

Defect Detection System

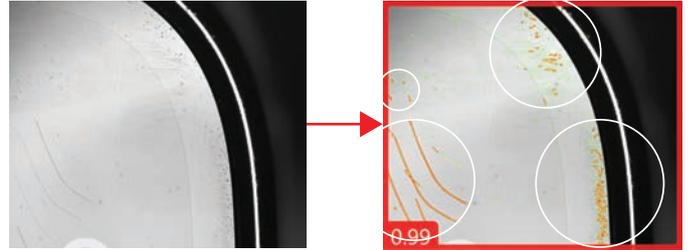
SMART INSPECTION IN SECONDS

Deep learning based defect detection system identifies surface imperfections with speed, reliability and precision

Featuring deep learning technology, the Defect Detection System quickly identifies defective or anomalous parts, helping manufacturers reduce costs and meet consumer quality expectations.



High-Definition Inspection Images



Smartphone glass defect

Detected by system

KEY BENEFITS

- Flexible inspection system combines advanced machine vision with deep learning algorithms
- Surface defect detection distinguishes desired features from anomalies while tolerating natural variations in complex patterns
- Detects defects on glossy, shiny or rough surfaces
- Easy setup and operation with automatic orientation of part for inspection
- Provides precise part placement without marring the part surface
- Rapid inspection part programming allows for efficient setup of different part configurations
- Identifies production defects in real-time, enabling adjustment of upstream processes to reduce waste
- Available as a standalone system or as an option on other DWFritz metrology and assembly systems

KEY FEATURES

- High powered GPU image processing system
- High resolution camera with global shutter optimizes field of view and measurement precision
 - Custom multispectral lighting and strobe controller
 - Custom fixturing and part handling capabilities

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Defect Detection System

IMPROVE QUALITY WHILE REDUCING MANUFACTURING COSTS

SPECIFICATIONS

Work volume	203 x 135 x 6 mm (L x W x H)
X-axis	600 mm [$\pm 2 \mu\text{m}$ repeatability]
Y-axis	220 mm [$\pm 2 \mu\text{m}$ repeatability]
Z-axis	10 mm [$\pm 2 \mu\text{m}$ repeatability]
Theta-axis	∞ , 5 μm runout
Payload	0-5 kg range
Pitch	180° [$\pm 0.004^\circ$ positional accuracy]
Lighting	Custom strobe, bright field, dark field, coaxial
Camera	5 MP [3.45 μm resolution]
Electrical service	208-240 VAC 50/60 Hz 15A, 1-Phase
CDA/AIR service	142 l/min [5 CFM] @ 0.55 MPa [80 psi]
System dimensions	112 x 70 x 209 cm (W x D x H)
System weight	725 kg (1600 lbs)
System controllers	High performance industrial PC operator station with touch screen and secondary display screen
Options	Barcode reader



KEY INDUSTRIES



Automotive



Consumer Electronics



Medical Devices



Aerospace



Semiconductors



Energy Storage

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