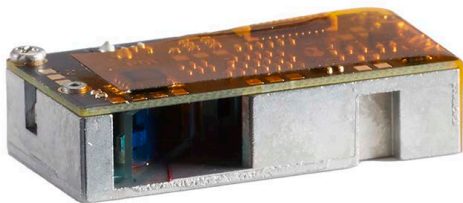


# MSL-1400

## Laser scanner

The MSL-1400 is a small form factor undecoded laser barcode scan engine. This scan engine is ideal for custom scanning applications. It performs excellent in LED lighted environments.



scale  
100%



## Highlights

- Undecoded laser barcode scan engine
- Features bi-directional scanning with a 650nm visible laser diode
- Extremely fast scan rate of 100 scans/second
- Small size makes it easy to mount and integrate into space constrained areas
- Output is digital barcode pattern (TTL) via 10 pin FFC connector
- Performs well in LED lighted environments
- Low profile, rectangular scan engine-dimensions of 28 x 8 x 14 mm, weighs 8.4 grams
- Engineering kit available-enables faster time to market
- Two year warranty

# MSL-1400

## Product Specifications

### Communication

**Digital output:** 10 pin FFC connector with SOS (start of Scan) and Signal (digitized barcode signal) lines

### Power

**Voltage requirement:** 3.3V

**Current consumption:** Max. 65 mA

### Barcode scanner optics

**Light source:** 650nm visible laser diode

**Scan method:** Bi-directional scanning

**Scan rate:** 100 scans / seconds

**Reading pitch angle:** 0°

**Reading skew angle:** 15°

**Reading tilt angle:** 0°

**Curvature:** R>20 mm (UPC)

**Min. resolution at pcs 0.9:** 0.076 mm / 3 mil

**Min. pcs value:** 0.9

**Depth of field at code 39:**

7.5 - 10 mm (0.076 mm) / 0.30 - 0.39 in (3 mil)

11 - 10 mm (0.127 mm) / 0.43 - 0.39 in (5 mil)

26 - 10 mm (0.15 mm) / 1.02 - 0.39 in (5.9 mil)

110 - 10 mm (0.20 mm) / 4.33 - 0.39 in (7.9 mil)

32.5 - 12 mm (0.254 mm) / 1.28 - 0.47 in (10 mil)

43 - 25 mm (0.508 mm) / 1.69 - 0.98 in (20 mil)

42.5 - 30 mm (1.016 mm) / 1.67 - 1.18 in (40 mil)

**Depth of field at code 128:**

32 - 10 mm (0.18 mm) / 1.26 - 0.39 in (7.1 mil)

**Depth of field at UPC/EAN:**

31.5 - 24.5 mm (0.33 mm) / 1.24 - 0.96 in (13 mil)

### Durability

**Temperature in operation:** -20 to 65 °C / -4 to 149 °F

**Temperature in storage:** -30 to 70 °C / -22 to 158 °F

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

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

**Ambient light immunity:** Fluorescent 4,000 lx max, Sunlight 80,000 lx max, Incandescent 4,000 lx max

**Drop test:** Packed in dummy case 1.8 m / 6 ft drop onto concrete surface

**MTBF:** 30,000 hours except laser diode (10,000 hours) and except mirror scan unit (10,000 hours)

### Physical

**Dimensions (WxHxD):** 28 x 8 x 14 mm / 1.1 x 0.32 x 0.55 in

**Weight:** Ca. 8.4 g / 0.3 oz

### Regulatory & Safety

RoHS, IEC 60825-1 : 2014, EN60825-1: 2014 Class 1

### Items

**Sold separately:** MEK-3100 SDK (with power supply, RS232 cable, USB cable, PCBs)