Handheld 2-Dimensional Code Reader
V530-H3

Easy Handheld Reading of Directly Marked, Ultra-Small, 2-Dimensional Codes

Features

Reads Directly Marked 2-Dimensional Codes

In addition to 2-dimensional codes printed onto paper, this convenient handheld unit easily reads codes directly marked with a laser marker onto metal, resin, or glass. (See note.)

Note: The ability to read directly marked codes is affected by the marking method and the material which is marked. These factors must be carefully considered before selecting the Handheld 2-Dimensional Code Reader.

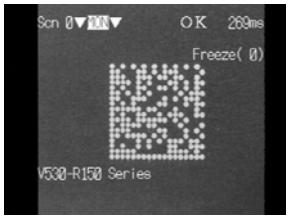
Reads Ultra-Small 2-Dimensional Codes

Ultra-high resolution of 0.05 mm (in the V530-H301 Coaxial Lighting Model) makes it possible to read the ultra-small 2-dimensional codes that are used in many of today's smaller, space-saving products and parts.

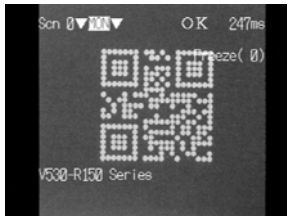
Reads Dot Cell Codes

The Handheld 2-Dimensional Code Reader can also read dot cell codes.

Data Matrix (ECC200)



QR Code



Note: The readable direction is limited for dot cell codes.

Three Models to Suit Target Objects

Three models are available to match the objects to be read, and the marking method.

For reading 2-dimensional codes marked onto polished wafer surfaces, LCD glass, and lenses.

V530-H302

For reading 2-dimensional codes marked onto printed wiring boards, electronic parts, and IC packages.

V530-H303

For reading 2-dimensional codes marked onto LCD glass substrates or color filters.

Lightweight, Compact, Handheld Design

Measuring only 175 mm in length and weighing only 100 g, the Handheld 2-Dimensional Code Reader can be used to control a variety of production information, such as the production number and lot number, on cell lines. Or, it can be used together with the V530-R150E-3/V530-R150EP-3 Fixed 2-Dimensional Code Reader as an ideal combination for automated lines.

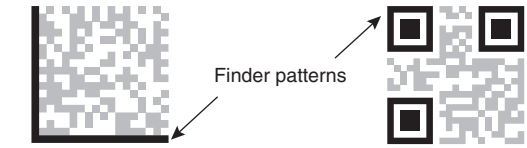
Enables Easy Problem Analysis

Using the Console and Monitor, the 2-dimensional code reading condition can be checked on-the-spot. Up to 24 NG images can also be stored in memory for use in troubleshooting reading problems.

For example, the finder pattern, cell recognition and reading data can be viewed on the Monitor.

Finder pattern (cutting symbol)

The shape of this pattern, which is used to detect the position of the 2-dimensional code, differs for each type of code.

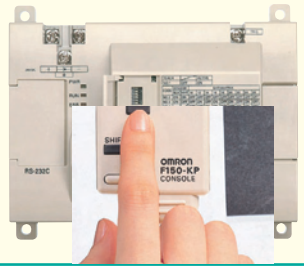


Easy Optimization

Optimal settings can be easily made by setting the DIP switch on the Controller and then reading the target 2-dimensional code. More detailed settings can be made by using the Console and Monitor.

STEP 1

Use the Controller DIP switch to select the matrix size (Data Matrix) or symbol color (QR Code).



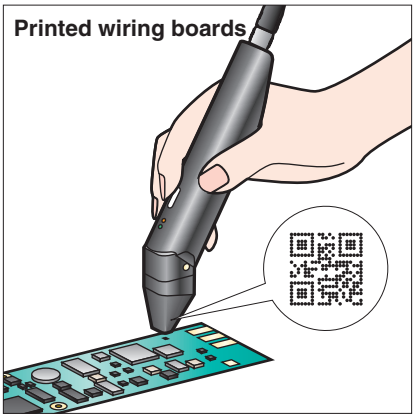
STEP 2

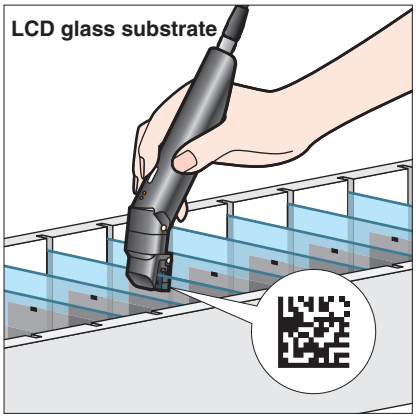
Read the target 2-dimensional code.

STEP 3

When the Reading Complete signal sounds and the green LED illuminates, the setting procedure is finished.

Applications





Ordering Information

■ List of Models

Name		Model
Handheld Reader	Coaxial Lighting Model	V530-H301
	Oblique Lighting Model	V530-H302
	Back Lighting Model	V530-H303
Controller		V530-C300E
Handheld Reader Cable (2 m)		V530-W001

■ Optional Models

Name	Model
Console	F150-KP-2D
Monitor Cable (2 m)	F150-VM-2D
LCD Monitor	F150-M05L-2D
Video Monitor	F150-M09-2D

Specifications

■ Handheld 2-Dimensional Code Reader

Item		Model		
		V530-H301	V530-H302	V530-H303
Performance specifications	Field of vision	3 × 3 mm	6 × 6 mm	6 × 6 mm
	Resolution	50 μm	100 μm	100 μm
	Lighting method	Coaxial lighting	Oblique lighting	Back lighting
	Reading method	Touch		
General specifications	Ambient operating temperature	0 to 38°C (with no icing or condensation)		
	Ambient operating humidity	35% to 85% (with no condensation)		
	Ambient operating environment	No corrosive gases		
	Storage temperature	–25 to 60°C		
Weight		Approx. 100 g (not including cable)		
Case material		ABS resin (reading section: POM)		

■ Controller

Item		V530-C300E
Performance specifications	Readable codes	Data Matrix (ECC200): 10 × 10 to 26 × 26 QR Code (Models 1, 2): Versions 1 to 6 (21 × 21 to 41 × 41)
	Interface	RS-232C
General specifications	Ambient operating temperature	0 to 50°C (with no icing or condensation)
	Ambient operating humidity	35% to 85% (with no condensation)
	Ambient operating environment	No corrosive gases
	Storage temperature	–25 to 60°C
	Power supply voltage	24 VDC (+10%, –15%)
	Current consumption	0.5 A
Number of pixels (resolution)		512 (H) × 484 (V)
Number of scenes		2
Image memory function		Maximum of 24 images stored.
Operation method		Menu selectable
Processing method		Gray
Readable direction		360°
Monitor interface		1 channel (over scan monitor)
Weight		Approx. 500 g
Case material		ABS/PC resin

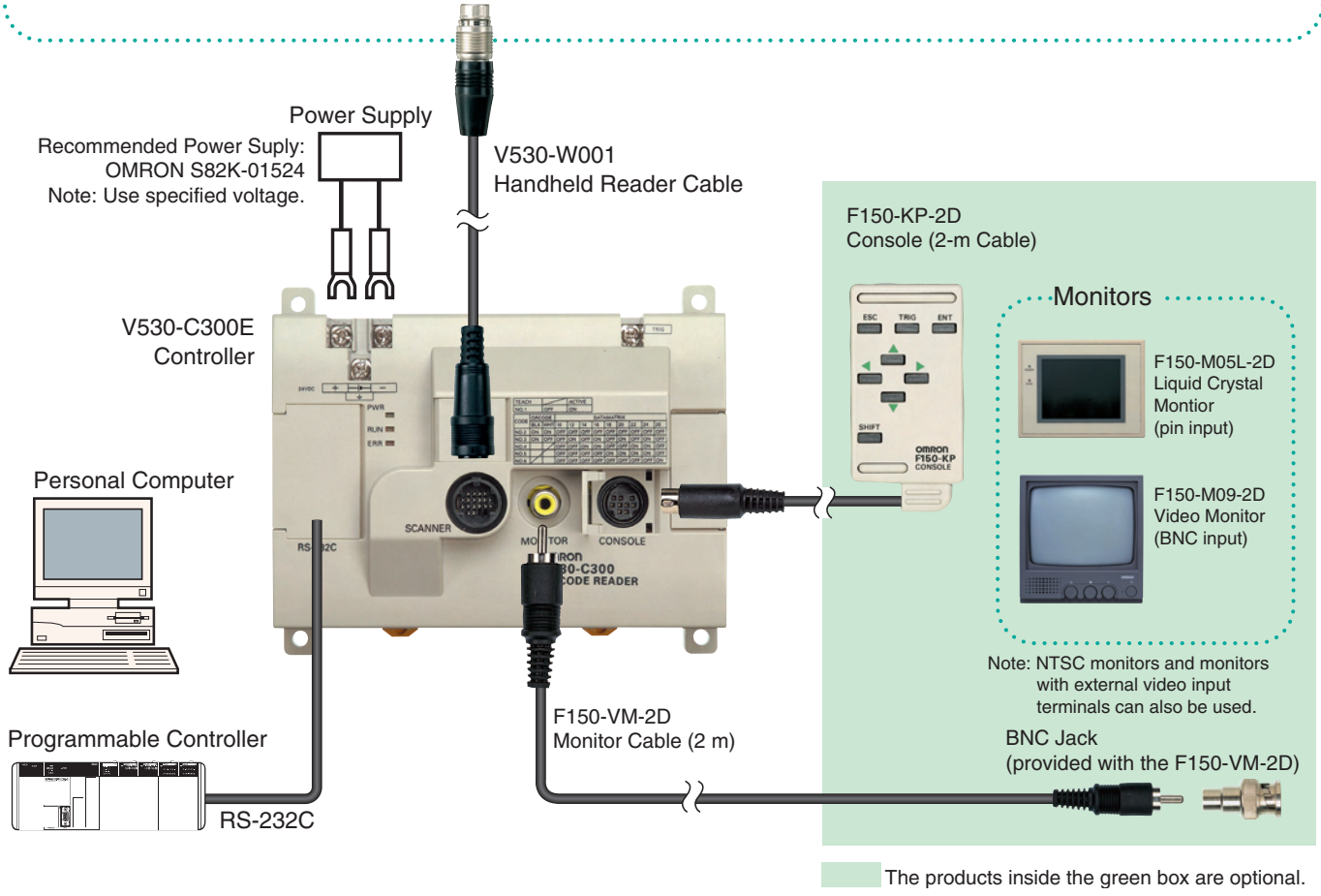
■ Handheld Reader Cable

Item	V530-W001
Ambient operating temperature	0 to 50°C (with no icing or condensation)
Ambient operating humidity	35% to 85% (with no condensation)
Ambient operating environment	No corrosive gases
Storage temperature	–25 to 60°C
Length	2 m
Cover material	Polyvinyl chloride resin

System Configuration

Handheld 2-Dimensional Code Readers

Select the model that best matches the marked material.



The products inside the green box are optional.

Model Selection

Select the Handheld Reader that best matches the marked material.

Coaxial Lighting Model V530-H301

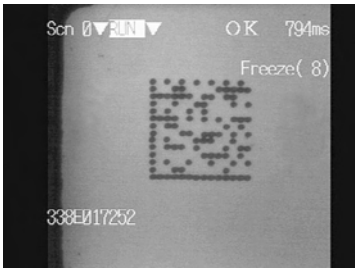
For directly marked items with mirror-like surfaces, such as wafers, or LCD glass substrates, stable reading can be achieved with the Coaxial Lighting Model because it detects only regular reflected light.

Application Examples

Codes on wafers or LCD glass substrates.

A 2-dimensional code on wafer

Read image



Oblique Lighting Model V530-H302

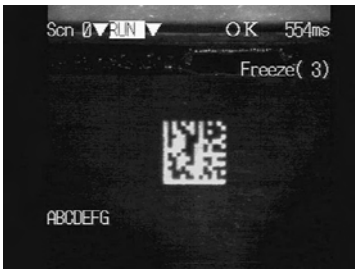
For laser-marked codes on comparatively glossy surfaces such as printed wiring boards or metal parts, or for codes printed onto highly diffusing surfaces such as paper, stable reading can be achieved with the Oblique Lighting Model.

Application Examples

Labels or directly marked printed wiring boards or electronic parts

A 2-dimensional code on a printed wiring board

Read image



Back Lighting Model V530-H303

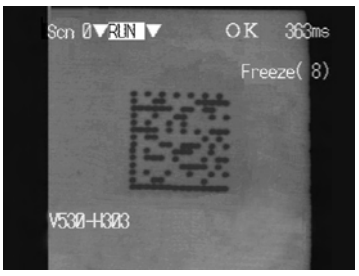
For transparent objects such as glass substrates and lenses, a stable, high-contrast image can be obtained by using the Back Lighting Model to detect differences between the transmitted and interrupted light.

Application Examples

Codes on transparent objects such as glass substrates and lenses.

A 2-dimensional code on a glass substrate

Read image

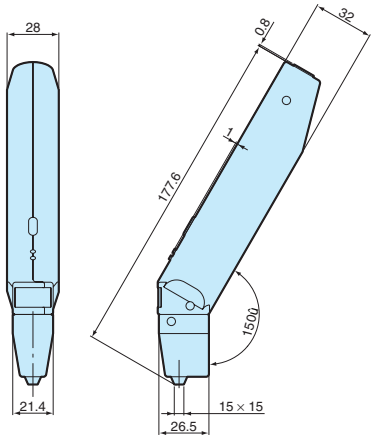


Dimensions

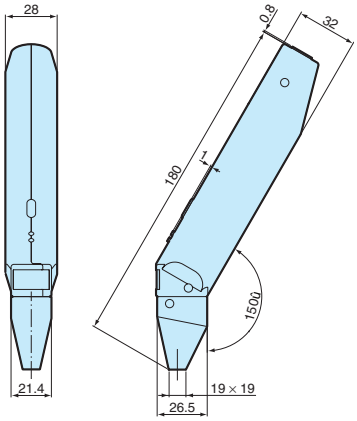
Note: All units are in millimeters unless otherwise indicated.

Handheld 2-Dimensional Code Reader

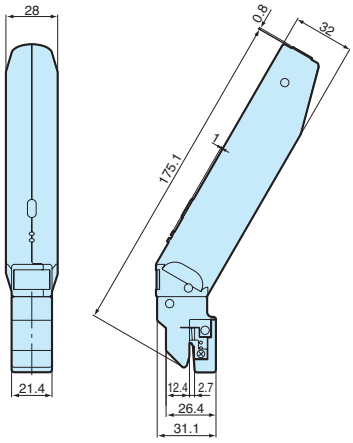
V530-H301



V530-H302

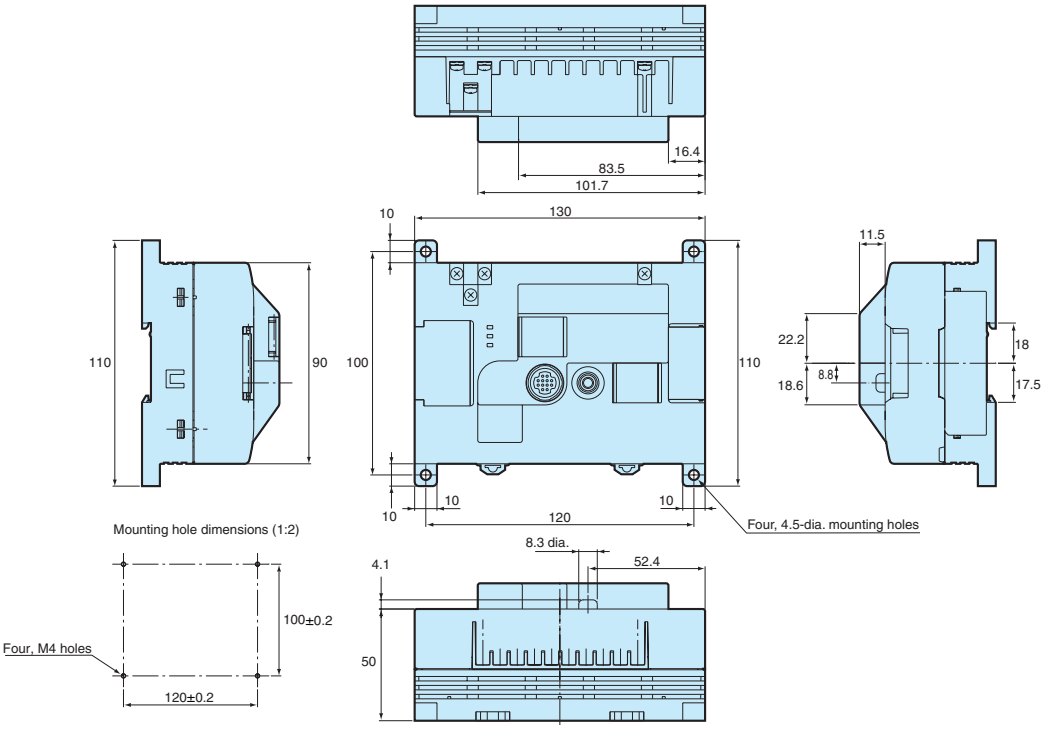


V530-H303



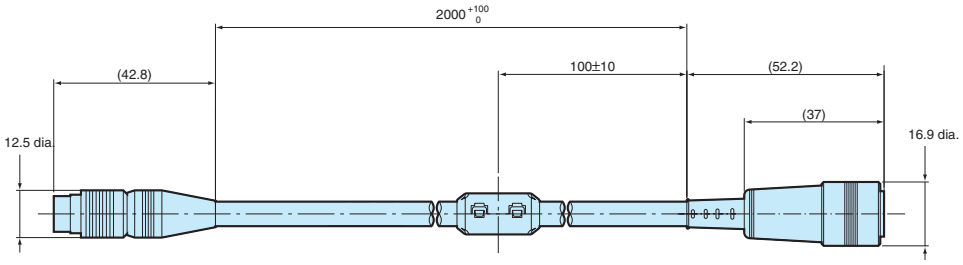
Controller

V530-C300E



Handheld Reader Cable

V530-W001



ALL DIMENSIONS SHOWN ARE IN MILLIMETERS.
To convert millimeters into inches, multiply by 0.03937. To convert grams into ounces, multiply by 0.03527.