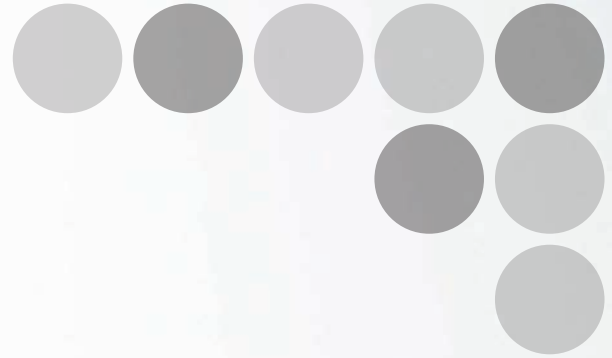


**NEW**

Inline PCB inspection system  
VT-S720

**OMRON**



Best Quality at the Minimum Q Cost!

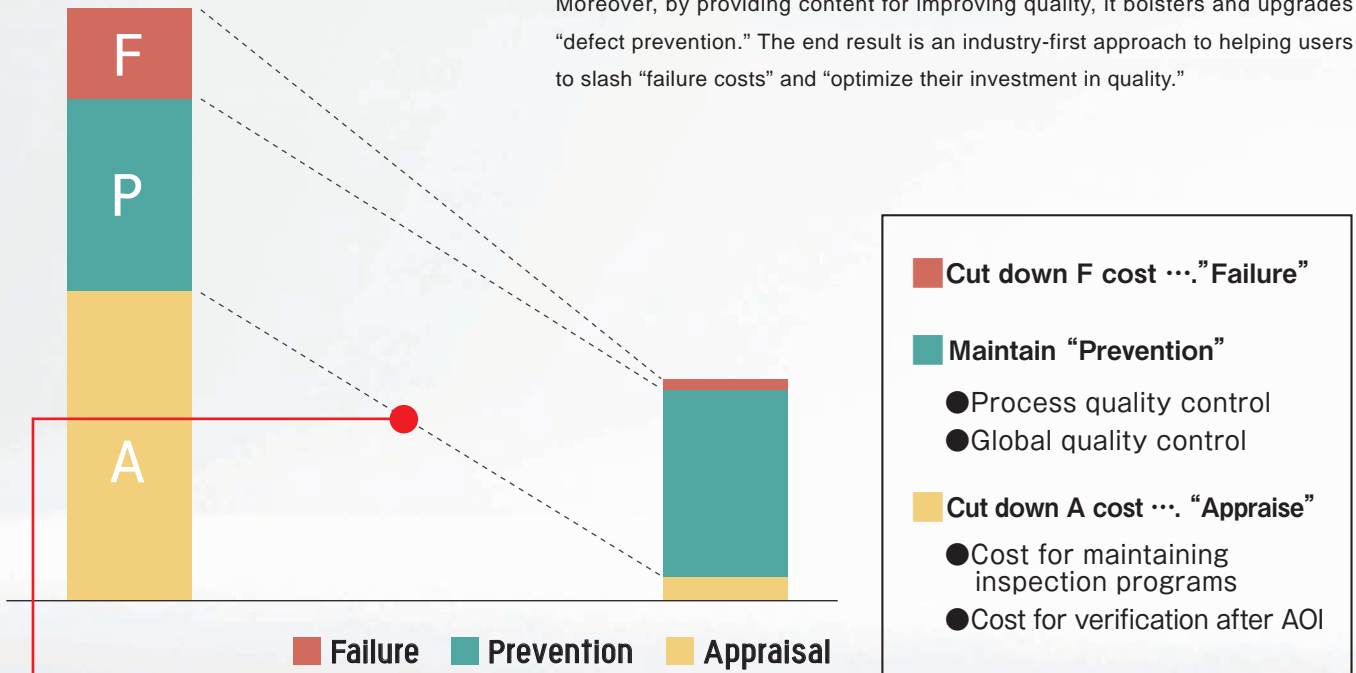
# VT-S720



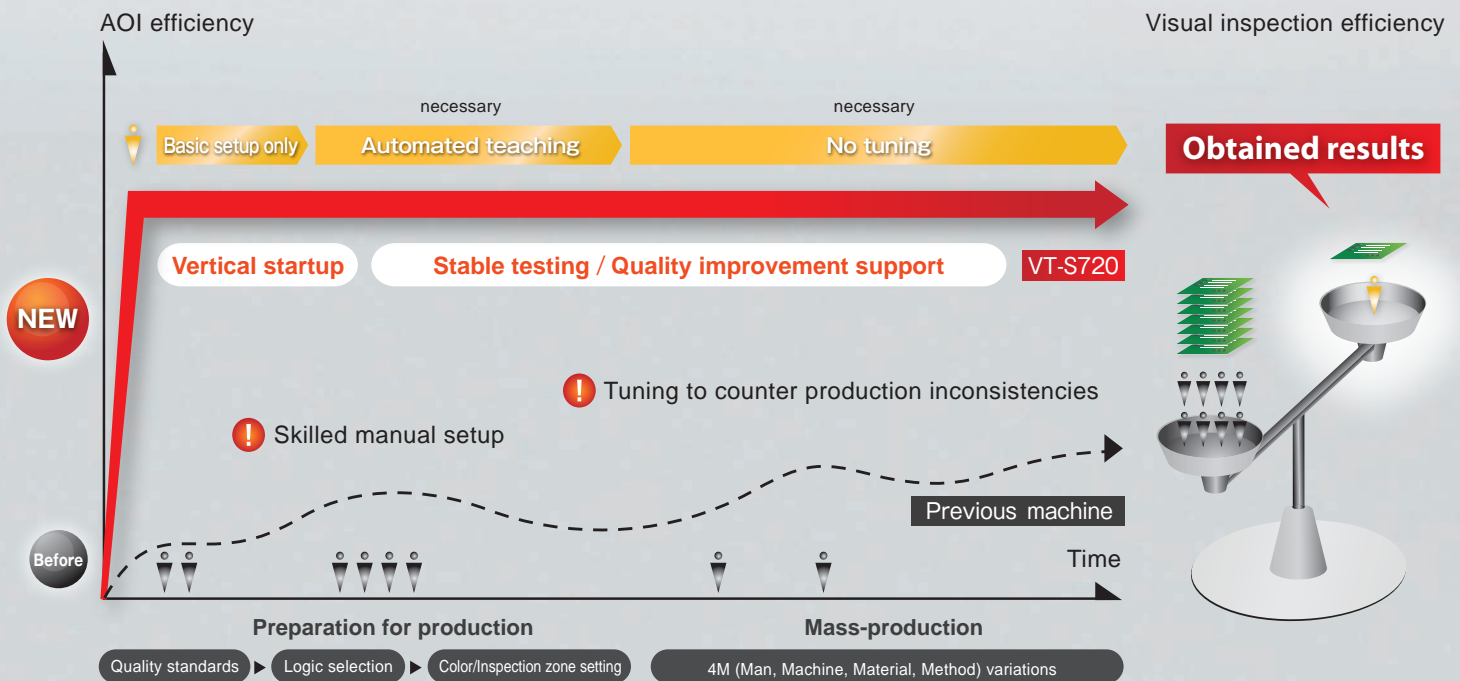
realizing

# Best Quality at the Minimum Q Cost!

The VT-S720 is a new concept in AOI. With a revolutionary inspection system, it greatly reduces "inspection costs" that have plagued AOI for some time. Moreover, by providing content for improving quality, it bolsters and upgrades "defect prevention." The end result is an industry-first approach to helping users to slash "failure costs" and "optimize their investment in quality."



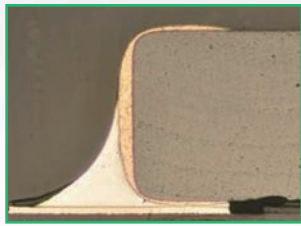
## A Reduction in inspection costs



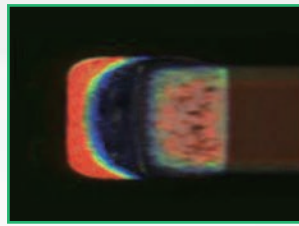
# Direct inspection of "fillet features"

Soldering reliability is determined by fillet shape.

The VT-S720 uses new image processing technology to automatically sample fillet topological features. **Patent Pending**



Actual image



Captured image

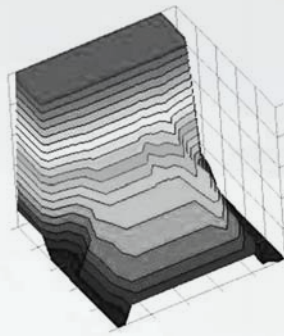
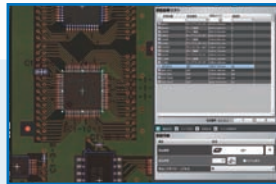


Image after internal processing

## Pass level definition

Features of passing products are input into the inspection machine as required quality levels.

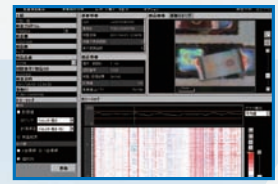
**Patent Pending**



Teaching window

## Process monitoring

Constant monitoring of production makes it possible to spot inspection troubles instantly, giving users a system optimized for improving both productivity and quality.



Monitoring of process stability



Production status window



Monitoring of impact from product inconsistencies



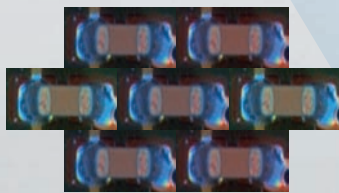
Monitoring of process threshold adequacy

# Manufacturing that begins with quality

## Passing product ascertainment

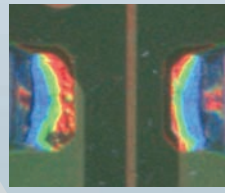
### Inconsistency monitoring

The VT-S720 absorbs inconsistencies in order to stabilize mass-production.



### Reduced noise impact

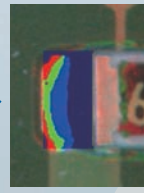
Parameters have been optimally set to pick up gradations unperceived by humans, and automatically separate good from bad products.



Example image of secondary reflection



Previous machine

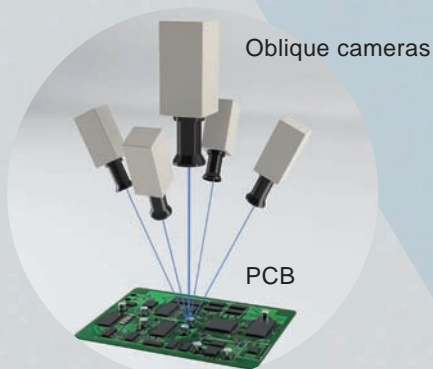


VT-S720

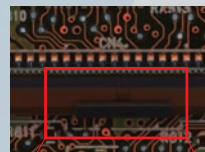
## AOI Inspection Coverage Expansion

### Oblique cameras

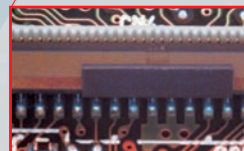
The camera array captures features that cannot be seen square on.



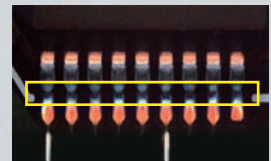
Oblique camera array



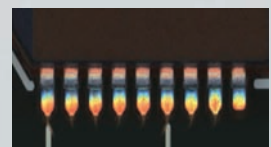
Oblique angle  
Straight-on shot of connectors



Oblique image  
(Red frame in straight-on shot)



PLCC  
Oblique image  
(Red frame in straight-on shot)



PLCC  
Straight-on shot of connectors  
Oblique angle

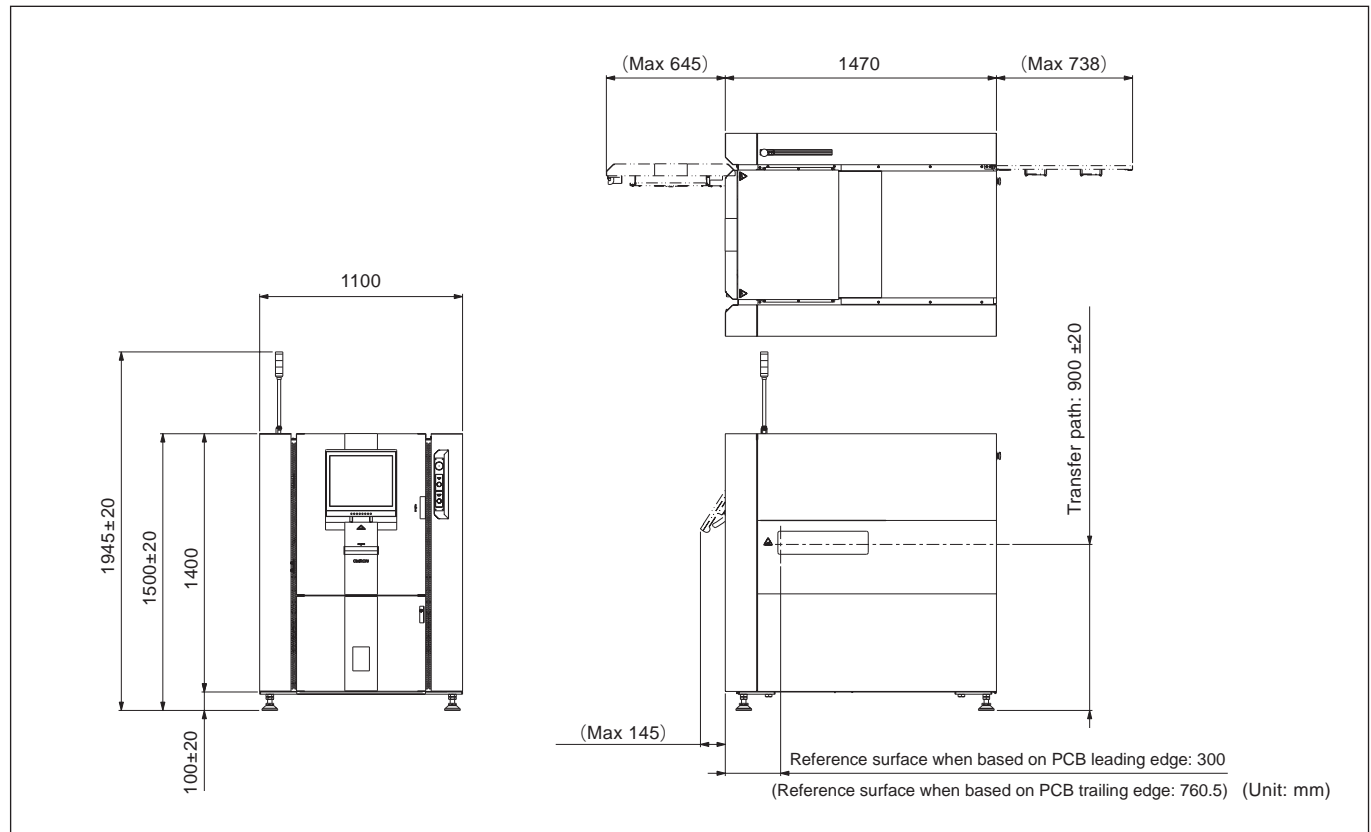
## Hardware Configuration

		L size
Image signal input unit	Camera	3-CCD camera/ Telecentric lens
	Illumination	Ring-shaped LEDs(R,G,B)
	Image resolution	20, 15 μm
Main unit	Feed method	Belt
	Line height	900±20mm Adjustment from adjustable feet
	PCB carrier width adjustment	Automatic
Power supply	AC200~240V(single phase) Fluctuation ±10% (Rated power on model plate supplied)	
Air	0.3 to 0.6Mpa	
Ambient operating temperature	+10 to +35°C	
Ambient operating humidity	30% to 80%RH(with no condensation)	
Weight	Approx. 800Kg	
Dimensions	1100(W)×1470(D)×1500(H)mm	

## Functional Specifications

		L size
Inspectable PCBs	Type	Post-reflow
	Dimensions	50(W)×50(D)~510(W)×460(D)mm
	Thickness	0.4~4.0mm
Clearance	Above PCB : 40mm Below PCB : 40mm	
Inspection items	Missing components, wrong components, component shifting (X/Y/skewing), fillets (wettability angle, height, length, width of the tip, length of the side) Exposed of land, Polarity shifting, Polarity lifting Solder balls, bridging, objects	
Number of inspection points	10,000 components/PCB max.	
Data storage	Special DB	
Communications	Ethernet, RS-232C	
PCB feed mode	Through	
Reference position	PCB feed direction : left or right Longitudinal : Front or back	

## Outer dimensions



- This catalog contains information useful for selecting a product model and does not contain precautions in usage, etc.
- For precautions in usage and other information pertinent to actual use, see the user's manual.
- Application examples appearing in this catalog are for reference purposes only, therefore confirm equipment functioning and safety before use.
- If interested in using this product under conditions not contained in this catalog or in applications that particularly require safety because of possible serious impacts on nuclear power control, trains, aircraft, vehicles, furnaces, medical equipment, entertainment equipment, safety devices, or otherwise human life or property, take into consideration methods of use that ensure adequate rating and performance margins, fail-safes and other safety measures, etc. Contact Omron sales reps with specifications, etc.
- This product may cause electrical interference if used in residential areas.

## OMRON Corporation Industrial Automation Company

### Sensing Devices Division H.Q.

7F Shinagawa Front Bldg., 2-3-13 Konan,  
Minato-ku, Tokyo 108-0075

### Vision Systems Sales Department

Tokyo / 81+3-6718-3550  
Nagoya / 81+52-561-0156  
Osaka / 81+6-6347-5840

### Repairs, maintenance and servicing

AOI Service Center / 0120-066-294

### OMRON INDUSTRIAL AUTOMATION (CHINA) CO., LTD.

F20,TowerA,NEO Building,6011ShennanAvenue,  
Futian District, Shenzhen, Guangdong  
518048, China  
TEL:+86-755-8359-9028 FAX:+86-755-8359-9628  
<http://www.omron-aoi.net/>

### Omron AOI Business Europe, Omron Europe B.V.

Zilverenberg 2, 5234 GM 's-Hertogenbosch,  
The Netherlands  
TEL:+31(0)736 481811 FAX:+31(0)736 481879  
[mailto:aoi\\_sales@eu.omron.com](mailto:aoi_sales@eu.omron.com)  
<http://www.aoi.omron.eu>

### OMRON ELECTRONICS LLC

1 East Commerce Drive, Schaumburg,  
Illinois, 60173-5302 U.S.A.  
TEL:+1-847-843-7900 FAX:+1-847-843-7787

### OMRON ELECTRONICS KOREA CO., LTD.

21F, Kyobo Tower B Wing,1303-22,  
Seocho-Dong, Seocho-Gu, Seoul, Korea 137-920  
TEL:+82-2-3483-7789

### OMRON ASIA PACIFIC PTE LTD

438A Alexandra Road #05-05/08 (Lobby 2)  
Alexandra Technopark  
Singapore 119967  
TEL:+65-6547 6789 FAX:+65-6547 6769  
<http://www.omron-ap.com/aoi/>