LUSTER

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SHEET−FED PACKAGING

PRINTING QUALITY INSPECTION SOLUTIONS

PTM-550M

en.lusterinc.com

Flexible Packaging

Sheet-fed Packaging

Label

Tobacco Packaging

About LUSTER

LUSTER LightTech Group, founded in June 1996, is a customer-oriented company focusing on Fiber Optics and Vision Imaging fields. During the past 23 years, we concentrate on developing innovative vision technologies of surface quality inspection and have been devoted ourselves to five industries which are Printing Inspection, Display Inspection, PCB Inspection, 3C Electronics and Glass Inspection. So far, LUSTER has over 1300 employees and total output value exceeds 261 million USD in 2018. It is our goal to support our customers throughout the entire production process and help them to achieve their dreams and add values to their products.

For printing industry, LUSTER provides automated vision inspection solutions and intelligent quality management service for flexible packaging, label, sheet-fed packaging and tobacco packaging in the printing process and final check. With our strong research team, flexible solutions and professional services, we aim to help our customers improve their quality management standard to a higher level in much lower costs and greater efficiency.

2200+ Installations Worldwide

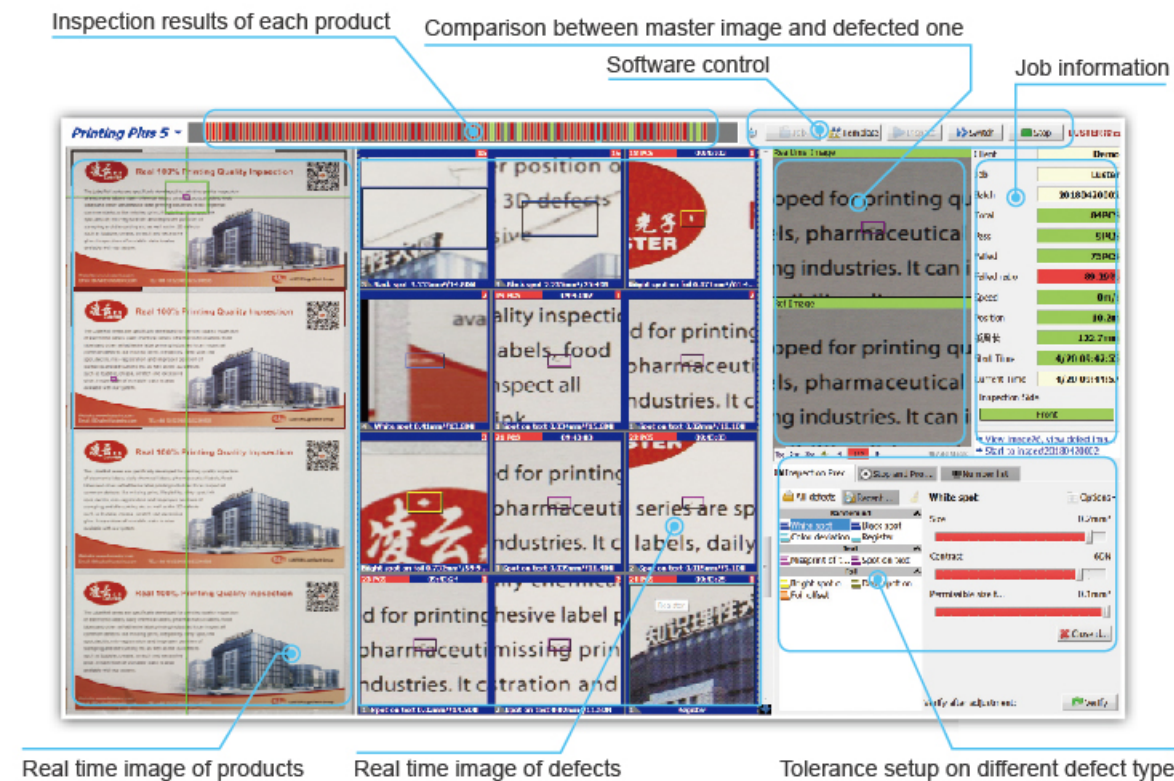1400+ Customers in Total

1300+ Employees & 14 Subsidiaries

70% Market Share of Printing Inspection

LUSTER Headquarter

Printing Plus Quality Inspection Software

Basic Functions and User Interface

Inspection results of each product

Comparison between master image and defected one

Software control

Job information

Real time image of products

Real time image of defects

Tolerance setup on different defect type

02 High Inspection Precision

100% print inspection is truly achieved that the Printing Plus 5.0 software reliably identifies every small defect like a colon or a decimal point in text.

04 Easy to Use

The Printing Plus 5.0 is very easy to use, only basic computer skills are needed. User simply follows few steps on screen to finish template setup process in few minutes. Clear instructions of tolerance adjustment are provided to facilitate users to quickly set up wanted template.

Main Features

01 Scientific Quality Standard

New software algorithm enables reliable and strong inspection performance. To ensure the accuracy of inspection, it only needs one master image as reference for job setup. No studying or training of multiple products, it can greatly improve the reliability of inspection and reduce false alarm.

03 Accurate Classification of Defects

Printing Plus5.0 software accurately identify different defects type and category, the operator can set different quality standard on defects type and region of interests to achieve minimum false alarm and best inspection performance.

05 Faster than every system you have seen before

The software only needs ONE computer to achieve the processing speed and reliable performance of 4-6 computers. Due to the advanced algorithm, the system can achieve high-speed inspection while still remain high accuracy of inspection.
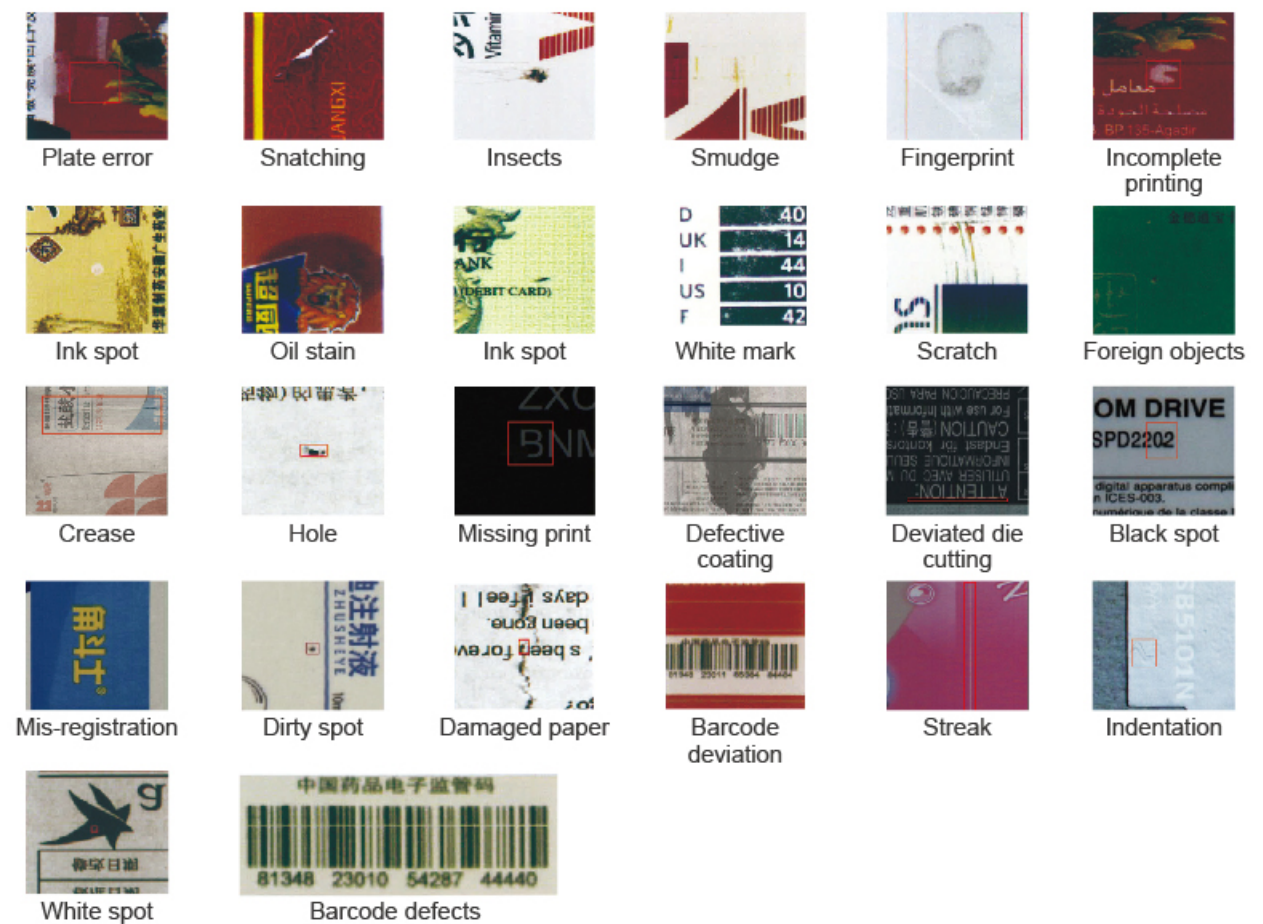
Sheet-fed Packaging Inspection

For sheet-fed packaging inspection such as pharmaceutical packaging, food & beverage packaging, 3C electronic products packaging, cosmetic packaging, tag, card, corrugated packaging etc., LUSTER specially developed the PrintMan series to effectively reduce labour cost and greatly improve inspection performance and efficiency. With advanced solutions of 2-5 camera combinations and different light source options, as well as innovative mechanical designs for various sizes of products, you can truly achieve 100% inspection of all kinds of defects and materials.

■ Product Samples

■ Defect Samples

Plate error	Snatching	Insects	Smudge	Fingerprint	Incomplete printing
Ink spot	Oil stain	Ink spot	White mark	Scratch	Foreign objects
Crease	Hole	Missing print	Defective coating	Deviated die cutting	Black spot
Mis-registration	Dirty spot	Damaged paper	Barcode deviation	Streak	Indentation
White spot	Barcode defects				

■ Solutions

Inline Inspection

Inline Inspection

Offline Inspection

Ink-jet → Offset Printing → Coating Stamping Laminating → Large Sheet Inspection → Die Cutting

Small Sheet Inspection | Ink-jet Inspection | Folder Gluer Inspection

■ Workflow

Start → PrintingProof inspection system → PrintMan Sheet-fed offset inline quality inspection → PackRoll web quality inspection

PackRoll Inline inspection system — PackRoll Offline inspection system

Folder gluer

Large sheet inspection — Sheet-fed packaging inspection | Folder gluer inline quality inspection | Tag printing quality inspection
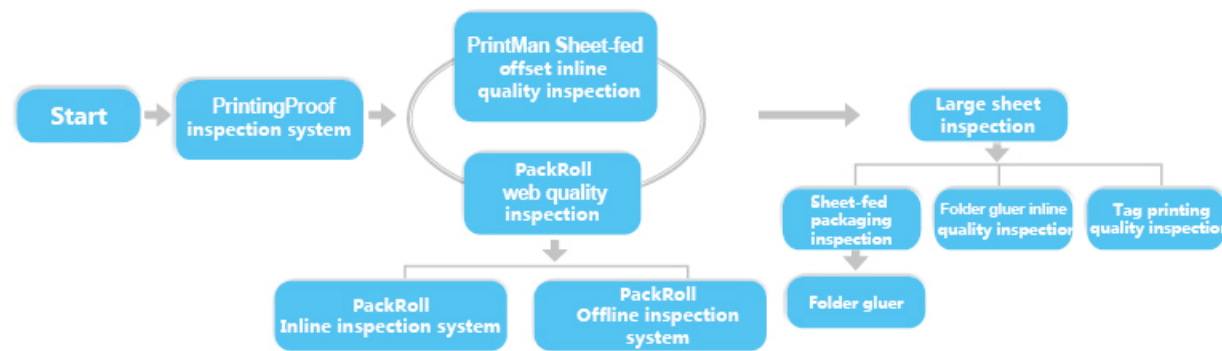
Sheet-fed Offset Inline Quality Inspection

The Sheet-fed Offset Inline Quality Inspection System is a highly precise, automatic printing quality inspection system designed to effectively control printing quality and colour consistency during production, to reduce waste and improve production efficiency. It is mainly used for defect inspection of instruction books, examination paper, sheet-fed packaging and colour printing products such as commercial print works.

【Main Features】

① **Easy to Use and Quick Job Setup**

◆Only need one master image as reference for job setup, no learning or training process of several products, to achieve the most genuine and accurate result. Also support automatic recognition, automatic alignment, automatic extraction and positioning and other automatic features to greatly reduce setup time to have quick start. Wizard and simple user interface enable operators to easily understand and operate.

◆Provide 1:1 real-time inspection image result without any image distortion under any production speed, to accurately catch the wanted defects and improve inspection efficiency.

② **Satisfy Different Inspection Requirements**

◆Software supports to setup different tolerance on different regions of interest, operator can also setup tolerance on each type of defect to effectively reduce false alarm and ensure accurate result.¬

◆Innovative algorithm of micro characters inspection enables satisfied inspection results of small missing printing, or defects on the small text area.

◆Advanced blowing and flattening system designed for thick and thin paper can prevent the paper damage fromswaying and ensure inspection stability.

◆Various options of rejection handling, such as label flag or ink-jet mark on waste products.

◆Strong performance in inspecting all kinds of common and high-reflective materials such as art paper, metallic paperboard, white paperboard etc..

③ **Quality Report& Data Analysis**

◆Quality reportwith detailed inspection statistical analysis, defect images, distribution map and other results to provide tools and evidences for future production improvement.

【Technical Specifications】

Model	Packsheet
Paper weight range	40-400g
Max. inspection speed	15,000 pcs/h
Installation location	Last printing unit
Inspection accuracy	0.13mm²
Mis-registration accuracy	0.13mm
Rejection method	Label flag for further removal
Type of defect	Dirty spot, white spot, missing print, hole, crease, mosquito, oil stain, mis-registration, etc.

Heidelberg


Komori

Ryobi Mhi

Manroland

Can be mounted on any offset press like Heidelberg, Komori, Ryobi Mhi, Manroland, Koenig & Bauer, etc

Koenig & Bauer

Folder Gluer Inline Quality Inspection

Combining the folding gluing and inspection process, the inline folding gluing inspection system can achieve 100% quality inspection of small carton box such as pharmaceutical packaging, food & beverage packaging, 3C **electronic products packaging, cosmetic packaging etc. to achieve maximum production efficiency and reduce** production cost.
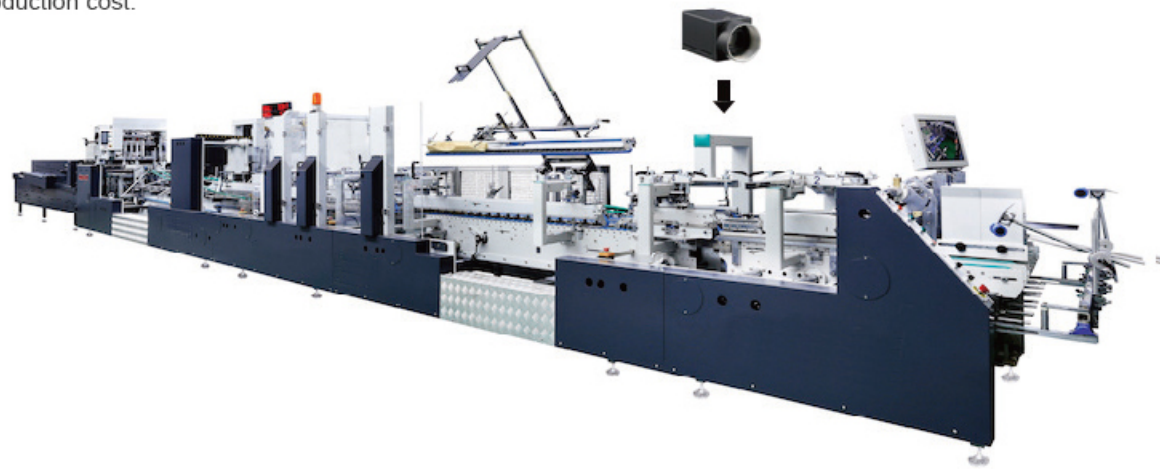
【Main Features】

① **Unique Design**
Combine inspection system and folding gluing process, enhance qualified ration, and reduce labor cost.

② **Scratchless Inspection**
Inspection is performed during folding gluing process, which effectively avoids scratching the printing surfaces.

③ **Easy to Use**
Only one master image as reference for job setup is needed to achieve the most genuine and accurate result. No learning or training process of several products is required.

【Technical Specifications】

Model	Folder Gluer Inline Quality Inspection System
Inspection size	According to the feeding of folder gluer
Paper weight in grams	90g-350g
Max. inspection speed	250m/min
Min. defect accuracy (as a spot)	0.1mm²
Min. line defect accuracy (W*L)	0.15 mm x 5 mm
Color	ΔE≥3
Mis-registration accuracy	0.1mm
Inspection of regulatory code	Repeated code, none code, wrong code
Variable data inspection optional	Barcode, QR/DM, sequence number

PrintMan Series Sheet-fed Packaging Inspection

Specially developed for sheet-fed packaging inspection such as pharmaceutical packaging, food & beverage packaging, 3C electronic products packaging, cosmetic packaging etc. Its wide adaptability allows accurate **inspection of highly-reflective materials as well as normal ones, for instance gold and silver paperboard, holographic paperboard, aluminized material and stamping material. It is able to inspect defects like streak line, missing print, dirty spot, splash, mis-registration, colour variation as well as embossing defects. What's more, it can provide effective inspection and verification of variable data.**

【Main Features】

Highly Intelligent
Software supports to setup different tolerance on different region of interest, operator can also setup tolerance on each type of defect to effectively reduce false alarm and ensure the accurate result.

Precise and Efficient
It can inspect minimum 0.1mm² size of dot defect and 0.07mm width of line defect under the speed of 300m/min. Advanced software algorithm enable high inspection accuracy while still ensure less false alarm.

Easy to Use
Only need one master image as reference for job setup, no learning or training process of several products, to achieve the most genuine and accurate result. Also support automatic recognition, automatic alignment, automatic extraction and positioning and other automatic features to greatly reduce setup time to have quick start. In addition, all machine operation areas are designed for user-friendly experience and easy adjustment.

Advanced Mechanical Design
State-of-the-art design of feeding unit, conveying unit, inspection unit and ejection unit to provide you the best inspection experience.

Model	PrintMan-350S	PrintMan-550S	PrintMan-650S	PrintMan-800S
Application	Pharmacuetical packaging, tobacco packaging, 3C electronic products packaging, cosmetic packaging, food packaging, etc.			
Max. sheet size	350mmx480mm	550mmx420mm	650mmx500mm	800mmx600mm
Min. sheet size	30mmx50mm	90mmx90mm	90mmx90mm	180mmx150mm
Paper weight in grams	90-350g/m²	90-350g/m²	90-350g/m²	100-450g/m²
Stable inspection speed	210m/min	250m/min	250m/min	150m/min
Min. defect accuracy (as a spot)	0.03mm²	0.09mm²	0.13mm²	0.06mm²
Min. line defect accuracy (W*L)	0.09mmx5mm	0.14mmx5mm	0.16mmx5mm	0.12mmx5mm
Mis-registration accuracy	0.09mm	0.14mm	0.16mm	0.13mm
Color variation	ΔE≥3			
Feeding method — Friction feeder	√	√	√	√
Feeding method — Suction feeder	Optional, intermittent feeding	Optional, uninterrupted feeding	Optional, uninterrupted feeding	×
Feeding method — Feeder	Optional	×	×	×
Feeding method — Reverse paper feeding	√	√	√	√
Rejected products handling — Shingle stream	√	√	√	√
Elimination method — Air blow eliminating	√	√	√	√
Elimination method — Reverse turning eliminating	Optional	Optional	Optional	Optional
Accepted products handling — Shingle stream	√	√	√	√
Equipment weight	About 3 tons	About 3 tons	About 3 tons	About 3 tons
Machine dimensions (L×W×H)	6300mmx2680mm x1800mm	6900mmx3000mm x2200mm	10000mmx3000mm x2170mm	10000mmx3200mm x2000mm
Control cabinet for inspection (L×W×H)	700mmx700mm x1200mm	700mmx700mm x1200mm	700mmx700mm x1200mm	700mmx700mm x1200mm
Control cabinet for machine (L×W×H)	5300mmx1000mm x1800mm	6800mmx1350mm x2200mm	9400mmx1600mm x2170mm	9500mmx1950mm x2000mm
Power supply	Three phases and five wires AC380V、50Hz	Three phases and five wires AC380V、50Hz	Three phases and five wires AC380V、50Hz	Three phases and five wires AC380V、50Hz
Power	13Kw	15Kw	21Kw	20Kw
Compressed air requirement	≥0.8MPa	≥0.8MPa	≥0.8MPa	≥0.8MPa

PrintMan-200 Tag Printing Quality Inspection

PrintMan-200 Series is developed for quality inspection and final check ofclothing tag, card and other small size sheet-fed products. Itsupports accurate inspection for front and back side printing with vacuum structure from both sides. It can achieve effective inspection of all kinds of defects as well as variable data and RFID inspection.

【Main Features】

User Friendly

Only one master image is required as reference for job setup, no learning or training process of several products, to achieve the most genuine and accurate result. It only takes few minutes to finish quality standard set-up.

Accurate Inspection

It can inspect minimum point accuracy of 0.05mm² and line defect of 0.05mm width under the speed of 200m/min. Advanced software algorithm enable high inspection accuracy while still ensure less false alarm.

Highly Intelligent

Software supports to setup different tolerance on different region of interest, operator can also setup tolerance on each type of defect to effectively reduce false alarm and ensure the accurate result.

【Technical Specifications】

PrintMan-200 Tag Printing Quality Inspection	
Application	Tag, card
Defects	Ink spot, missing print, dirty spot, colour variation, mis-registration, crease, miss stamping, improper position of stamping etc. Variable data: repeated code, missing code, wrong code, broken code etc.
Max. inspection size	200mm(L)×200mm(W)
Min. inspection size	50mm(L)×30mm(W)
Gram weight	90g/m²~350g/m²
Max. inspection speed	200m/min
Min. defect accuracy (as a point)	0.3mm²
Min. line defect accuracy	0.05mm（W）×5mm（L）
Mis-registration accuracy	±0.05mm
Colour variation	△ E≥3
Feeding method	Friction Feeding (Standard) Suction Feeding (Optional) Scratchless Feeding (Optional)
Elimination method	Air Blow Elimination Reverse Turning Elimination
Accepted products handling	Shingle Stream
Rejected products handling	Shingle Stream
Dimensions	5000mm（L）×950mm（W）× 1750 mm（H）
Control cabinet for machine	2200mm（L）×930mm（W）× 1800 mm（H）
Control cabinet forinspection	700mm（L）×700mm（W）× 1200 mm（H）
Power	AC380V/50Hz/10KW, 3 phase-5 wire
Weight	1.5 T