

# OMRON



Visual Inspection by Digital Solution.

Digital**LUPE**<sup>®</sup>

realizing



Digital LUPE

VC-DL100



Let the Digital LUPE show you the way to higher quality.





## A Digital Eye Shows You More

Today a severe eye is being cast on the quality of process control that is as severe and sometimes even severer than for the quality of the products themselves. Various quality control issues call for production environments to provide methods for recording information on product quality from visual inspections on the production lines to creating databases of quality standards. These needs can be met with OMRON's Digital LUPE. The LUPE is easy to operate, and has digital functionality that can greatly boost quality control capabilities. Another digital solution from OMRON.

Digital**LUPE**<sup>®</sup>



# Making Visual Inspection more Precise and Efficient

The level of quality control can be greatly improved by using monitor checks, which are easy on the eyes, and provide convenient monitoring functions for essentially any application.

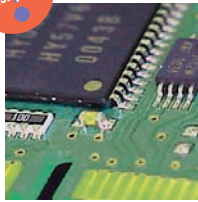


## Precision and Efficiency

### Electronic Zoom (5x to 100x) and Auto Focus

A power zoom can be used to monitor at 5x to 50x, or 10x to 100x, as required by the objects being monitored. Also, with the Auto Focus, even high-magnification inspections can be performed quickly. Smooth monitoring is possible for a wide range of applications.

Industry First!

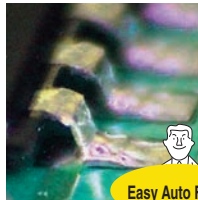


Board



#### Advantages

- Increases inspection speed.
- Combines a magnifying glass and microscope in one unit.
- Eliminates troublesome focusing operations.
- Reduces human inconsistencies in focusing.



Easy Auto Focus!

Instant Focusing

## Operator Friendly Inspection Environment

### High-quality Images are Easy on the Eyes

Enlarged images can be viewed on the monitor, reducing eye fatigue and dizziness. The LUPE provides an inspection environment that minimizes oversights.



#### Freeze Function

With a single touch you can view a frozen frame (still image) of the place and instant you wish to see. Useful for increasing inspection accuracy by reducing oversights.



#### Advantages

- Inspecting minute parts with their heavy inspection load.
- Inspecting objects that are difficult to fix in one place.



Discover Factory Problems, and Sol

# Digitize Quality Information

Effectively utilize data to create standards for quality and reports. A digital operating method connects you to the future.



## Applications that expands in your computer.

You can use a PC capture card (commercially available) to load image data onto a computer. The data can be saved and used to create quality standards, databases, reports, and much more.



#### Advantages

- Recording/pasting images of defective products
- Making databases of standards for quality.
- Creating reports.
- e-mailing images.
- Measuring images with measurement software.



Dedicated Measurement Software (sold separately)

**QuickGauge™**



## Easy to See, Optimum Lighting

### White LED Lighting

White LED light close to sunlight is used for lighting. With eleven lighting patterns available, you can select the best lighting method. Of course, LED light sources are maintenance free and have a long service life.



■ Digital Pattern Lighting Function



#### Advantages

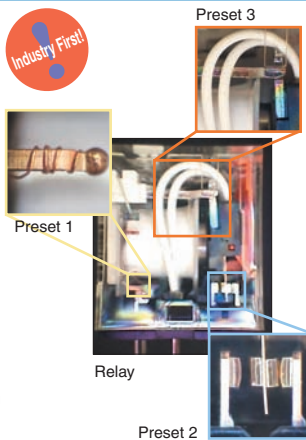
- Inspecting objects with uneven surfaces or defects.
- Reducing running costs with a long service life.



## Perform Multiple Inspections More Conveniently and Efficiently

### Preset Function: Zoom and Lighting Patterns

Register up to three groups of magnification rates and lighting patterns as presets. This allows you to call frequently used groups with one touch for convenient operation when you need to switch the monitoring conditions.



#### Advantages

- Inspection while changing the magnification rate for only part of the image.
- Inspection with many setup changeovers.
- Reducing human inconsistencies.



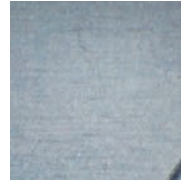
## Monitoring Shiny Surfaces

### No-reflection Images

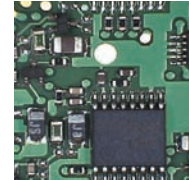
Useful for inspecting regular-reflective objects, such as metallic surfaces, glass surfaces, and solder.

No-reflection Mode: OFF

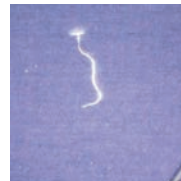
SUS Surface



Laser Markings ON ICs



No-reflection Mode: ON



#### Advantages

- Inspecting surfaces with metallic coatings.
- Inspecting for minute dust and foreign matter.



# View Them with the Digital LUPE.



## Enabling Team-wide Quality Studies

Connect directly to a projector. Go beyond magnifying glasses with easy application to quality control meetings or prototype study sessions.



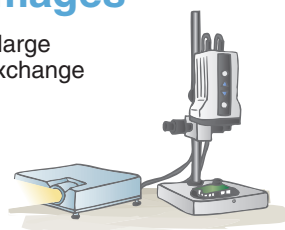
### Readily Project Large Images

With the Digital LUPE, you can also project large images with a single touch, facilitating the exchange of opinions while viewing relevant images.



#### Advantages

- Quality control meetings, prototype discussions, and other types of meetings

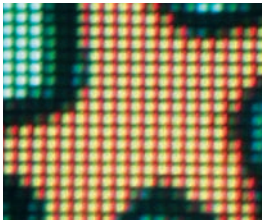


#### Freeze Function

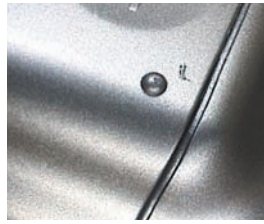
With one touch you can freeze frame the image at an important point, which is ideal for facilitating in-depth discussion.



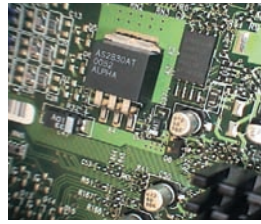
## Applications



LCDs



Defects in Molded Goods (Dents)

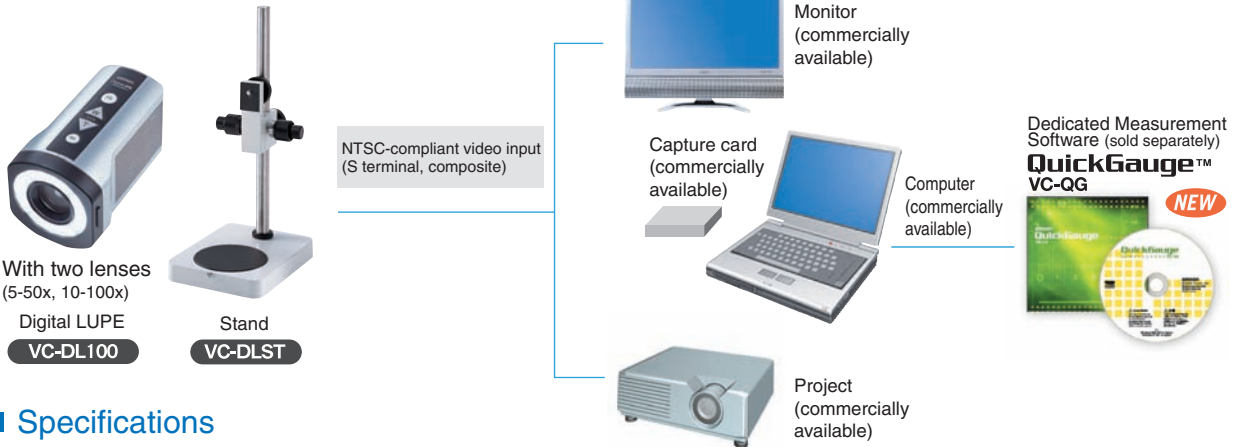


PCBs



Spark Plugs

## System Configuration



## Specifications

### Digital LUPE

Performance specifications	Imaging element	1/4 CCD, approximately 38,000 effective pixels
	Image output	VBS: 1Vp-p (negative sync) and Y/C output
	Imaging distance	5-50x lens: 90 mm, 10-100x lens: 48 mm
	Lighting	White LED
	Image adjustments	Auto white balancing, AE full auto
	Monitoring Tools	Auto Focus, Freeze Function, Electronic No-reflection Mode, Digital Pattern Lighting

Specifications	Supply voltage	7 VDC (AC adapter for 100 to 240 VAC included.)
	Power consumption	5 W (rated)
	Ambient temperature	Operation: 0 to 40°C, Storage: -10 to 50°C (with no icing or condensation)
	Ambient humidity	Operation/Storage: 20% to 85% (with no condensation)
	Dimensions	76 × 77.5 × 127.5 mm (excluding projections)
	Weight	Approx. 300 g (Digital LUPE with x50 lens mounted)

This document provides information mainly for selecting suitable models. Please read the document SCNC-703 carefully for information that the user must understand and accept before purchase, including information on warranty, limitations of liability, and precautions.

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