

# Universal Ringlight

For 33 to 81 mm objective diameters



Universal Ringlight A08600.1 (new clamp style)

## Product and Performance Characteristics

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

- 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

## Universal Ringlight Specifications

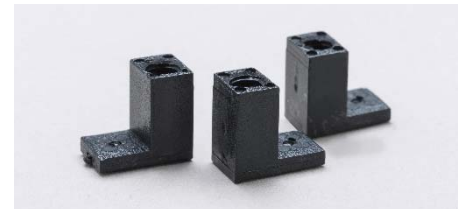
Part No.	Exit	Minimum Working Distance	Objective Diameter Camera and Microscope	Mounting Clamps	Polarizer/ System Analyzer
A08600	Standard	1.5" - 6"	47 – 62 mm	Classic	A08615
A08600.1	Standard	1.5" - 6"	47 – 62 mm	New	A08615
A08620	Vertical	1.5" - 6"	47 – 62 mm	Classic	A08615



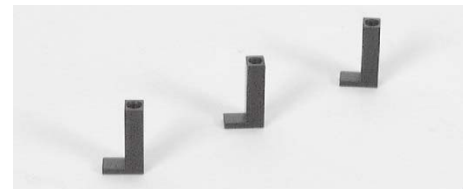
Universal Ringlight A08600 (classic clamp style)

## 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)
A08601.1	Ringlight screw
A08602	(62 mm to 81 mm)



Anti-Slip Ringlight Clamps, A08614



Anti-Slip Ringlight Clamps, A08601



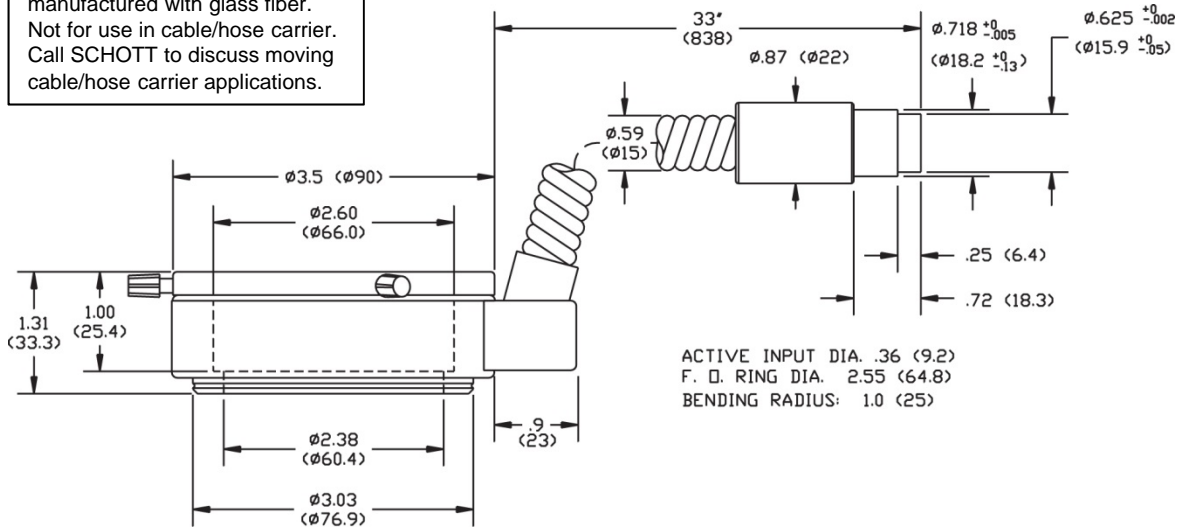
Anti-Slip Ringlight Clamps, A08602

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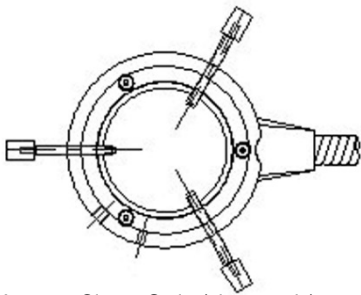
## Specifications

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

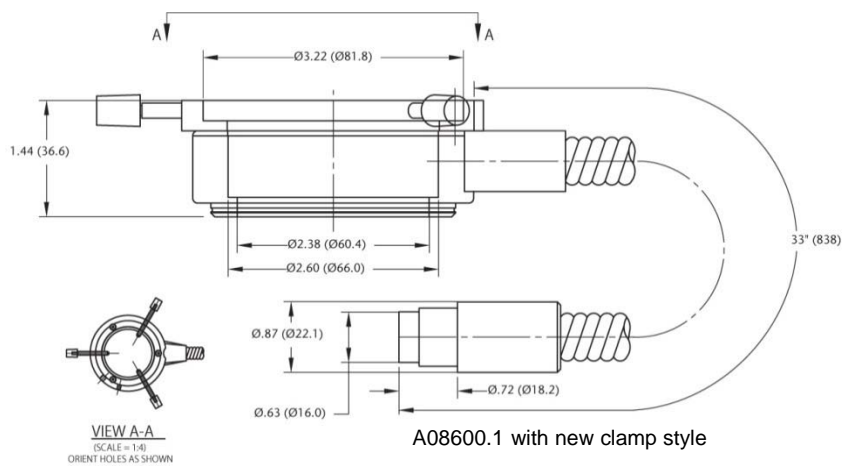


A08620 - 47 mm / 62 mm Ringlight with vertical exit (classic clamp)  
 Dimensions in ( ) are in mm

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



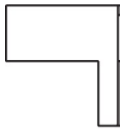
A08690 Clamp Style (clamp only)



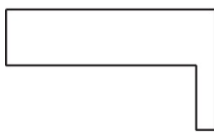
A08600.1 with new clamp style

## Available Clamps

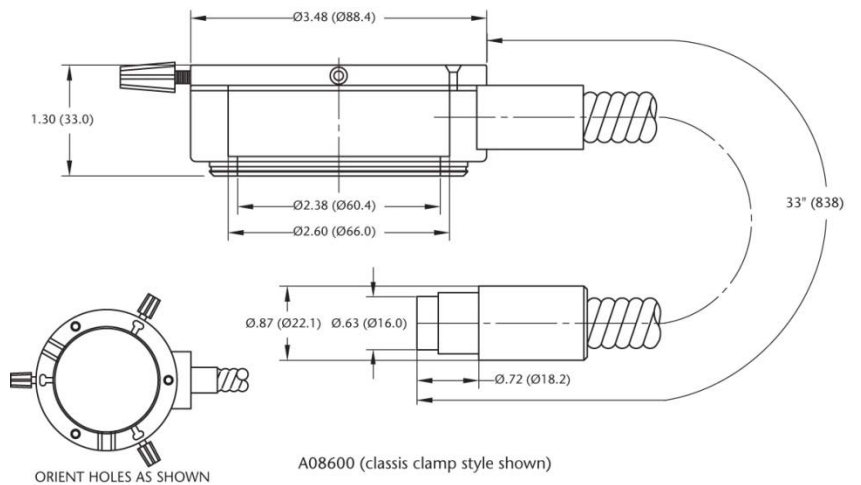
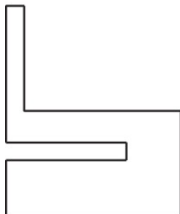
For A08611  
 Clamp Ring,  
 A08600 and  
 A22000  
 Ringlights and  
 A08614, Set of  
 3 Clamps 1.8 / 2.4"  
 (47/62)



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



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



A08600 (classic clamp style shown)

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# Ringlights, 66mm / 58mm

For intense, uniform, and shadow-free illumination. Designed to fit Nikon SMZ and Leica S4E and S6E microscopes



Basic 66 mm Ringlight A08625

## 66 mm Ringlight Characteristics

- 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)

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

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

## 58 mm Ringlight Characteristics

- 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

Part No.	ESD	Objective Diameter	Mounting System	Polarize/ Analyzer
A22040*		Nikon SMZ 645/660	Thumbscrew	A22042*
A22050		Leica S4E/S6E	Thumbscrew	A22052*
A22060	Yes	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



Tapered Ringlight with Retaining Ring, A22040

## Product and Performance Characteristics

- 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

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

## Specifications Ringlights, 66mm and 58mm

Ringlight Input: Black Anodized Aluminium or Conductive Finish  
 Bundle Sheathing: PVC 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, A22040

## Specifications Ringlights, 58mm

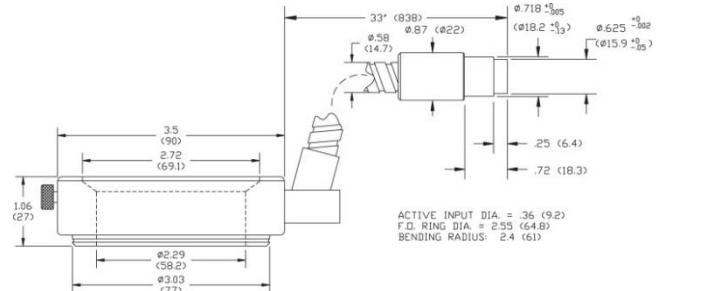
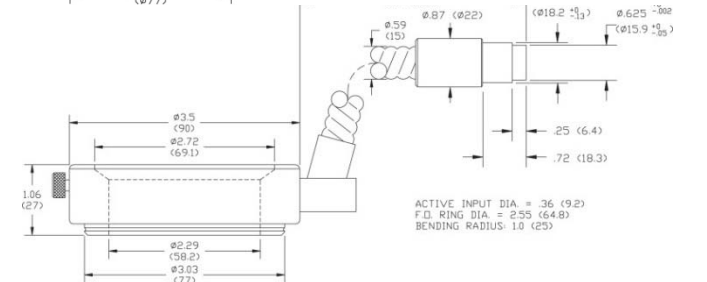
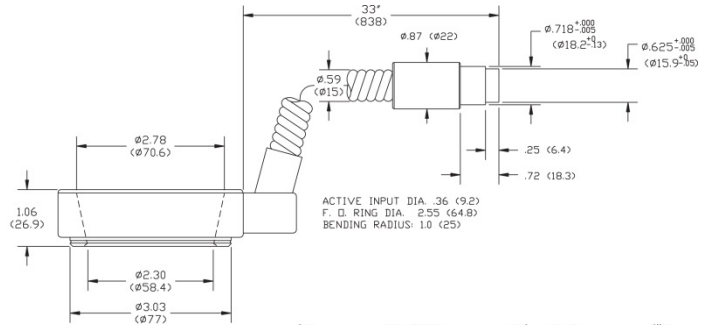
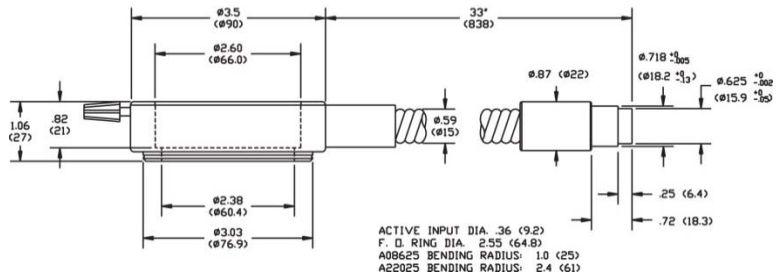
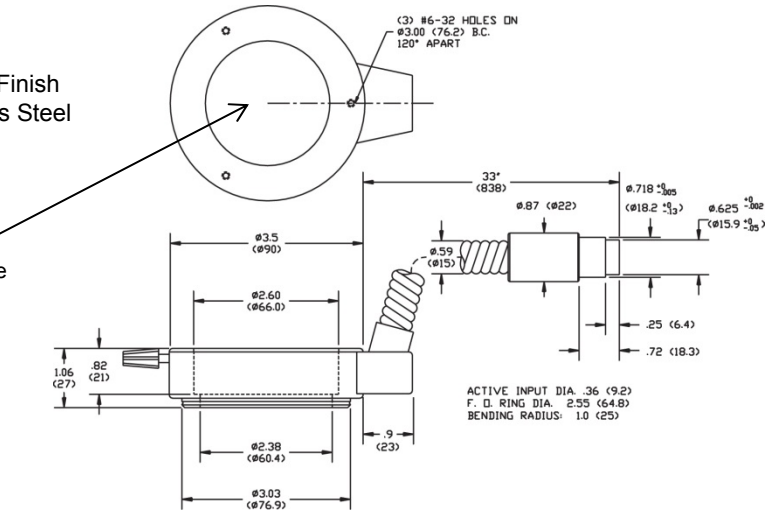


Leica Compatible, A22050



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

Mounting Hole  
 Location for  
 A08625,  
 A22025,  
 A08680



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# Midi, Mini and Maxi Ringlights

For intense, uniform, and shadow-free illumination for 19 to 53 mm objective diameters.



Mini Ringlight, A08650



4" Ringlight, A08700



8" Ringlight, A08710

## Characteristics – Mini Ringlight

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

## Characteristics – Midi Ringlight

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

## Characteristics – Midi and Mini

- 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

## Maxi Ringlights

## Characteristics – 4" Ringlight

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

## Characteristics – 8" Ringlight

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

## Mini Ringlights

Part No.	Exit	Working Distance	Polarizer / Analyzer
A08650	Standard	0.5" - 1.5" (13 – 38 mm)	A08632
A08660^	Standard	1.5" - 4" (38 – 102 mm)*	*A22032
A08670^	Vertical	1.5" - 4" (38 – 102 mm)*	A08627
^ 29% more fiber than A08650 ringlight * ESD (Electro Static Discharge) option is available			* Made-to-order products

## Midi Ringlights

Part No.	Exit	Working Distance	Polarizer / Analyzer
A08630	Standard	1.25" - 3.5" (32 – 89 mm)*	A08632
A08635	Vertical	1.25" - 3.5" (32 – 89 mm)*	A22032
* ESD (Electro Static Discharge) option is available			

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

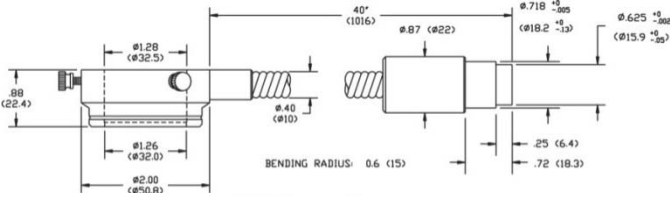
\* Made-to-order products

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.

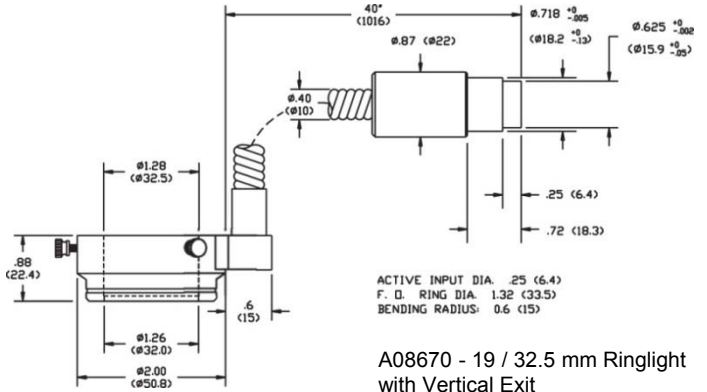
# Specifications

Dimensions in ( ) are in mm

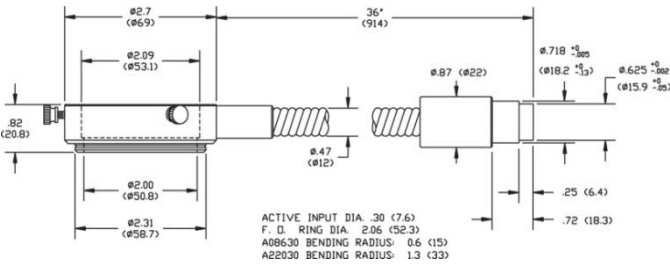
Ringlight Input: Black Anodized Aluminum or Conductive Finish  
 Bundle Sheathing: PVC Covered Metal Tubing or Stainless Steel



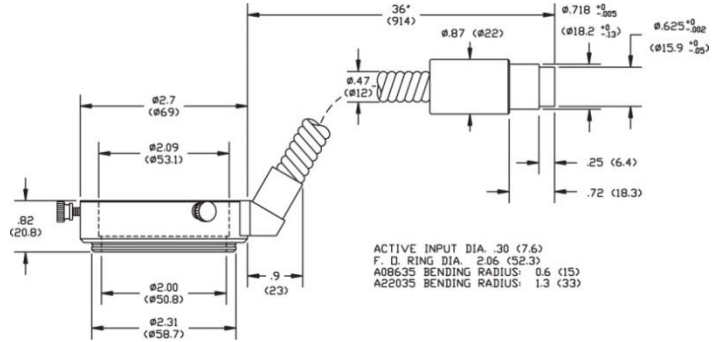
Note:  
 A08650 has an active fiber dia. of .22 (5.6) for a working distance of .5 to 1.5" (13 to 38mm).  
 A08660 has an active fiber dia. of .25 (6.4) for a working distance of 1.5 to 4" (38 to 102mm).  
 Both have F. D. ring dia. of 1.32 (33.5).  
**A08650 - A08660 - 19 / 32.5 mm Ringlights**



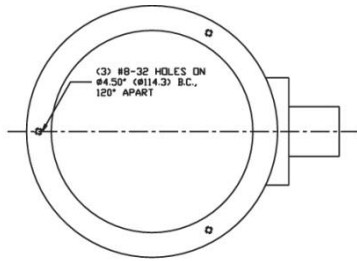
**A08670 - 19 / 32.5 mm Ringlight with Vertical Exit**



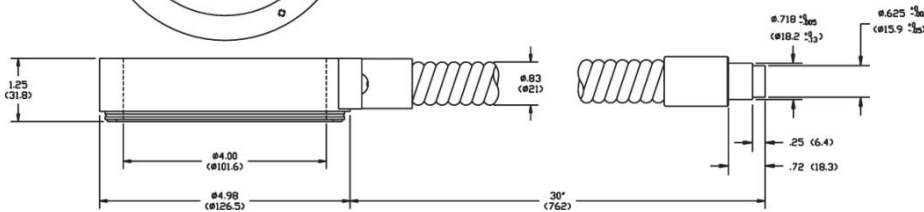
**A08630 - 38 / 53 mm Ringlight with Standard Exit**



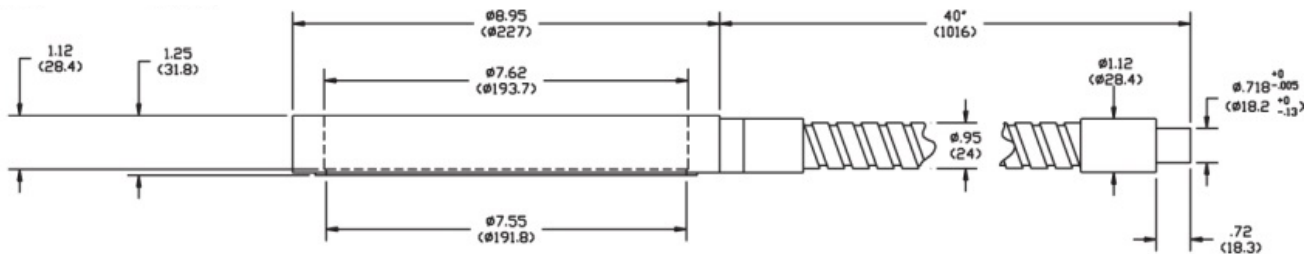
**A08635 - 38 / 53 mm Ringlight with Vertical Exit**



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



**A08700 4" Ringlight**



Note: A08710- WD from 2.5" (64) BENDING RADIUS: 3.25 (83)  
 A08715- WD from 4.5" (114) BENDING RADIUS: 3.25 (83)  
 Active fiber dia. of .65 (16.5)  
 F. D. ring dia. of 7.78 (197.6)

**A08710 8" Ringlight**

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# Diffuse Dome

For use with 4" Fiber Optic Ringlight A08700.



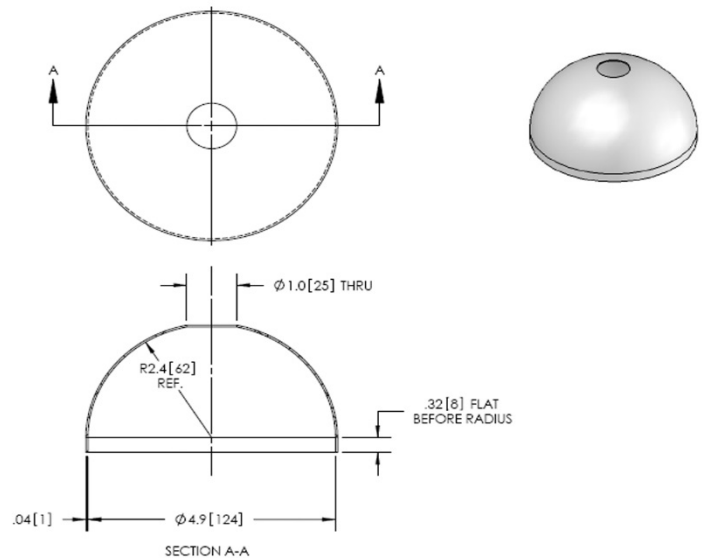
Diffuse Dome A25045 with Ringlight, A08700 (Ringlight not included)

## Typical Applications

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

## Product and Performance Characteristics

- Diffuse Dome is used to eliminate specular reflection on shiny surfaces.
- 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)



Dimensions in ( ) are in mm  
All other dimensions are inches

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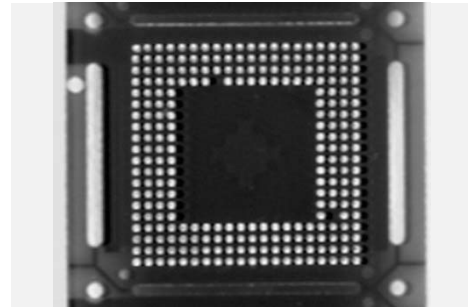
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# Darkfield Ringlight

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

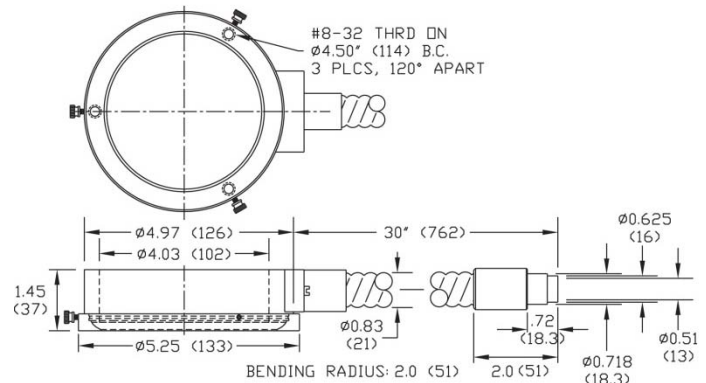


Actual Image of BGA (Ball Grid Array) chip illuminated by a Darkfield ringlight clearly identifies where solder balls are missing.

Darkfield Ringlight, A22780

## Product and Performance Characteristics

- 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



Darkfield Ringlight, A 22780

Dimensions in ( ) are in mm

## Typical Applications

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

## Darkfield Ringlights

Part No.	Exit	ID	OD	Working Distance	Bundle Length
A22780	Standard	4.03" (102)	5.25" (134)	0" - 0.25" (0 - 6.35)	30" (762)

Dimensions in ( ) are in mm

For more information please contact:



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