

L-46XS

2D CMOS Imager

The L-46XS combines performance, durability, and reliability. With enhanced motion tolerance and improved reading performance, it features Opticon's advanced 2D CMOS imaging for effortless point-and-shoot scanning.



Highlights

- High-speed 2D CMOS imager
- Rapidly scans 1D and 2D barcodes, including curved, wide, or poorly printed codes
- Best-in-class reading depth: reads JAN 0.33 mm from 0–400 mm; 2D codes down to 0.127 mm (5 mil)
- World's fastest motion tolerance: up to 10 m/s for quick, accurate scanning
- Enhanced decoding algorithm and new optical system for top-tier performance
- Upward compatibility with the L-46X — no hardware/software changes needed
- Best-in-class ESD resistance for reliable use in retail and industrial settings
- Durable: survives 1.8 m drops to concrete
- IP42-rated for protection against dust and moisture
- Standard antimicrobial coating on black and white model
- Custom configuration, including multi-read support
- Trigger modes: manual, auto-trigger, and stand detection
- USB or RS232 communication with interchangeable cables
- Available in black or white
- Optional stand and wall-mountable stand
- Optional coiled cable
- Backed by a two-year warranty

L-46XS

Product Specifications



Operating indicators

Visual: 1 LED (multicolor)

Non-visual: buzzer, vibrator(optional)

Operating keys

Entry options: 1 scan key

Communication

RS232C: DB9 pin (with external power supply),

RS232(gp) pin 9 power supply

USB: ver. 2.0, HID/COM, USB-A connector

Power

Voltage requirement: 5V \pm 10%

Current consumption: Typ. 250mA

2D Imager optics

Light source: Aiming green LED, warm white illumination LED

Scan method: CMOS area sensor, 640 x 480 pixels

Scan rate: Up to 120 fps

Trigger mode: Manual, auto-trigger

Reading pitch angle: \pm 65°

Reading skew angle: \pm 65°

Reading tilt angle: 360°

Curvature: R \geq 20 mm (12-digit UPC)

Min. resolution at PCS 0.9: 0.076 mm

Field of view: Horizontal 38°, Vertical 28.9°

Min. PCS value: 0.2

Depth of field at code 39:

6 - 64 mm (0.076 mm) / 0.24 - 2.52 in (3 mil)

0 - 177 mm (0.127 mm) / 0 - 6.97 in (5 mil)

0 - 321 mm (0.254 mm) / 0 - 12.64 in (10 mil)

15 - 559 mm (0.508 mm) / 0.59 - 22 in (20 mil)

Depth of field at Code 128:

15 - 247 mm (0.2 mm) / 0.59 - 9.72 in (7.87 mil)

Depth of field at EAN/UPC:

0 - 401 mm (0.33 mm) / 0 - 15.78 in (13 mil)

Depth of field at PDF417:

0 - 74 mm (0.127 mm) / 0 - 2.91 in (5 mil)

2 - 170 mm (0.254 mm) / 0.08 - 6.69 in (10 mil)

Depth of field at QR Code:

11 - 49 mm (0.127 mm) / 0.43 - 1.93 in (5 mil)

0 - 209 mm (0.381 mm) / 0 - 8.23 in (15 mil)

Depth of field at DataMatrix:

12 - 54 mm (0.127 mm) / 0.47 - 2.13 in (5 mil)

0 - 129 mm (0.254 mm) / 0 - 5.08 in (10 mil)

Supported symbologies

Barcode (1D): UPC-A/E/E1, UPC-A/E Add-on, EAN-8/13, EAN-8/13 Add-on, JAN-8/13, Code 39, NW-7(Co-dabar), Industrial 2 of 5, Interleaved 2 of 5, Code 93, Code 128, GS1-128, MSI/Plessey, Code 11, GS1 DataBar, GS1 DataBar Limited, GS1 DataBar Expanded, Composite GS1 DataBar, Composite GS1-128, Composite EAN, Composite UPC, TELEPEN, IATA

Postal code: Japanese Postal, Intelligent Mail Barcode, POSTNET, PLANET, Netherlands KIX Code, UK Postal, Australian Postal, Korean Postal Authority code

2D code: PDF417, MicroPDF417, Codablock F, QR Code, Micro QR Code, DataMatrix (ECC 200), MaxiCode, Aztec Code, Chinese Sensible Code, OCR-B

Durability

Temperature in operation: -5 to 50 °C / 23 to 122 °F

Temperature in storage: -30 to 60 °C / -22 to 140 °F

Humidity in operation: 5% to 90% (non-condensing, no frost)

Humidity in storage: 5% to 90% (non-condensing, no frost)

Ambient light immunity: Fluorescent 10,000 lx, direct

sun 100,000 lx, Incandescent 10,000 lx

Max drop test: 1.8 m / 6 ft drop onto concrete surface

Vibration test: 10 - 100Hz with 2G for 1 hour

Protection rate: IP42

Physical

Dimensions scanner (W x H x D): 105.4 x 153.4 x 60 mm / 4.15 x 6.04 x 2.36 in

Weight body: Ca. 112 g / 3.9 oz (excl. cable)

Dimensions stand (W x H x D): 53 x 112 x 73 mm / 2.09 x 4.41 x 2.87 in

Weight stand: Ca. 365 g / 12.9 oz

Dimensions wall mount holder (W x H x D):

80 x 85 x 80 mm / 3.15 x 3.35 x 3.15 in

Case: Black or white

Cable length: 2.0 Meter

Regulatory & safety

Product compliance: CE, FCC, VCCI, RoHS, IEC62471:2006, EN55032, EN55035

Items

Sold separately (MOQ applies):

Cable: Straight, Coiled - Color: black and white -

Interface: USB, RS-232C, RS-232CVCC9 -

Stand: Desk stand, ST-2 (wall mount)

Models

Interface versions: USB, RS-232 (optional)

Color: Black and White (optional)