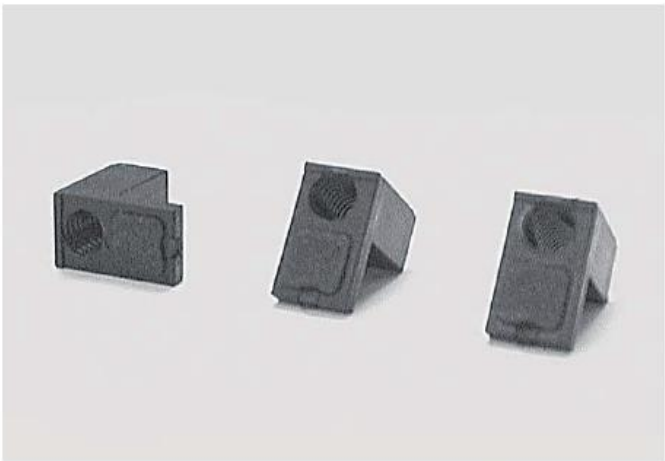
To fix ringlight position

Ringlight Clamp Accessories

Dimensions in () are in mm

Clamp(s) for
A08611 Clamp Ring,
A08600 and A22000
ringlights and
A08614, Set of 3 Clamps
1.8 / 2.4" (47/62)

A08614
Clamps with Anti-slip Pads
(Set of 3)



Anti-Slip Ringlight Clamps, A08614

Clamp Accessories

Part No.	Description
A08614	Anti-slip Ringlight Clamps for ringlight models A08600, A08620. (3 clamps in package)