	Model*	Light Source	Reach (Inches)	Base	Weight (lbs.)**
CIRCLINE MAGNIFIER (8MC-series)	8MC-100	22-watt circline fluorescent	28	DESK	27
	8MC-150	22-watt circline fluorescent	28	CLAMP	15
	8MC-200	22-watt circline fluorescent	42	CLAMP	15
	8MC-250	22-watt circline fluorescent	34	IV-PIVOT	15
	8MC-300	22-watt circline fluorescent	42	IV-PIVOT	15
	1400	ADD-A-LENS (8-diopters)			
	1408-30C	Plastic shield for fluorescent tube			
	For optional 5-diopter lens add “-5” to model number, e.g., 8MC-100-5				
4-POWER CIRCLINE MAGNIFIER	8MC-200-4X	22-watt circline fluorescent	42	CLAMP	15
HI-LIGHTING MAGNIFIER (8MG-series)	8MG-400	13-watt compact fluorescent	26	DESK	26
	8MG-450	13-watt compact fluorescent	26	CLAMP	14
	8MG-500	13-watt compact fluorescent	40	CLAMP	14
	8MG-550	13-watt compact fluorescent	32	IV-PIVOT	14
	8MG-600	13-watt compact fluorescent	40	IV-PIVOT	14
	1400	ADD-A-LENS (8-diopters)			
	8SD-100	Plastic shield for fluorescent tube			
	For optional 5-diopter lens add “-5” to model number, e.g., 8MG-400-5				
***ESD-SAFE* HI-LIGHTING MAGNIFIER**	270N-ES	13-watt compact fluorescent	24	DESK	26
	208N-ES	13-watt compact fluorescent	40	CLAMP	14
	209N-ES	13-watt compact fluorescent	30	CLAMP	14
	1400	ADD-A-LENS (8-diopters)			
	For optional 5-diopter lens add “-5” to model number, e.g., 270N-ES-5				
STRETCH-VIEW MAGNIFIER (8MR-series)	8MR-100	18-watt compact fluorescent	26	DESK	27
	8MR-150	18-watt compact fluorescent	26	CLAMP	15
	8MR-200	18-watt compact fluorescent	40	CLAMP	15
	8MR-250	18-watt compact fluorescent	32	IV-PIVOT	15
	8MR-300	18-watt compact fluorescent	40	IV-PIVOT	15
	8SD-900-1	Plastic shield for fluorescent tube			
	For optional 5-diopter lens add “-5” to model number, e.g., 8MR-100-5				
	For optional 11-diopter lens system add “-11” to model number, e.g., 8MR-100-11				
	For optional 16-diopter lens system add “-16” to model number, e.g., 8MR-100-16				
	For *ESD-SAFE* STRETCH-VIEW add “-ES” to model number, e.g., 8MR-100-ES				
MAGNIFIER FLEX	8ML-100	40-watt tubular incandescent	30	CLAMP	5
	8ML-104	13-watt compact fluorescent	30	CLAMP	6
INDUSTRIAL FRICTION-GRIP MAGNIFIER	1420R	22-watt circline fluorescent	28	CLAMP	8
	1400	ADD-A-LENS (8-diopters)			
	1408-30C	Plastic shield for fluorescent tube			
	For optional 5-diopter lens add “-5” to model number, e.g., 8MC-100-5				
FLOOR STANDS and OTHER MOUNTINGS	1050	Caster base	39.5” high		30
	3050R	Pedestal base	38.5” high		30
	7100-060	Wall mounting bracket			
	8TR-series	HANGTIGHT track mounting system for workstation wall partitions			

*3-diopter lens is standard.
**Shipping weights are approximate.

Warranty: Five-year warranty on electrical and mechanical operation. Halogen models have a 2-year warranty on electrical components; 5-year on mechanical operation. (Tubes and bulbs are not covered by warranty.)

U.L. Listed. For 120V 60HZ.
Patent Pending.

DAZOR MANUFACTURING CORP.
4483 Duncan Ave., St. Louis, MO 63110
800-345-9103, IN MISSOURI 314-652-2400
FAX: 314-652-2069
Internet: www.dazor.com
e-mail: info@dazor.com

DAZOR®

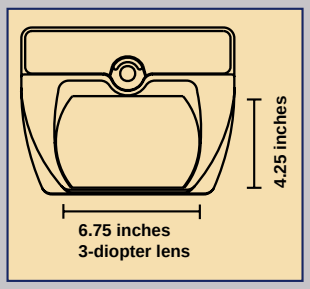
Made in USA

ILLUMINATED MAGNIFIERS

DAZOR®

STRETCH-VIEW™

Wide-View Rectangular Magnifier



8MR-300/3050R Pedestal Stand **8MR-300/1050 Caster Stand**

The rectangular shaped magnifying lens "stretches" the 5-inch circular viewing area to 6.75 inches. This wider viewing area allows for comfortable vision with both eyes and also reduces eyestrain and fatigue. Visual scanning speed is increased because more surface area is magnified at any given position. The 3-diopter lens is made of crown-optical glass and measures 6.75 by 4.25 inches.

With proper illumination levels, magnification requirements are significantly reduced. That is why Dazor uses a powerful 18-watt compact fluorescent light source to produce 130 footcandles at 15-inches above the work surface.

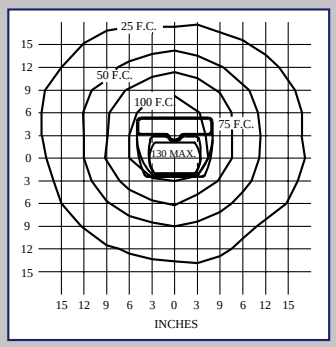
Exact positioning of the light source behind the lens allows for a choice between even, shadow-free illumination or a highlighting effect. Shadow-free viewing is achieved by holding the object directly under the light source. A highlighting effect is produced when the object is moved slightly away from the center of the light source.

The STRETCH-VIEW is available in an ESD-safe version that is ideal for the inspection of electronic parts and circuit boards.

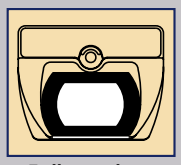
8MR-200

8MR-100

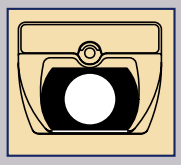
Footcandle Map at 15" above surface



18-watt compact fluorescent



5-diopter lens



11d and 16 diopter lens systems

For additional magnification, there is a 5-diopter lens that measures 5 by 3 inches. The 11-diopter and 16-diopter (4X) lens systems each use 3-inch diameter lenses.

The Circline

All-Purpose Illuminated Magnifiers

8MC-200

8MC-100

1408-30C
Lamp shield

Dazor 8MC-series lamps provide even, shadow-free light under the magnifying lens with a 22-watt circline fluorescent. This type of lighting is best when the goal is to de-emphasize irregular or uneven surfaces. The circular light source uniformly illuminates the viewing surface so that color contrasts are enhanced without competing shadows.

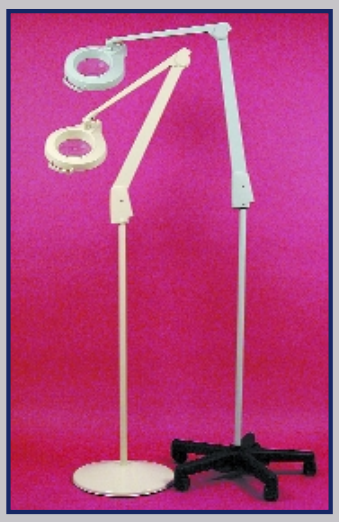
The contemporary “Floating-arm” lets you position the light source and lens with the touch of a finger. The all-metal head that houses the magnifying lens is designed to provide years of service.

The 5-inch crown optical glass lens produces sharp images over a wide viewing area and is available in magnification powers of 3-diopters (.75X) and 5-diopters (1.25X). Another option includes an 11-diopter (2.75X) lens systems with a 3-inch viewing area. For precise inspection, Dazor’s 4-power, 16-diopter lens system meets government standard MIL-STD-2000.

Magnifiers Increase Viewing Comfort

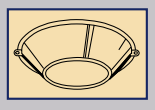
For your eyes. Two key factors for enhancing your vision are provided: light and magnification. These factors reduce eyestrain and fatigue which allow you to work longer with less visual effort. The effectiveness of magnification in achieving good vision is dependent upon the lighting conditions. Dazor magnifying lamps combine proper lighting with magnification for maximum benefit.

For your hands. Both hands are free to grasp an object and work on it. Whether you are using tools or holding a newspaper, hands-free viewing is easier. Also, your hands control the amount of light and magnification you require by adjusting distances between the object, the magnifying lens, and your eyes.



8MC-300/3050R
Pedestal Stand

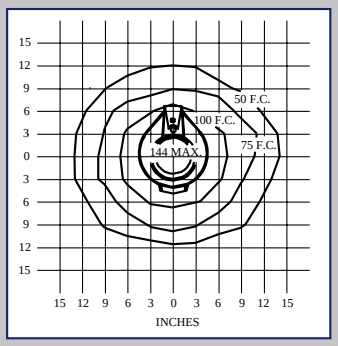
8MC-300/1050
Caster stand



ADD-A-LENS

The easy-to-attach ADD-A-LENS accessory increases magnification of the 3-diopter lens from +75% to +275%. Works with both the 8MC and 8MG magnifier series.

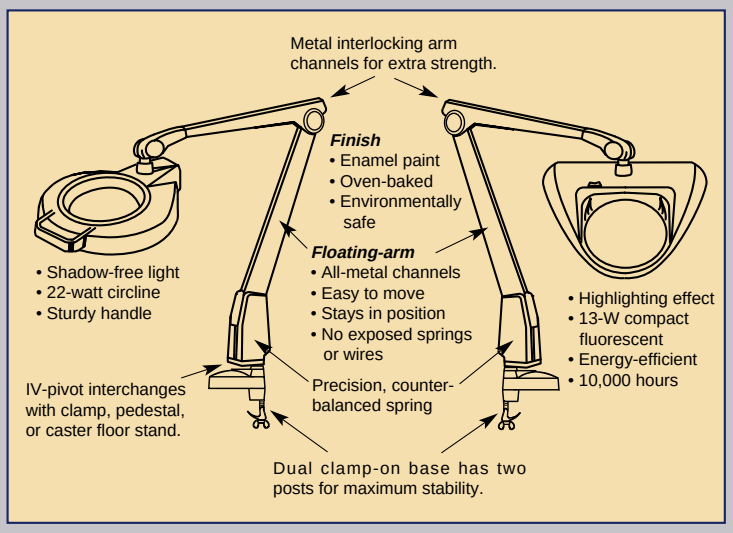
Footcandle Map at 15” above surface



Hi-lighting Magnifiers

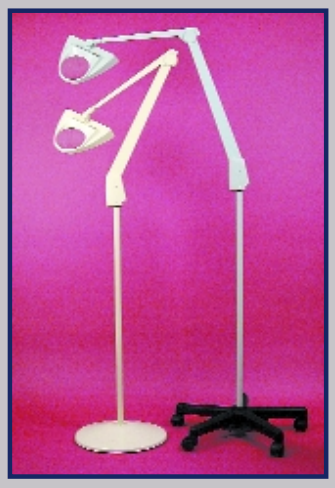
Makes Details of Uneven Surfaces Stand Out

8MG-500



13-watt compact fluorescent

8MG-400

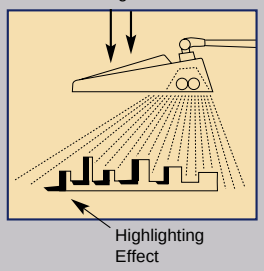


8MG-600/3050R Pedestal Stand

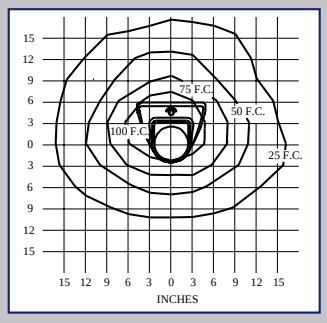
8MG-600/1050 Caster Stand

Dazor 8MG-series lamps use a 13-watt compact fluorescent located behind the magnifying lens to cast light at an angle ideal for highlighting object details. This shadow highlighting makes details of uneven surfaces "pop-out" to the viewer. The shadows help define variations in surface depth and emphasize irregularities. The highlighting feature is well suited for inspection tasks that require precise discrimination of details found in the variations of an object's surface.

The 5-inch crown optical glass lens produces sharp images over a wide viewing area and is available in magnification powers of 3-diopters (.75X) and 5-diopters (1.25X). Another option includes an 11-diopter (2.75X) lens systems with a 3-inch viewing area.



Footcandle Map at 15" above surface



Common Questions about Magnification

What is a DIOPTER? Diopter refers to the curvature of a lens. As the diopter increases, the lens becomes thicker and the curvature greater. As the curvature increases, light rays are redirected to fill a greater portion of the viewer's retina which makes the object look bigger.

What is POWER? Power refers to how much larger an object is made to look through a magnifying lens. Power is typically indicated by an "X" such as 2X or 4X. Unfortunately, there are two different conventions for computing power that lead to different results. Below is an example of how two power ratings can be achieved for the same 8 diopter lens.

Formula A: $\frac{\text{diopters}}{4} = \text{power}$ $\qquad \frac{8}{4} = 2X$

Formula B: $\frac{\text{diopters}}{4} + 1 = \text{power}$ $\qquad \frac{8}{4} + 1 = 3X$

The question is, "Does an 8-diopter lens make an object look 2 times bigger or 3 times bigger?"

Formula A says that the 8-diopter lens makes an object look 2 times bigger, over and above what the unaided eye already sees.

Formula B says that the 8-diopter lens makes an object look 3 times larger than it actually is. By including the size of the orginal object (+1), Formula B adds the size of the image from the unaided eye to the 2X enlargement from the lens.

Dazor reports power according to Formula A. For example, a 3-diopter lens makes an object look 75% bigger than what the unaided eye already sees.

$$\frac{\text{3-diopter}}{4} = .75X \quad (75\% \text{ bigger})$$

What is FOCAL LENGTH? Focal length is the distance from the center of a lens to the point where the light rays converge and the object is in optimal focus (focal point). This is also known as the "working distance" of the lens. Focal length is important when the task requires using tools with the object being viewed. Because focal length decreases as power increases, there is less room to perform work on an object under higher power lenses.

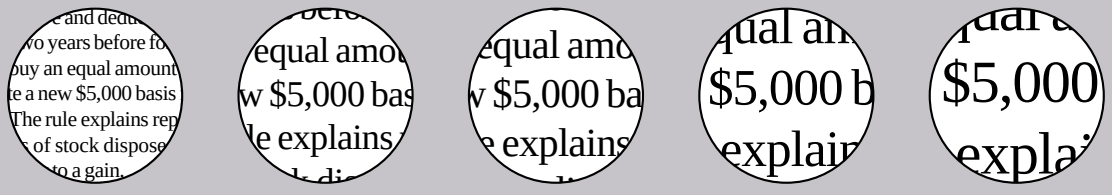
What is FIELD OF VIEW? The field of view is the size of the magnified area under the lens that is in focus. The field of view decreases as power increases. More powerful lenses make small details look big, but less of the total object is visible. There is a trade-off for the viewer who must decide between the size of the field of view and amount of magnification (see below).

What is the relationship between LIGHT and MAGNIFICATION? Proper lighting is equally important as magnification in achieving a good viewing situation. A magnifying lens would be useless in the dark, so increasing light levels results in better vision. In fact, the better the quality of light used with a magnifying lens, the less power is needed. When less magnification is required, the user has a bigger field of view and working distance under the lens. Therefore, the quality of light should be closely evaluated when choosing an illuminated magnifying lamp.

Common diopter/power relationships using Formula A: diopters ÷ 4 = power

Diopter	Power	% Bigger than Object	Focal Length in Inches
3	.75X	75%	13
5	1.25X	125%	8
8	2.00X	200%	5
11	2.75X	275%	3.75
13	3.25X	325%	3
16	4.00X	400%	2.5

Field of View decreases as Magnification increases



Normal Newsprint

- +75% magnification
- 3-diopter lens
- Focal length of 13"

- +125% magnification
- 5-diopter lens
- Focal length of 8"

- +275% magnification
- 11-diopters (3-diopter lens plus ADD-A-LENS)
- Focal length of 3.75"

- +400% magnification
- 16-diopter lens system
- Focal length of 2.5"

Magnifier Flex™

Combines Quality and Economy

8ML-104

13-watt compact fluorescent

Flex arm. The all-metal flexible arm is tough and durable. It adjusts easily and stays in position. Total reach for the unit is 30 inches.

Mounting. At the base of the flex arm is a standard 1/2 inch IV-pivot which inserts into a sturdy table clamp (furnished).

A second option is to mount the Magnifier Flex on a Dazor floor stand. The caster or pedestal base should be ordered separately from the magnifier.

A third option is to mount the Magnifier Flex on a vertical surface with a Dazor universal base (Part 7100-060).

8ML-104/3050R Pedestal Stand

8ML-104/1050 Caster Stand

Light source. The light source is a 13-watt compact fluorescent. This energy-efficient, cool operating tube lasts up to 10,000 hours. Since the light source is located behind the magnifying lens, the light is cast at an angle of incidence ideal for highlighting object details. This shadow highlighting makes details of uneven surfaces “pop-out” to the viewer and is well suited for many inspection tasks.

Lens. The 5-inch glass lens produces sharp images over a wide viewing area. The 3-diopter lens means that an object looks 75% larger when held at a distance of 13-inches below the lens.

Industrial Magnifiers

For special applications

4X - POWER MAGNIFIER

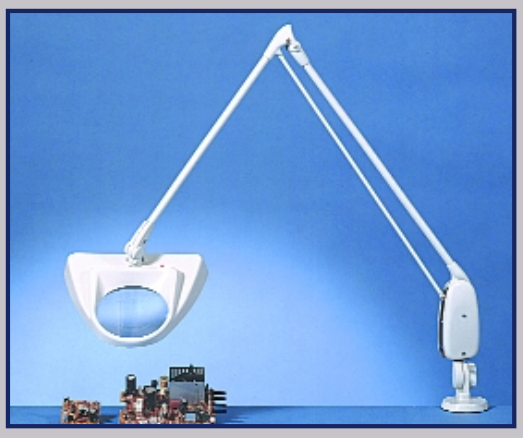
FOR PRECISE VIEWING OF FINE DETAILS

8MC-200-4X

The 4-power magnifier is the economical alternative for precise inspection of solder connections and other fine details. This 16-diopter magnifying system uses crown-optical glass lenses and a 22-watt circline fluorescent tube. Meets government standard MIL-STD-2000. Dual clamp-on base for a firm mount and 3-conductor cord.

ESD-SAFE HI-LIGHTING MAGNIFIER

FOR ELECTROSTATIC SENSITIVE AREAS



208N-ES

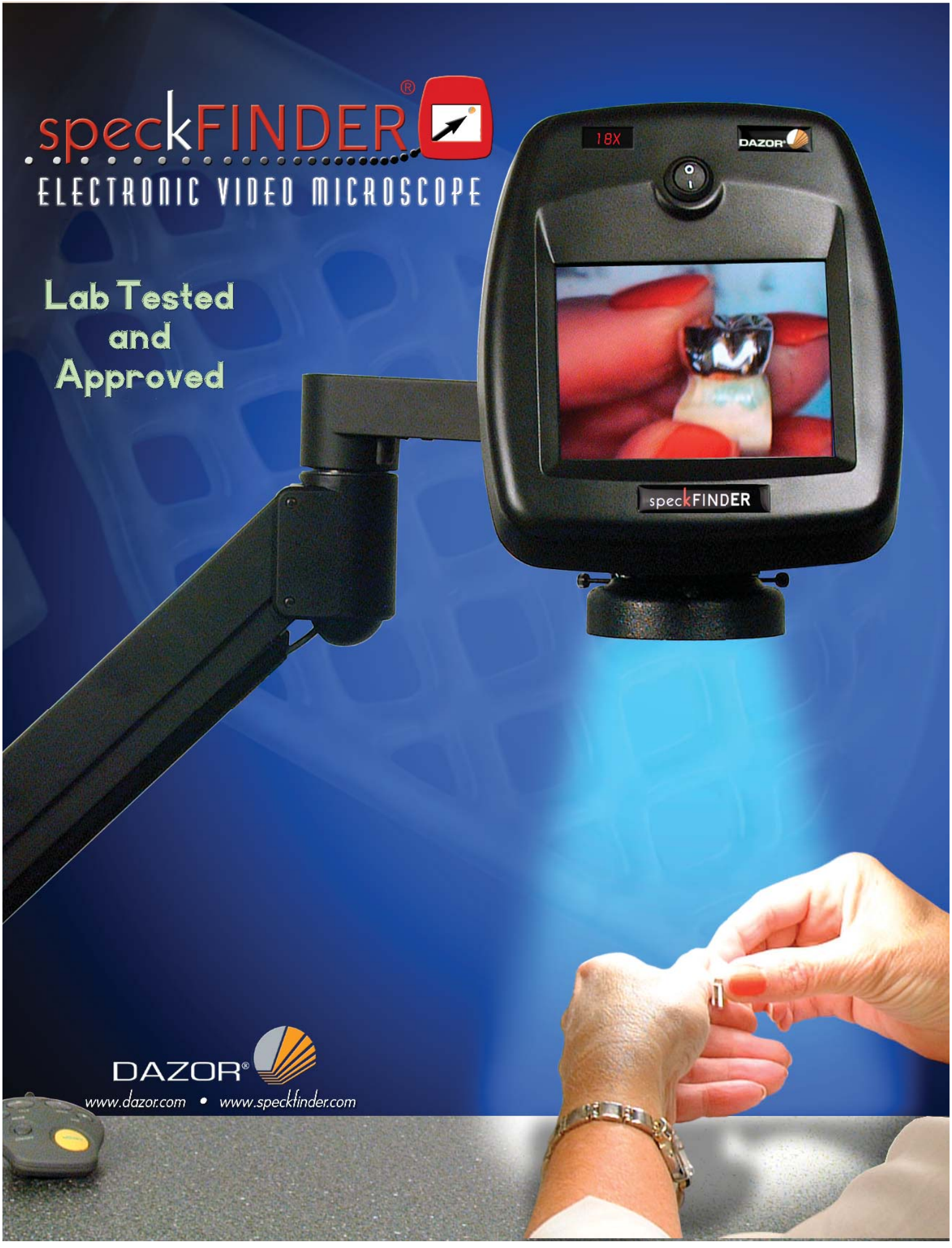
ESD-safe illuminated magnifier directs light at the proper angle to highlight object details, which makes it ideal for inspection of electronic parts and circuit boards. Perfect solution for workstations that need to be free from electrostatic discharge (ESD). Same light pattern and highlighting effect as the 8MG-series (p. 4). For additional ESD-safe magnifiers see 8MR-series (p. 2).

FRICTION-GRIP ADJUSTABLE ARM

ILLUMINATED CIRCLINE MAGNIFIER

Sturdy friction-grip adjustable arm that tightens to secure the illuminated magnifier head in place during machine vibration. Light source is a 22W circline fluorescent. Clear, optical glass lens is available in 3-, 5-, and 11-diopter systems. Dual clamps prevent the base from twisting off mounting edge. Steel L-shaped bracket with elongated holes for vertical or horizontal screw-down mounting. Supplied with 9 ft. SJTO 3-conductor cord.

1420R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ELECTRONIC VIDEO MICROSCOPE

1X to 40X magnification

External Connections (rear view)

- Video Out for connection to VGA monitor or television.
- Enables image capture and recording of real-time video.

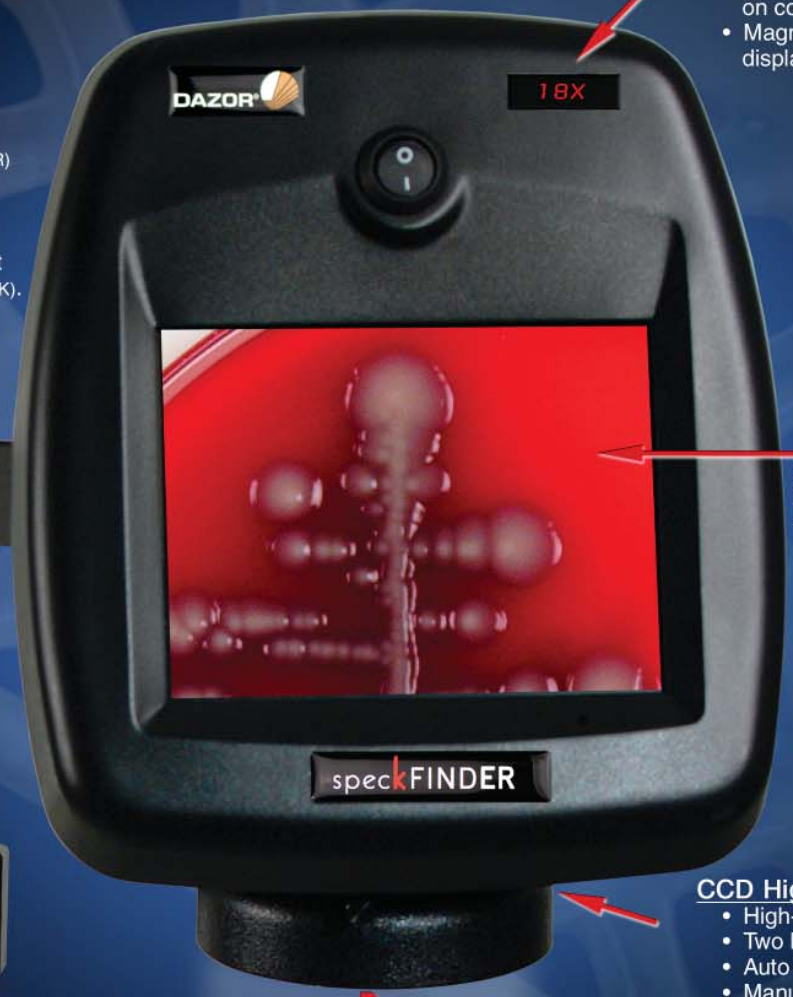
Three Lighting Options

- Dual, independent, 20-watt halogen bulbs, mounted on flexible arms for shadow-free or high-light viewing.
- 6000K Ring Light.
- BoosterBox with Stop-Shine and Tunnel Vision.

(COMPLETE DETAILS ON BACK COVER)

Magnification

- Continuous magnification range of 1X through 40X.
- Zoom-in/Zoom-out function on control mouse.
- Magnification power setting displayed on digital readout.



Positioning

- Gear-controlled height adjustment for precise positioning (SPECK100-BK).
- Multi-angle head adjustment.
- Articulating Arm 360° rotation at each of three piviots, 200° tilt.

(MODEL # DEPENDENT)

Flat Panel TFT LCD Display

- High resolution 6.5-inch flat panel display.
- Anti-Glare coating.
- 480 TV lines.
- 640 pixels (H) by 480 pixels (V).
- Wide viewing angles of 160° horizontal and 160° vertical.

CCD High Resolution Camera

- High-resolution CCD camera.
- Two lens options.
- Auto focus.
- Manual focus.
- 480 TV lines.
- High gain for low light usage.

Working Distance

- Generous 5 to 9-inch (127-228 mm) working distance across the entire 1X-40X magnification range.

(MODEL # DEPENDENT)

Multi-Function Control Mouse

- Zoom-in/Zoom-out.
- Menu functions:
  - Brightness
  - Sharpness
  - Shutter Speed
  - White Balance
  - Auto/Manual Focus
  - Color, B & W
  - Inversion
  - Mirror Image

DAZOR®

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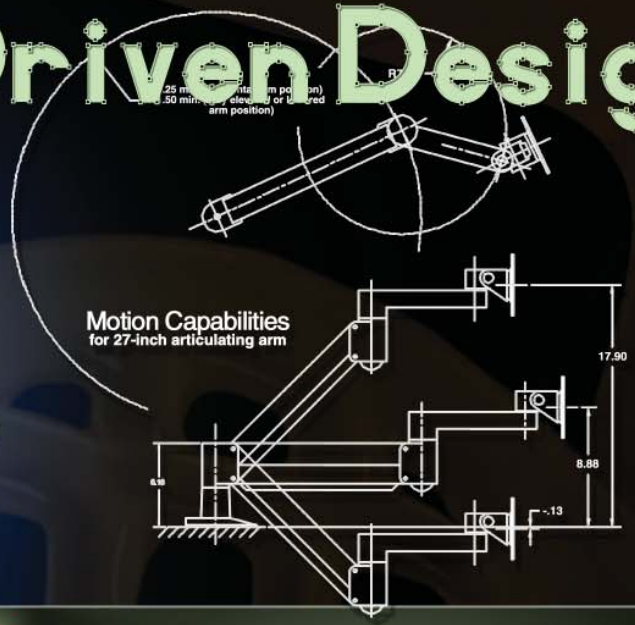
Customer Driven Design

SPECK227-BK



SPECK418-BK

speckFINDER™

MODEL NUMBER

	100-BK	218-BK	318-BK	418-BK	518-BK	227-BK	327-BK	427-BK	527-BK
Mounting System									
Weighted Base	●								
6-Way Mounting Kit		●	●	●	●	●	●	●	●
Articulating Arm									
18-inch		●	●	●	●				
27-inch						●	●	●	●
Lighting System									
Dual 20-Watt Halogen	●			●				●	
6000K Ring Light		●				●			
BoosterBox			●				●		
LED Ring Light					●				●
Lenses									
50mm/122mm/250mm	●	●	●	●	●	●	●	●	●

SPECK527-BK

SPECK318-BK

Weighted Base Model: SPECK100-BK (see photo back cover)

Articulating Arm Models:

- 18” arm is adjustable vertically 9.5” and extendable 18” from its mount.
- 27” arm adjusts vertically 18” and extends 27” from its mount.
- Arms fold back toward the 6-way mount to fit in about 3” of space.
- Arm rotation is 360° at each pivot point.
- Unit head mounted on 200° tilt mechanism.
- Operator can position the speckFINDER® with the touch of a finger.
- All wires are hidden within cable management system.

Lens Options:

- Three different lens options satisfy varying magnification needs.

Lighting Options: (see back cover)

- Ring Lights - LED or Fluorescent
- Twin Halogens
- HID Metal Halide Thru-the-Lens Booster Box

Lighting Options

SPECK100-BK sports dual, 20-watt halogen lights mounted on flexible arms that allow maximum user control.

Multiple angle illumination gives you the choice for either shadow-free or high-light viewing.

Dual side lighting with a 3000K color temperature (warm white) provides flexibility and color which are both pleasing and suitable for many applications.

SPECK100-BK

BBox100-BK **BoosterBox**

Where tough viewing situations present a problem, BoosterBox or a Ring Light option will prove beneficial.
Note: BoosterBox and Ring Lights are quickly interchangeable for different viewing situations.

BoosterBox *has direct alignment of the* speckFINDER® camera with the light path emitted by the HID Metal Halide bulb rated at 450 lumens and a Kelvin temperature of 6000°. Use the BoosterBox to...

CONTROL SHINE...BoosterBox eliminates shine and glare on highly reflective surfaces. Allows the user to see detail that is normally "washed out."

TUNNEL VISION...illuminates dark holes, cavities and crevices to produce stunning, shadow-free viewing of depths in excess of 6-inches. BoosterBox eliminates any need to use probes or fiber optic cables to illuminate depth.

RNG100-BK

Ring Light and Backlight Options:

RNG100-BK Fluorescent provides even, shadow-free light with a daylight fluorescent color temperature of 6000°K. It is especially useful where color correctness and shade matching are critical.

Highlight 100-BK provides 40 LEDs. Any number of LED's can be on or off at any time. Any number of LED's can be rotated in either direction manually or automatically. Illumination control from 100% to 25%, 12%, 5% or 2%. Functions are all "mouse controlled."

Additionally, Ring Lights may be used in conjunction with speckFINDER® halogen lights. Combining the warm color of the halogens with the daylight illumination of Ring Lights, covers a large portion of the color spectrum, yielding an accurate white light with excellent color rendering properties.

HIGHLIGHT 100-BK

Slim Edge Backlight provides illumination from behind/beneath the object being viewed. It may be used when the object being viewed is translucent; specimen slides, glass lenses, clear plastic, etc. Slim Edge Backlight is available in three sizes. Operates from standard outlet or batteries.

BKLGT 5X4

DAZOR®

DAZOR MANUFACTURING CORP.
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314.652.2400 • 800.345.9103 • fax 314.652.2069
www.dazor.com • email: info@dazor.com • www.speckfinder.com