



## Spectrim with **LUCAi™**

---

Intelligent optical sorting & grading platform  
**Now for Kiwifruit (Green and Gold)**

Correctly classify difficult defects like sooty mould, hayward mark, physical damage, doubles, long stem, bird lime, blemish, hayward beak to maximize your crop yields and minimize fruit loss

# About LUCAi™


Right product, right pack, season after season.

LUCAi™ is a pre-trained deep learning algorithm that classifies the entire piece of fruit. Trained on 20 seasons of in-house kiwifruit images, LUCAi™ arrives at your packhouse knowing what defects to look for, how to find them, and the most appropriate classification.

The result is simplicity for operators during set up and operation while also achieving the highest possible performance and accuracy.

Launched as the world's first deep learning product for fruit sorting in 2018, LUCAi™ began by providing precision classification for blueberries. With over 3.300 lanes sold,

LUCAi™'s applications now include apples, blueberries, cherries, citrus, kiwifruit and stonefruit. New applications arrive every year.



LUCAi™ has a much higher grading accuracy at the drop, which allows for more defects identified, compared to previous solutions

Kiwifruit Packhouse Operator  
New Zealand

## Benefits

### → Improved operational usability


- Reduce operator training from days to hours
- Easier learning curve means faster time to peak performance
- Simpler system means easier to adapt for new defects and varieties

### → Superior sorting accuracy

- Achieve consistency batch-to-batch and shift-to-shift
- Reduce good-in-bad and bad-in-good
- Improved pack quality, brand reputation and customer eating experience

### → Increased throughput

- Improve the efficiency and speed of your overall line with less manual inspection
- Simply pack a greater volume of fruit because LUCAi™ provides your operator with the confidence they need



LUCAi™ has proven to be effective at separating defects with complex severity standards like hayward marks, and dark and light blemishes.

Kiwifruit Packhouse Operator  
New Zealand

# TOMRA Spectrim with LUCAi™

Spectrim with LUCAi™ is a deep learning-powered optical grading platform that removes >99% of many hard-to-detect defects for kiwifruit.

## → High performance hardware

Designed for up to 3 wavelengths and featuring 9 cameras per lane, Spectrim's hardware specifically targets general defects sooty mould, hayward mark, bird lime and blemish.

## → Advanced deep learning

LUCAi™ processes up to 40,000 images per second to assign a unique severity rating for classifications. Having learned from 20 seasons of in-house fruit images, LUCAi™ uses extremely fine differentiation to surpass both existing sorting capabilities.

## → Simplicity and exceptional performance in one

A simple user interface is all that's needed to maintain consistent performance. The combination of increased accuracy and smarter decisions mean the machine requires minimal operator input, so fewer controls to manage.

## Who is it for?

Suitable for high-speed operations sorting kiwifruit.



## Why Spectrim?



Optimal geometry, no mirrors, and target wavelengths ensure complete fruit visibility.

Eliminating shadows and reflections while using emissive lights provides the best lighting conditions.



High color fidelity, high resolution, and low noise deliver the best fruit images.



# Spectrim with LUCAi™ for your line

## TOMRA 5S Advanced

For high throughput packhouses where food hygiene and trust are essential.

Works with Spectrim with LUCAi™ to manage highly configurable operations with high throughput.

- Multi-lane sorter
- Cross belts to sort more grades
- Food trust design with stainless steel or food safe polymer and easy cleaning

## Existing Line

Compatible with many existing competitor sorting lines.

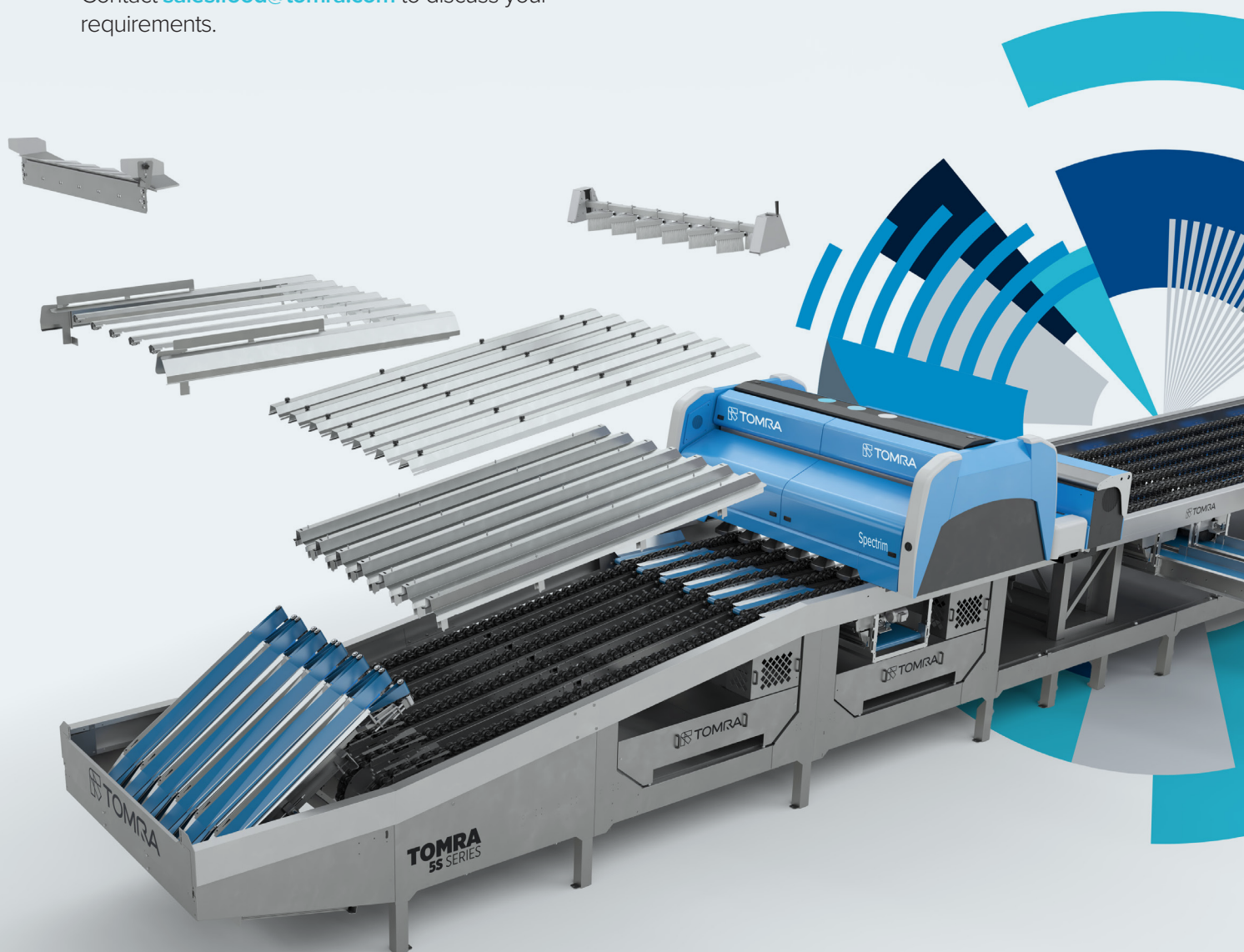
Contact [sales.food@tomra.com](mailto:sales.food@tomra.com) to discuss your requirements.

## TOMRA Single Lane Sorter / Dual Lane Sorter

For small-medium packhouses sorting between 2 to 8 metric tonnes per hour.

Works together with Spectrim with LUCAi™ to pack variety of packaging types and respond to market demands.

- Single or dual lane sorter
- Highly accurate weighing system
- Gentle transportation
- Dual side tipping for reducing system length and footprint





**TOMRA**

Interested in a free demonstration with your own product or require more information?

**Please contact us directly. [www.tomra.com/food](http://www.tomra.com/food)**



#1025