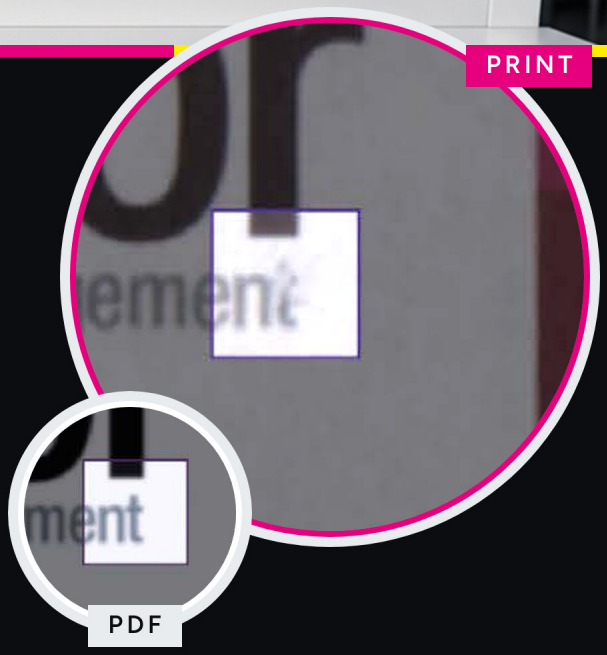


Measure. Control. Inspect.



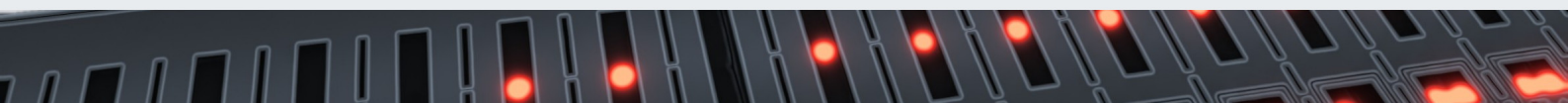
Color control and 100 % inspection from one manufacturer — retrofittable to your press.

NEW
LithoFlash®
Color and register control

NEW
LithoLine®
Color control with one camera

NEW
LithoLine® INSPECT
100 % inline inspection

NEW
LithoLine® FUSION
Inspection and color control





THE LITHEC INLINE FAMILY

One manufacturer. Four systems.

Measure and control color, inspect every sheet — or do both with one camera. All four are **retrofittable to your press** and **program themselves**: no color bar to teach, ever.

LithoFlash® S

NEW

Color and register control

- One flash per sheet, one line: a color bar or free patches.
- Control by density or BestMatch; register measured and controlled*.

LithoLine® S

NEW

Color control with one camera

- A line-scan camera measures every ink zone on every sheet — color bars from 1 mm.
- Closed-loop color and register control*; upgradeable to FUSION.

LithoLine® INSPECT

NEW

100 % inline inspection

- First sheet against the PDF (LithoLine® PDF), then every sheet against the golden sheet.
- Three illuminations: Tube, 0/45 and Duplex Magic®.

LithoLine® FUSION

NEW

Inspection and color control

- One camera inspects the sheet and measures every ink zone.
- Closed-loop color and register control*.

WHICH SYSTEM FOR WHICH TASK?	* depending on the press interface
You want color and register under control	**LithoFlash® S**
You want the same with a camera — ready to upgrade	**LithoLine® S**
You need every sheet inspected	**LithoLine® INSPECT / PDF**
You want both — with one camera	**LithoLine® FUSION**

30 years of experience — in use in over 1,500 printing plants worldwide.



LithoFlash® S NEW

One flash. One line.

LithoFlash® S measures **one line across the full width with one flash per sheet** — a color bar or freely arranged patches, solid or halftone. Up to **6 such lines** are measured in turn, at full production speed.

6	0.0–2.5 D	0.01 D	15 m/s	12	52–205 cm
measuring lines, in turn	measuring range	reproducibility*	web and sheet speed	printing units	production width

Own LED flash light
Defined 0/45° illumination inside the press, about 5 cm from the bar — independent of ambient light.

All channels in parallel
All density channels across the full width, measured on every sheet.

Process and special colors
CMYK and special colors on up to 12 printing units.

Print quality per zone
Tone value increase, trapping and gray balance at a glance.

Wear-free sensor
Maintenance-free, with integrated anti-dust protection.

Low energy
Flash operation saves energy; the LED measuring light is long-lived.

Scope of delivery
Sensor bar with mounting, touch PC, control unit, encoder, anti-dust protection, dynamic control and dynamic job change.

Options
CIP presetting, color database, hand-held reference device, sheet guiding for all formats.

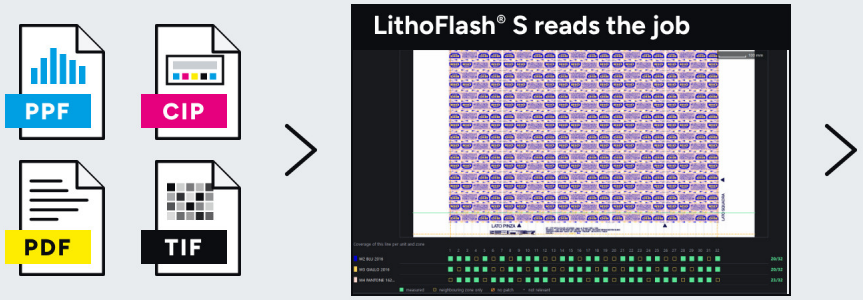
* minimum, depending on the measuring conditions

Inspection is not part of LithoFlash® S — see LithoLine®, page 7.

NEW IN LITHOFLASH® S AND LITHOLINE® FUSION

It programs itself.

Load the job — **PPF, CIP, PDF or TIF** — and the system reads all it needs from the prepress data. **You never teach a color bar again.**



Ready to measure

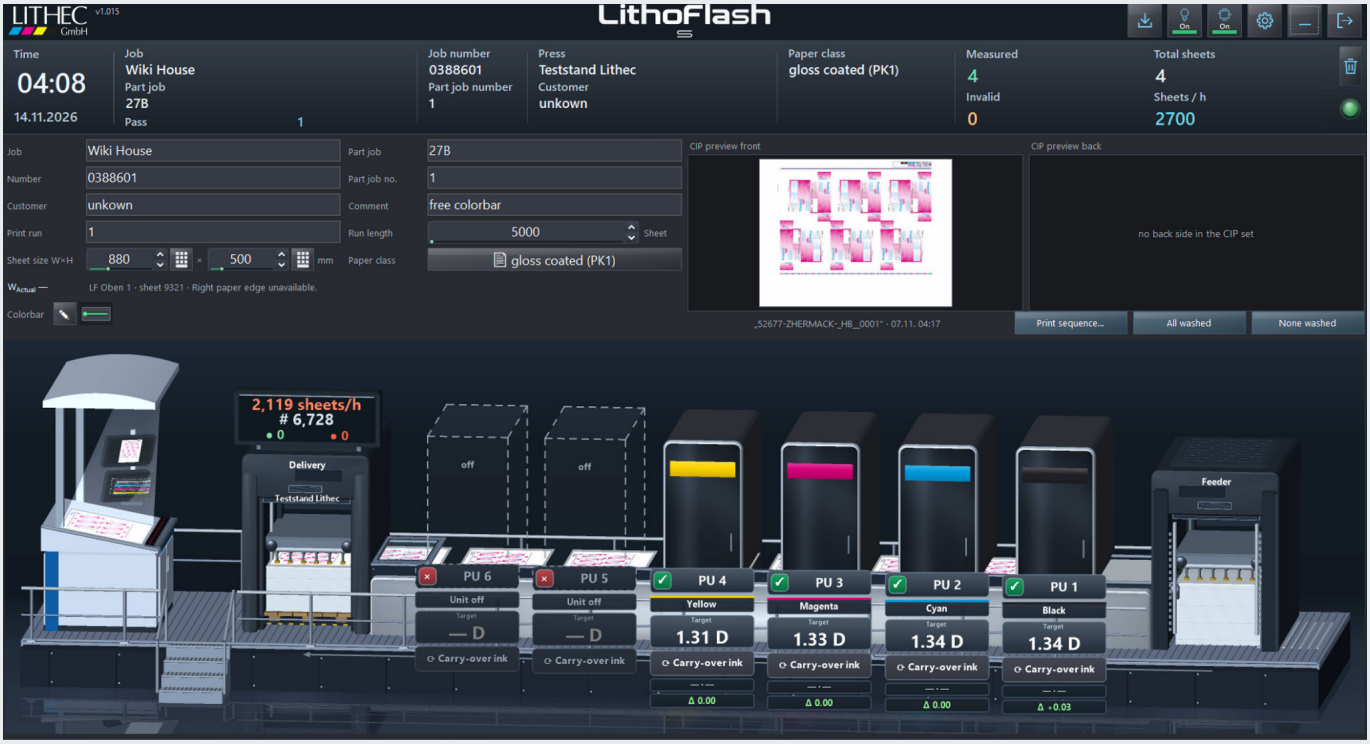
No programming at the press. Color is measured and controlled from the first sheets.

BEFORE

- The color bar had to be programmed by hand.
- Its position was measured from the leading edge of the sheet.
- Every interruption of the bar was keyed in manually.

NOW

- Position and layout of the bar are read from the job data.
- Interruptions of the bar are recognized automatically.
- Freely arranged solid patches are found the same way.



The job screen of LithoFlash® S: job data, the sheet preview from prepress and the press with its printing units.

NEW IN LITHOFLASH® S

No room for a color bar? Use free patches.

Crown corks, cans, closures: in **metal decorating** there is often no space for a full color bar. LithoFlash® S measures **freely arranged solid patches on a line** — on up to **6 lines**, measured in turn.

THE LITHOFLASH® SENSOR BAR · ONE FLASH PER SHEET



ONE CAPTURED LINE · AS LITHOFLASH® S SEES IT



Up to 6 lines
One flash per sheet captures one line; the lines take turns.

Any position
Patches go wherever the layout leaves room — between the blanks, in the trim.

Measured and controlled
Reliably, by density or by BestMatch — see the next page.





LITHOFLASH® S · COLOR CONTROL

On target — by density or BestMatch.

Every ink zone is pulled to its target, sheet by sheet. You choose the control mode that fits the job.

Density control

Each ink zone is controlled to its target density — per color and per printing unit.

BestMatch

Spectral decomposition plus density control: each color is steered to the density at which the smallest ΔE to the target can be expected — for process and special colors.

Dynamic control

On target sooner — less waste and less time at make-ready.

Dynamic job change

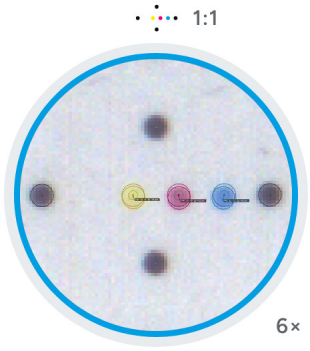
The controller knows what was in the inking unit before the change.

CIP3/PPF presetting

Ink keys, ductor and vibrator* are preset from the job data.

Calibrated to your device

Two-stage calibration to your handheld device, global and per zone, special colors included — with paper classes for coated and uncoated stock.



NEW IN LITHOFLASH® S

Register — measured and controlled*

Marks in the color bar turn LithoFlash® S into a register measuring system: lateral, circumferential and diagonal, in µm, during the run. **Repeatability σ approx. 3 µm.** The live display shows a tolerance tile per printing unit.

* depending on the press interface



LithoLine® INSPECT LithoLine® PDF NEW

Every sheet inspected.

LithoLine® is a **line-scan camera for 100 % print-image and surface inspection** — retrofittable to most offset presses, including the delivery of metal decorating presses.

1 · PDF: first sheet against PDF

The first sheet is checked against the customer PDF: up to 32 PDFs per sheet, GPU-accelerated and AI-assisted. If it is good, it becomes the golden sheet for the run.

2 · INSPECT: run against golden sheet

Then every sheet of the run is compared with the golden sheet. Without the PDF check, the approved print is the golden sheet. One defect above the tolerance flags the sheet.

22,000	300–600 dpi	36 bpp	0.02 mm²	~30 s
sheets per hour, or 15 m/s on the web**	variable scan resolution	color depth	smallest detectable defect, approx. 0.02–0.07 mm²	to the first PDF check***

Typographic defects
Wrong typeface, missing glyphs, damaged characters.

Surface defects
Scratches, streaks, smearing, ghosting.

You decide what happens
Signal light, audible alarm, marker tape — or a press stop. A double delivery diverts the sheet to the second pile. Single and repeat defects can be handled separately.

Print image defects
Color spots, ink splashes, contamination.

Press-related defects
Damaged or deformed blankets.

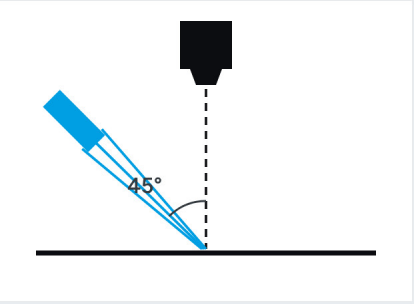
The laser shows where to look
On the pulled sheet a laser marks every suspect area — no searching.

** faster depending on format · *** format-dependent: 30 seconds for a full 1,050 × 720 mm sheet · 100 % inspection requires secure, steady sheet travel

LITHOLINE® · ILLUMINATION

The right light for every substrate.

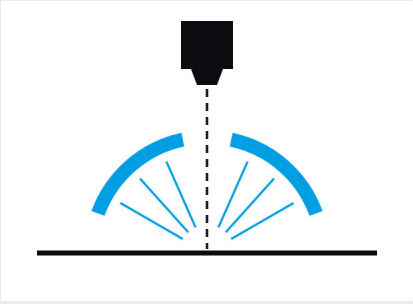
Paper, glossy board or metal: LithoLine® comes with **three illumination variants**. Which one fits depends on the substrate — and on whether you inspect, measure color, or do both.



0/45

THE COLOR GEOMETRY

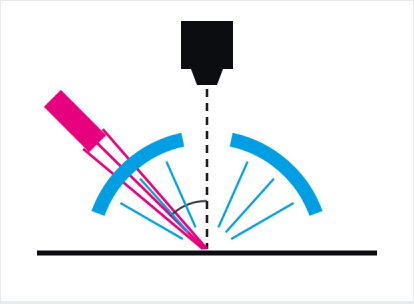
The geometry for measuring color. On normal paper it is all you need — for inspection, measuring and control.



Tube

DIFFUSE LIGHT

For reflective materials. Ideal for inspection; color can be measured only with a calibration device.



Duplex Magic®

BOTH IN ONE

Two captures per sheet, one with each light. For glossy substrates: measure and control color — and inspect.

ILLUMINATION	INSPECTION	MEASURE AND CONTROL COLOR	TYPICAL SUBSTRATES
0/45	✓	✓	Normal paper
Tube	✓	With a calibration device	Reflective materials
Duplex Magic®	✓	✓	Glossy substrates, metal decorating

Made by Lithec

All illumination modules are produced by Lithec. Which module is fitted depends on the job and on the substrates that run on the press. Light settings are read and applied in the software.

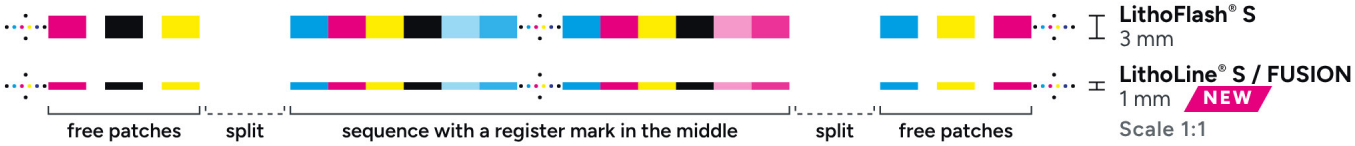
Which variant for which system

LithoLine® INSPECT and PDF inspect with any of the three variants. For measuring and controlling color — LithoLine® FUSION — choose 0/45 or Duplex Magic®, or Tube together with a calibration device.



LithoLine® FUSION NEW

Inspection and color control. One camera.



LithoLine® FUSION measures the density of **every ink zone on every unit** from the same image data that inspects the sheet — at full production speed.

INSPECTION

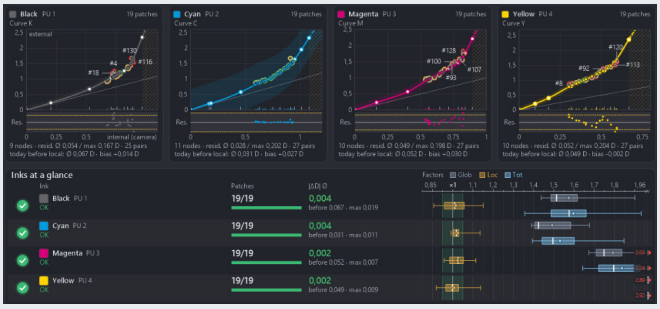
- Variable scan from 300–600 dpi, 36 bpp color
- Smallest detectable defect approx. 0.02–0.07 mm²
- Comparison against golden sheet and PDF, AI- and GPU-accelerated
- Laser shows suspect areas directly on the sheet

COLOR CONTROL

- All density channels in parallel, on every sheet
- Color bar or free solid patches — any number
- Programs itself from the job data — no color bar to teach
- CIP presetting: ready to run from the first sheet
- Best Match Control for CMYK and spot colors
- Register measured and controlled* via marks in the color bar — repeatability σ approx. 3 µm
- Ink keys, ductor and vibrator in the control loop*

One system. One installation. One service.

Reports as PDF, CSV or ISO 28178 — defects and color in one record.



Calibration report — base curves per ink.



At the press console — the sheet below the screen.

* depending on the press interface

Which system does what.

THE FAMILY COMPARED

FEATURE	Another inline system[1] for comparison	LithoFlash® S color · register	LithoLine® S color · register	LithoLine® INSPECT / PDF inspection	LithoLine® FUSION all in one
COLOR MEASUREMENT					
CMYK measurement	✓	✓	✓	•	✓
Special colors up to 12 printing units	•	✓	✓	•	✓
Print quality per zone TVI, trapping, gray balance	•	✓	✓	•	✓
Free solid patches number of lines NEW	•	up to 6	any number	•	any number
Programs itself — no color bar to teach NEW	•	✓	✓	•	✓
Whole sheet measured, every sheet	•	•	✓	•	✓
COLOR CONTROL					
Closed-loop ink zone control	•	✓	✓	•	✓
Dynamic control and dynamic job change	•	✓	✓	•	✓
CIP3/PPF presetting ink keys, ductor, vibrator*	•	✓	✓	•	✓
BestMatch the density that hits the color	not confirmed	✓	✓	•	✓
Calibration to your handheld device per paper class	CMYK only	✓	✓	•	✓
Self-learning presetting	•	•	✓	•	✓
REGISTER					
Automatic register setting at job start*	✓	✓	✓	✓	✓
Register measurement during the run NEW	•	✓	✓	✓	✓
Register control* NEW	•	✓	✓	✓	✓
Live register display per printing unit	•	✓	✓	✓	✓
INSPECTION					
100 % inline inspection every sheet	✓	•	•	✓	✓
Comparison with the customer PDF first sheet	•	•	•	LithoLine® PDF	✓
Fine defects scratches, hairlines, blankets	•	•	•	✓	✓
Sensitivity per area	•	•	•	✓	✓
AI-assisted evaluation	•	•	•	✓	✓
Laser marks suspect areas on the sheet	•	•	•	✓	✓
SUBSTRATES AND SERVICE					
Illumination	•	0/45 flash	0/45, Duplex Magic®	3 variants	0/45, Duplex Magic®
Metal decorating	•	✓	✓	✓	✓
Retrofittable across press makes	•	✓	✓	✓	✓
Parts and service from Lithec in Miesbach	•	✓	✓	✓	✓

[1] An inline system currently offered by a press manufacturer; status October 2026. • = not offered or not specified. * depending on the press interface.

Technical data.

AT A GLANCE

	LithoFlash® S	LithoLine® INSPECT / PDF	LithoLine® FUSION
Principle	Flash sensor bar; a color bar or free patches on up to 6 lines	Line-scan camera; the whole sheet, every sheet	Line-scan camera; inspection and color from the same image data
Speed	up to 15 m/s	up to 22,000 sheets/h or 15 m/s (web)**	up to 22,000 sheets/h or 15 m/s (web)**
Density	0.0–2.5 D; reproducibility min. 0.01 D*	—	0.0–2.5 D; reproducibility to 0.01 D*
Resolution	—	300–600 dpi, 36 bpp color	300–600 dpi, 36 bpp color
Smallest defect	—	approx. 0.02–0.07 mm²	approx. 0.02–0.07 mm²
Measuring fields	Color bar from 3 mm height or free patches; field size variable	—	Color bar from 1 mm height or free patches; any number, split and offset
Register	Measured and controlled***; repeatability σ approx. 3 µm	Measured and controlled***	Measured and controlled***; repeatability σ approx. 3 µm
Illumination	0/45° LED flash; polarizing filter optional	Tube, 0/45 or Duplex Magic®	0/45 or Duplex Magic®; Tube with a calibration device
Job data	PPF, CIP, PDF, TIF — programs itself	PDF: up to 32 per sheet	CIP3/PPF — programs itself; up to 32 PDFs
Control and response	Density or BestMatch; ink keys, ductor and vibrator***	Signal light, audible signal, tape inserter, double delivery	Both: color control and defect response
Working width	52–205 cm production width	Inspection width freely selectable	52–205 cm production width
LithoLine® S	Color and register as LithoLine® FUSION, without inspection — upgradeable at any time.		

* standard deviation, depending on the measuring conditions · ** faster depending on format · *** depending on the press interface

Retrofittable — to your existing press

Sheetfed and web offset, metal decorating included. Further press types on request.

Koenig & Bauer	Heidelberg	manroland
Komori	Komori Chambon	RMGT
Miyakoshi	Göbel	Müller Martini
Nilpeter	MetalPrint	Others on request

Reporting

LithoLine®: job or product report as PDF, local or on the network. FUSION adds CSV and ISO 28178 — defects and color in one record.

Operation

Touch-optimized LithoLine® software: zoom and navigate at full production speed. More than 20 languages, switchable live.

LITHEC GmbH

One manufacturer.
One contact.
One service.



Color measurement, color control and inspection from one source: **all parts and the service come from Lithec in Miesbach** — and every system can be retrofitted to your existing press.

30 years of experience in measurement, control and inspection.
In use since 1994 in over 1,500 printing plants worldwide.

See the systems live — ask us for a demonstration.

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LithoFlash® S · LithoLine® S · LithoLine® INSPECT · LithoLine® PDF · LithoLine® FUSION

I IP S → SIP

Grows with you. A LithoLine® I or IP can be upgraded to an SIP (FUSION) at any time — and a LithoLine® S can be converted into an SIP as well.

This brochure shows the systems in full specification. The actual scope of performance depends on the capabilities of the press and on the order specification. A prerequisite for 100 % inspection is secure, steady sheet travel and a constant distance to the sensor. Interface and installation data on request. Subject to technical change. All trademarks named are the property of their respective owners.

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