

## 3.9mm CA, NIR Coated, Corning® Varioptic® Variable Focus Liquid Lens Development Kit



Corning® Varioptic® Variable Focus Liquid Lenses



Stock **#28-770** CLEARANCE CONTACT US

⊖ 1 ⊕ **SS\$1,355<sup>00</sup>**

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**General**

Development Kit Type:

**Contents of Kit:**

- Corning® Varioptic® A-39N0 Lens (without cable)
- A-39N1-P37 Lens (with straight flex cable)
- Maxim MAX14574 Driver Board (with 4 pin connector and 6 pin connector for thermistor populated 6 pin FPC)
- USB-MUniversal Control Board
- M4 thread holder for lens

**Model Number:**  
D-A-39N1

**Typical Applications:**  
Industrial vision, medical imaging cameras, optical equipment, & biometric devices requiring a large clear aperture operating in the NIR

## Physical & Mechanical Properties

**Diameter (mm):**  
15.50 (packaged lens, 13.00 bare lens)

**Clear Aperture CA (mm):**  
3.9

**Thickness (mm):**  
5.20 (packaged lens, 4.00 bare lens)

## Optical Properties

**Coating:**  
NIR

**Focus Range (mm):**  
-5 to +15 diopter

**Transmission (%):**  
96 @ 850nm (typical)

**Transmitted Wavefront Error, RMS:**  
50nm

## Environmental & Durability Factors

**Operating Temperature (°C):**  
-20 to +60

**Storage Temperature (°C):**  
-40 to +85

## Regulatory Compliance

**RoHS 2015:**  
[Compliant](#)

**Certificate of Conformance:**  
[View](#)

**Reach 235:**  
[Compliant](#)

## Product Details

- Vary Focal Length by Applied Voltage
- Ideal for Machine Vision Autofocus Applications
- Less Power Required than Traditional Autofocus Lenses
- Development Kits and Lenses with Thermistor Available

Corning® Varioptico® Variable Focus Liquid Lenses consist of a conductive liquid deposited on a flat, conductive substrate. Applying a voltage between the substrate and the liquid causes an insulated material within the liquid to change shape, yielding a variable focal length. These lenses are designed with a stable optical axis, can operate regardless of orientation, and feature AR Coatings optimized for excellent transmission between 400 and 700nm. Corning® Varioptico® Variable Focus Liquid Lenses are ideal for autofocus applications, and with no moving parts, they are faster, more durable, and consume less power than traditionally actuated autofocus lenses. The 1.6mm aperture lens is the smallest liquid lens currently available and specifically designed for ultra-compact cameras, such as barcode engines, industrial and medical endoscopes. A 2.5mm aperture lens for high speed applications and a 3.9mm aperture lens for long focal lengths, large sensor size, and laser applications are also offered, as well as the largest available 5.8mm clear aperture lens that has been designed for machine vision applications with long focal distance objectives, large sensors, or C-Mount objective lenses. The lenses are also available in development kits which include lenses, drive electronics, cables, and software for easy use and integration via USB-A connection. Versions with thermistor (temperature-dependent resistors) for temperature sensitive applications are also available.

**Note:** These products are sensitive to electrostatic discharge (ESD). Handling precautions should be taken to prevent accidental damage, such as using anti-static devices and storing products in static-safe containers when not in use.

## Technical Information

Stock No.	Description
#34-283	Packaged A-30N0-P04 Liquid Lens (MS)
#15-740	Packaged A-30N0-P04 Liquid Lens w/ Thermistor (MS)
#19-354	Packaged A-30N1-P04 Liquid Lens w/ Thermistor (NIR)
#17-126	A-39N0 Liquid Lens Development Kit (MS)
#19-358	A-39N1 Liquid Lens Development Kit (NIR)
#37-521	6mm FL, Liquid Lens M12 Lens
#37-522	8mm FL, Liquid Lens M12 Lens
#37-523	12mm FL, Liquid Lens M12 Lens
#37-524	16mm FL, Liquid Lens M12 Lens
#33-676	35mm, f/5, Liquid Lens Cx Series Fixed Focal Length Lens
#33-687	50mm, f/7, Liquid Lens Cx Series Fixed Focal Length Lens

**#12-247 - Liquid Lens Driver Board - Maxim USB**



Jumper at ST2 plugged in

Jumper at ST2 removed

**#12-248 - Liquid Lens Driver Board - Maxim I<sup>2</sup>C/DC**



Jumper at ST2 installed

Jumper at ST2 removed

When using a Maxim driver board with a Corning® Varioptic® A39Nx series lens, the jumper at ST2 **must** be removed to ensure optimal performance and product lifetime. Please contact us for updated user manuals with more information.

**Special Handling**

These optics require special handling to avoid damage and ensure long-term performance. Proper handling, cleaning, and storage are essential to maintain optical quality. Explore our [Optics Cleaning Resources](#) for step-by-step guides and best practices. For personalized assistance, [Email us](#) or [Chat](#) with our technical support team.



Component Handling Tools

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