OPTICON

Introducing the L-46XS - the successor of the L-46X

We scan,
connect and
communicate

L-46X upward compatible

The L-46XS delivers enhanced performance while maintaining full compatibility.
Customers can use it immediately without the need for additional evaluation.

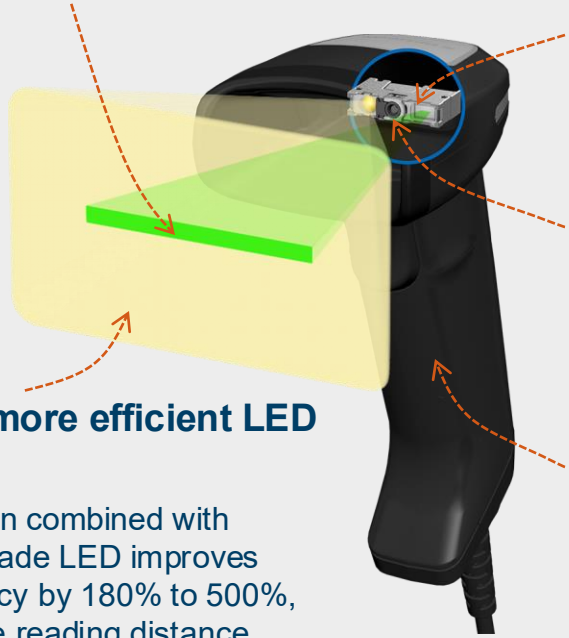
L-46X
From 2017

- Hardware/software compatibility
- Comprehensive quality improvements
- Redesigned for best-in-class performance
- Equipped with long-life components

L-46XS
From 2025

The all-new imager engine

- **120% Aiming brightness**
  A new LED combined with an optimized lens design improves luminous efficiency while maintaining the sharp aiming outline of the current model.



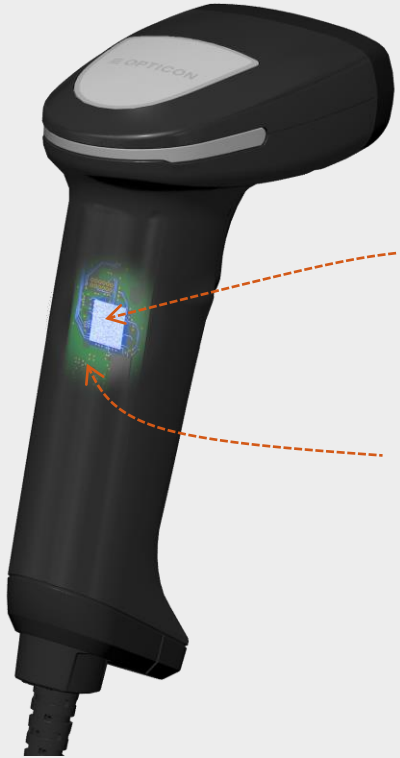
- **180 to 500% more efficient LED illumination**
  A new lens design combined with NICHIA's high-grade LED improves luminous efficiency by 180% to 500%, depending on the reading distance.

- **120fps High-speed CMOS sensor**
  The frame rate of the global shutter CMOS sensor has been increased from 100 fps to 120 fps for faster image capture.

- **Improved imaging lens design (same optical specification)**
  Optimized lens design improves far-field scanning range and enhances near-field 2D minimum resolution.

- **Antimicrobial now available in black model**
  In addition to the white model, the black model now also features an antimicrobial case for improved hygiene.

The all-new imager engine



- **New customized chipset (CPU + GPU + AI core)**

  Improved processing speed with CPU that is 1.6x faster and an upgraded GPU.

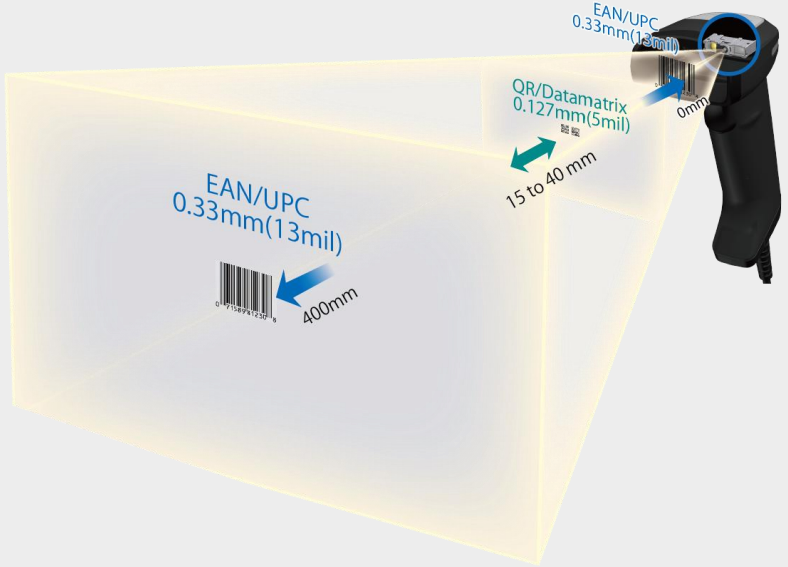
- **New ESD resistant design**

  The redesigned board significantly improves the ESD immunity.

Best-in-class DoF and resolution

Depth of field has been improved:

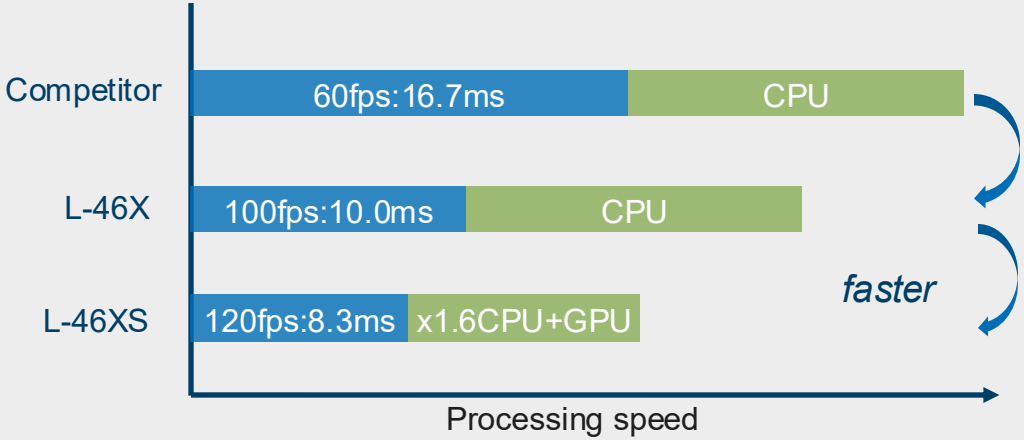
- Improved imaging lens to read high resolution code
- Improved LED illumination efficiency reduces noise, even at far distances
- Improved decode algorithm

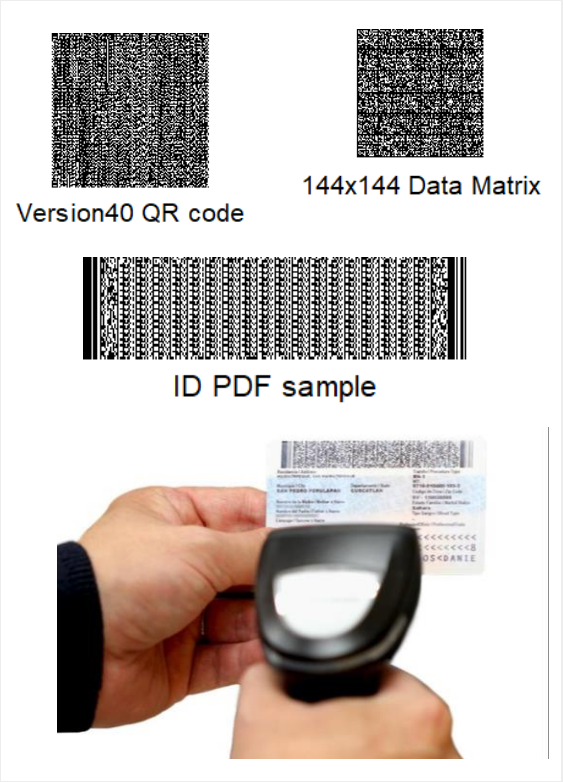


Depth of Field (Typical Value in Spec)						
Resolution mm (mil)	Symbology Type	L-46X			L-46XS	
		Near	Far		Near	Far
0.076 mm (3 mil)	Code 39				6 mm (0.2″)	64 mm (2.5″)
0.127 mm (5 mil)		12 mm (0.5″)	85 mm (3.3″)		0 mm (0″)	177 mm (7.0″)
0.254 mm (10 mil)		11 mm (0.4″)	196 mm (7.7″)		0 mm (0″)	321 mm (12.6″)
0.508 mm (20 mil)		28 mm (1.1″)	392 mm (15.4″)		15 mm (0.6″)	559 mm (22.0″)
0.2 mm (7.9 mil)	Code 128	9 mm (0.4″)	150 mm (5.9″)		15 mm (0.6″)	247 mm (9.7″)
0.33 mm (13 mil)	UPC/EAN	9 mm (0.4″)	250 mm (9.8″)		0 mm (0″)	401 mm (15.8″)
0.127 mm (5 mil)	PDF417				0mm (0″)	74 mm (2.9″)
0.169 mm (6.7 mil)		8 mm (0.3″)	105 mm (4.1″)			
0.254 mm (10 mil)		1 mm (0″)	170 mm (6.7″)		2 mm (0.1″)	186 mm (7.3″)
0.127 mm (5 mil)	QR Code				11 mm (0.4″)	49 mm (1.9″)
0.169 mm (6.7 mil)		19 mm (0.7″)	70 mm (2.8″)			
0.381 mm (15 mil)		0 mm (0″)	209 mm (8.2″)		0 mm (0″)	216 mm (8.5″)
0.127 mm (5 mil)	Data Matrix				12 mm (0.5″)	54 mm (2.1″)
0.169 mm (6.7 mil)		21 mm (0.8″)	75 mm (3.0″)			
0.254 mm (10 mil)		2 mm (0.1″)	132 mm (5.2″)		0 mm (0″)	129 mm (5.1″)

Best-in-class scanning speed

The L-46XS achieves the fastest scanning speed in its class.

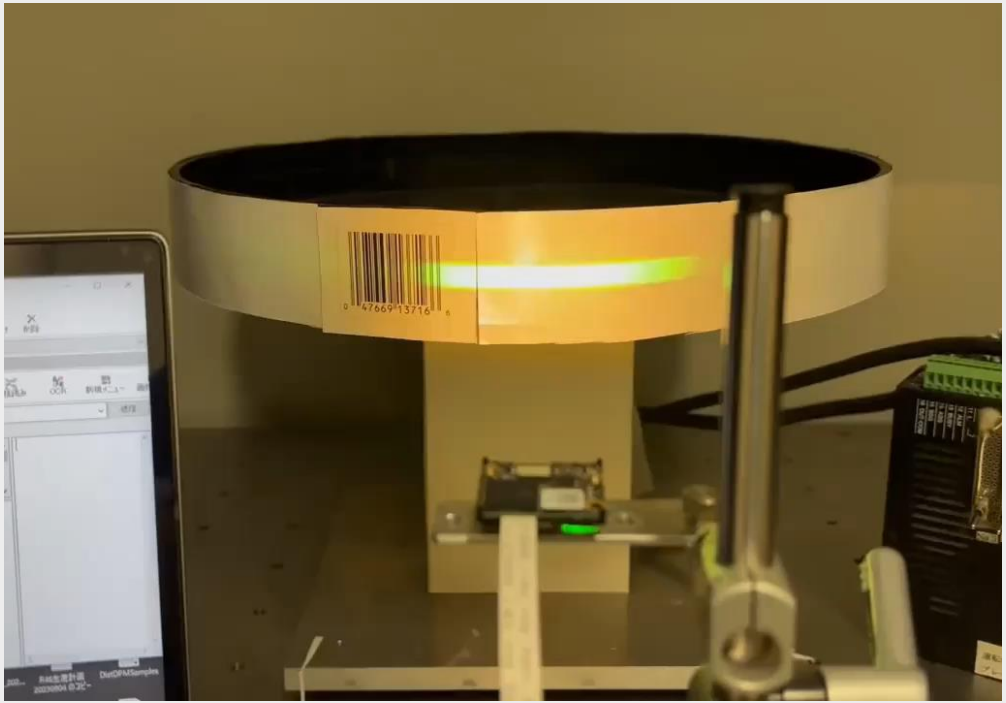




Average 40% faster

- Global shutter CMOS sensor frame rate:100fps to 120fps
- CPU clock during scan: x1.6
- Improved code search algorithm

Fast motion tolerance



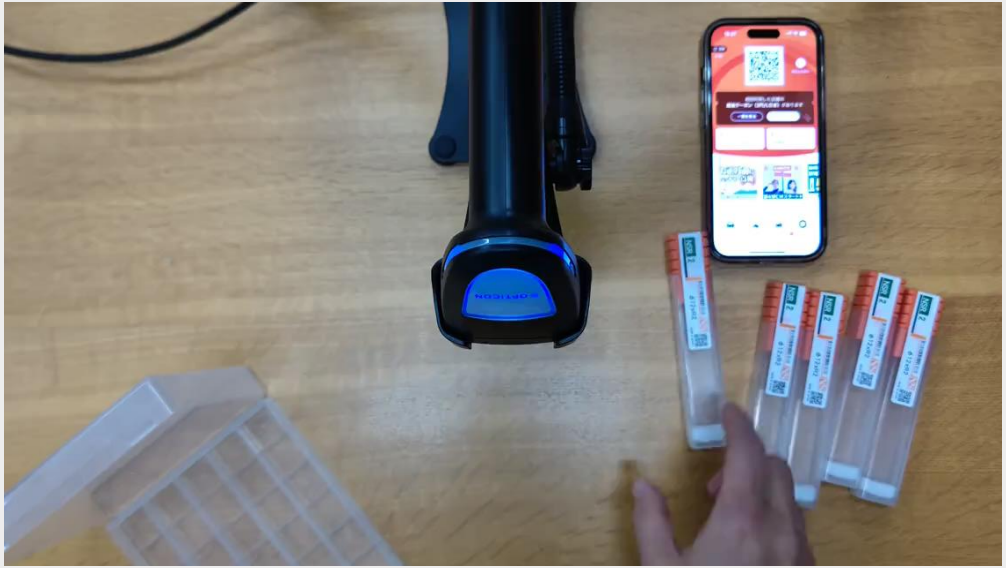
- Motion tolerance of 10 m/s (previous model 2.54 m/s)
- Due to improve LED illumination efficiency, the imager engine now achieves a typical LED peak pulse width of 60µs at a distance of 130mm under default exposure control settings.

Video configuration:

- UPC only (J1)
- Continuous reading (S2)

Note: Exposure control is an initial setting.

Fast motion tolerance



The L-46XS delivers both high motion tolerance and versatile media reading performance during auto-trigger operation.

Snappy scanning performance has been improved:

- Motion tolerance improved from 2.5 m/s to 10 m/s
- CPU clock speed increased by 1.6x during scanning
- Upgraded code search algorithm for faster results
- Improved exposure control for better accuracy

Experience ultra-fast scanning performance

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Always scanning for new IDs

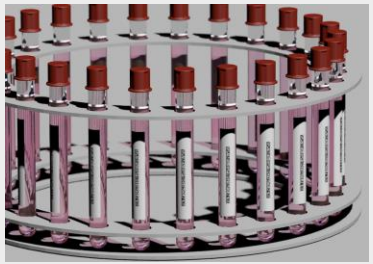
New rMQR

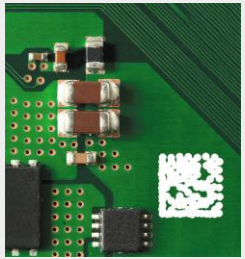
DMRE

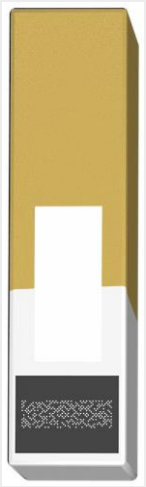
DPM

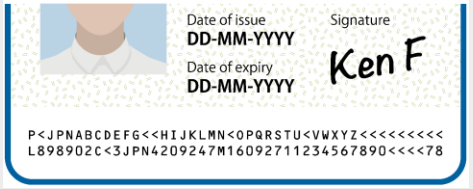
Dot code

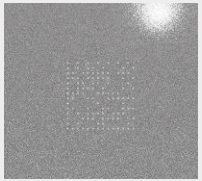
OCR





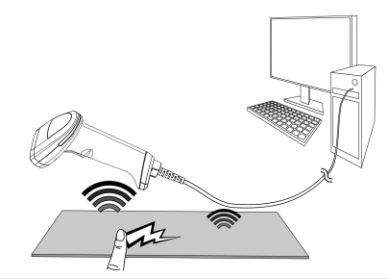




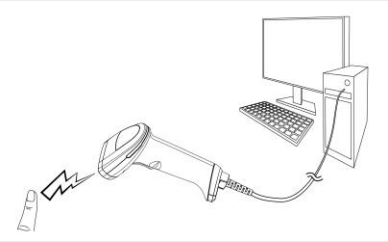


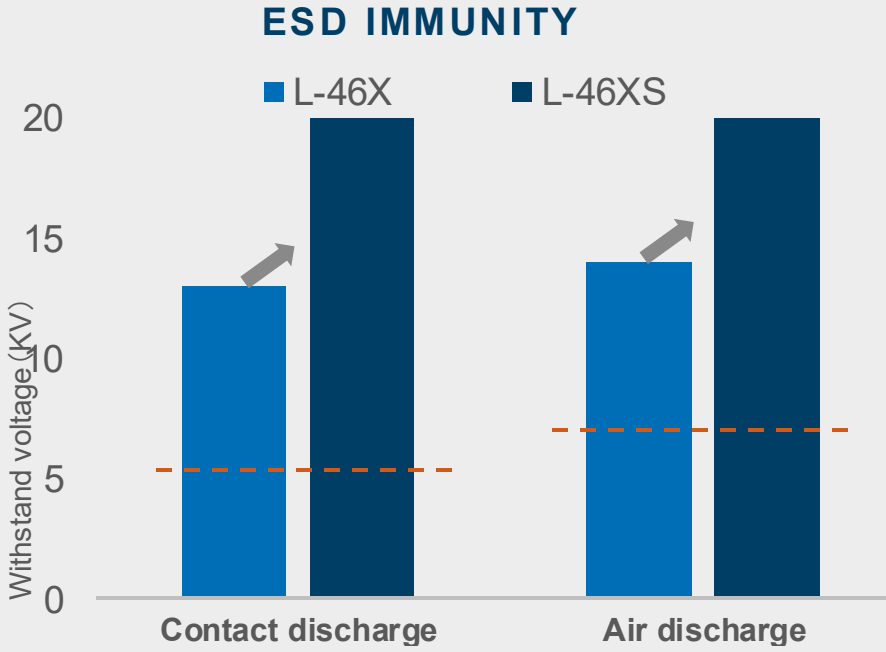
Best-in-class of ESD immunity

Contact discharge (direct / indirect)
- Standard: IEC 61000-4-2
- Standard value: ±6KV (Class 2)



Air discharge (direct)
- Standard: IEC 61000-4-2
- Standard value: ±8KV





New function: smart indicator

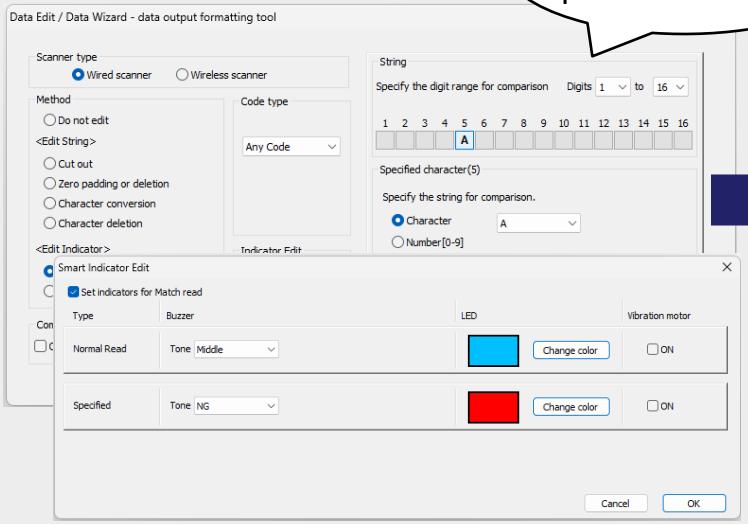
The smart indicator function enables easy switching to a different indicator setting using a tool once the reading conditions are satisfied.

Configurable items in the Universalconfig tool:

- Specify characters for sorting based on the number of digits
- Specify numerical thresholds for sorting based on the number of digits
- Judgment during batch reading
- Judgment relative to the date OCR reference date (before and after)

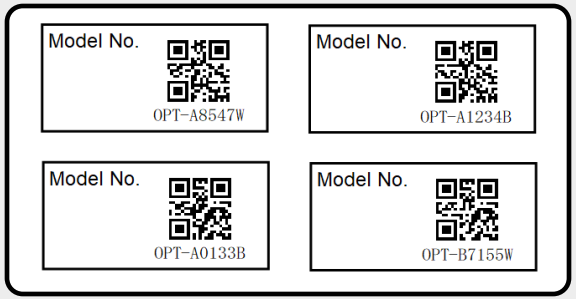
New function: smart indicator

Sort “OPT-**A**” product number



Configuration code

Default



Enhance with optional accessories

L-46XS comes with an optional coiled cables and a wall mount stand.

New ST-2 wall mount

* ST-2 is compatible with other scanners

New coiled cables

- Straight: 2 and 2.8m
- Coiled: 2.1 and 4m
- Interface: USB, RS-232C, RS-232CVCC9
- Color: black and white

* MOQ may apply

Thank you for your attention

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