



# PRODUCT SPECIFICATION

**MODEL:** V8-80 SERIES

**PRODUCT CODE:** REFER TO TABLE 1

**DESCRIPTION:** HIGH-SPEED MOTORIZED ZOOM LENSES FOR 1/2-INCH FORMAT CAMERAS

- Sharp, color-corrected optics
- High-speed zoom and focus
- Microcomputer-controlled iris (AC model)
- Clutch-protected zoom and focus motors

The V8-80 series of high-speed motorized zoom lenses consists of three models. Model V8-80M-HS-1 features motorized zoom, focus, and iris functions. The V8-80MS-HS-1 adds a neutral-density spot filter to the motorized functions of the M lens for operation under a wide range of lighting conditions. The V8-80AC-HS-1 lens includes motorized zoom and focus, spot filter, and autoiris operation with built-in amplifier. With this lens, a sensitive camera can operate effectively in both partial darkness and high-light-level conditions. As the iris closes, the effect of the spot filter increases. The automatic iris control provides optimum viewing contrast regardless of light conditions or variations within the scene.

In AC lenses, the iris is controlled by a stepping motor, which is virtually unaffected by vibration or operating position. The microcomputer iris control provides precise, responsive iris operation.

MS and AC lenses may be ordered with the preset position function. This consists of precision potentiometers built into the lens which provide position feedback information for zoom and focus to a preset position control.

NOTES	SPEC NO.	REV.	SEC.
SUPERSEDES PRODUCT SPECIFICATION 684-296	684	499	15



V8-80M-HS-1 MOTORIZED ZOOM LENS

TABLE 1  
MODEL NUMBERS AND PRODUCT CODES

Model Number	Product Code
V8-80M-HS-1	5863
V8-80MS-HS-1	5864
V8-80MS-HS-P-1	5864-01
V8-80AC-HS-1	5865
V8-80AC-HS-P-1	5865-01

## ASSOCIATED EQUIPMENT AND ACCESSORIES

**Model V10FT Field-of-View Comparator:** Determines what focal length lens to use for a given scene. Compatible with 1, 2/3-, 1/2-, and 1/3-inch camera formats. Includes a strap and black vinyl case. Product Specification 786.

## CONTRACTORS' SPECIFICATION

### 1/2 INCH FORMAT HIGH-SPEED MOTORIZED ZOOM LENS

The lens shall be a 1/2-in. format high-speed motorized zoom lens. The focal length shall be variable from 8 to 80 mm, and the maximum aperture shall be f/1.4. Three versions shall be available: M, with motorized zoom, iris, and focus; MS, same as M with neutral density spot filter; AC, with motorized zoom and focus functions, spot filter, and autoiris operation with built-in amplifier. Minimum aperture shall be f/22 in the M version and f/360 in the MS and AC versions. Operating speed shall be adjustable, 2-7 sec in zoom, 2-8 sec in focus and 1.5-8 sec in iris. Autoiris speed shall not be adjustable. All models shall have a C-mount. The horizontal field-of-view shall be from 4.6° to 45.9°. MS and AC models shall be available with a preset-position option. The motorized zoom lens shall be Vicon model V8-80M-HS-1, V8-80MS-HS-1, or V8-80AC-HS-1; the motorized zoom lens with presets shall be Vicon model V8-80MS-HS-P-1 and V8-80AC-HS-P-1.

Product specifications subject to change without notice.  
Copyright © 1999 Vicon Industries Inc. All rights reserved.

Vicon part number 8006-7684-01-00  
Vicon and its logo are registered trademarks of Vicon Industries Inc.

# TECHNICAL INFORMATION

## OPTICAL

**Focal Length:** 8-80 mm (10X).

**Effective Aperture Range:** M lens: f/1.4-f/22.  
MS and AC lenses: f/1.4-f/360.

**Flange Focal Distance:** 0.690 in. (1.75 cm).

**Minimum Focusing Distance:** 4.9 ft (1.5 m).

**Field of View:** See Table 2.

**TABLE 2**  
**FIELD-OF-VIEW ANGLES**

Direction	Wide Angle View	Telephoto View
Horizontal	45.9°	4.6°
Vertical	34.4°	3.5°
Diagonal	57.6°	5.7°

**Video:** Requires video from 0.5 V to 1.0 V peak-to-peak for proper iris operation.

## ELECTRICAL

### M and MS Lenses

**Motor Drive Voltage:** 6-12 VDC.

**Operating Current:** Zoom: 40 mA.  
Focus: 40 mA.

**Connectors:** Standard lens: Vicon part number 8000-9800-00 on pendant cable. (Mating connector 8000-9736-00 supplied.)  
Preset lens: Vicon part number 8000-9801-00. (Mating connector 8000-9645 supplied.)

**Cable Requirements:** Without presets: 4 conductor, shielded.  
With presets: 8 conductor, shielded.

### AC Lenses

**Input Voltage:** Iris: 8-16 VDC.  
Zoom and focus: 7.5 VDC.

**Operating Current:** Iris: 40 mA.  
Zoom and focus: 43 mA max. per motor.

**Connectors:** Iris: 3-conductor shielded pendant cable supplied for iris.  
Zoom and focus: Standard lens: Vicon part number 8000-9800-00 on pendant cable. (Mating connector 8000-9736-00 supplied.) Preset lens: Vicon part number 8000-9801-00. (Mating connector 8000-9645-00 supplied.)

**Cable Requirements:** Without presets: 3 conductor, shielded.  
With presets: 7 conductor, shielded.

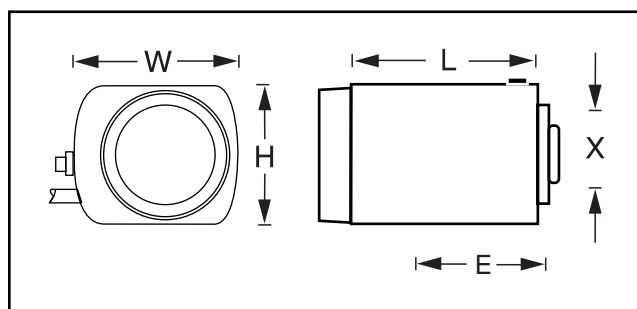
## OPERATIONAL

**Duty Cycle:** Intermittent.

**Operating Speed:** Zoom: 2-7 sec, adjustable.  
Focus: 2-8 sec, adjustable.  
Iris, M & MS Lenses: 1.5-8 sec adjustable.  
Iris, AC Lenses: 2.0 sec, not adjustable.

## MECHANICAL

**Dimensions:** Refer to Figure below.  
Height (H): 2.6 in. (6.6 cm).  
Width (W): 3.0 in. (7.6 cm).  
Length (L): 4.7 in. (11.9 cm).  
Optical center to bottom (X): 1.3 in. (3.4 cm).  
Distance from bottom mounting hole to CS-mount flange (E): 1.2 in. (3.1 cm).



**Mounting Hole:** 1/4-20 thread x 1/4 in. deep.

**Weight:** 1.43 lb (0.65 kg).

**Finish:** Black.

**Lens Mount:** C-mount.

**Maximum Lens Penetration into Camera:** 0.28 in. (0.71 cm). Measured from the lens mounting surface.

**Front Thread Element:** 58 mm x 0.75 p.

**Overload Protection:** All motors slip-clutch protected. AC and MS models provided with limit switches on iris function.

**Shipping Dimensions:** Height: 4.5 in. (11.4 cm).  
Width: 3.3 in. (8.4 cm).  
Length: 6.25 in. (15.9 cm).

**Shipping Weight:** 1.7 lb (0.77 kg).

**Shipping Volume:** 0.05 ft<sup>3</sup> (0.0014 m<sup>3</sup>).

#### **ENVIRONMENTAL**

**Ambient Temperature Range:** +14 to +122°F (-10 to 50°C).