



## LS 1220 MiniScan Series



### **Big Performance, Small Size for Fixed-Mount Or Embedded Scanning Applications**

The MiniScan™ combines compact, durable construction with Symbol's proven scanning technology for a rugged, reliable fixed-mount scanner that can also be used as an embedded module. Available in standard or long-range working distances for additional flexibility, MiniScan is the right choice for applications requiring accurate unattended automated data entry.

### **Reliable High Quality Scanning, Low Power Consumption**

MiniScan's superior laser performance and sophisticated decoding algorithms assure the highest first-time read rate and accuracy, even on damaged or poorly printed symbols, while decoding all major bar code symbologies. The LS 1220 Series also incorporates Symbol's patented Mylar® scan element. Like a tuning fork, the Mylar scan element resonates at a fixed frequency – creating motion without wear and tear. That translates into reliability that's virtually nonstop.

MiniScan Series scan modules also offer the industry's lowest power consumption – the result of our combination of Solid State Visible Laser Diode and Mylar scan element.

Additional features include RS-232-C output, "scan" and "good decode" LED indicators, bar code programming menus for easy set-up, host and external trigger options, your choice of standard or long-range models and a variety of optional accessories.

### **Many Uses for MiniScan**

Used as fixed-mount, non-contact scanners, LS 1220 modules are ideal for conveyor, library and document tracking applications. MiniScan Series modules are also ideal for embedded applications such as chemical and blood analyzers; automated medical, test and processing equipment; and many other automated data entry devices.

MiniScan Modules: One more big idea in a small package from Symbol Technologies, the world leader in bar code-based data management systems with more than 2.5 million scanners and terminals installed.

# LS 1220 MiniScan Series Specifications

## Physical Characteristics

Dimensions:	1.3 in. (33.3 mm) H x 2.13 in. (54.6 mm) W x 2.18 in. (55.9 mm) D
Weights:	LS 1220: 6.5 oz. (184 gm) LS 1220LR: 6.5 oz. (184 gm)
Mounting:	Screw mounting to optional stand or host device
Visual Indicators:	Red scan LED; green decode LED
Audible Indicator:	Beeper driver output: 2.5 kHz, 50 mA sink
Optional Accessories:	Photo switch trigger; pushbutton trigger, footswitch trigger, handsfree trigger; 5VDC power supply

## Performance Characteristics

Light Source:	Visible laser diode operating at $\pm 670$ nm
Scan Rate:	36 $\pm$ 3 scans per second
Optical Resolution:	LS 1220: Element width minimum: .005 in. (.13 mm) LS 1220LR: Element width minimum: .010 in. (.256 mm)
Minimum Print Contrast:	LS 1220: 25% absolute dark/light reflectance at 670 nm LS 1220LR: 50% absolute dark/light reflectance at 670 nm
Decode Capability:	UPC versions A and E, EAN 8 and EAN 13, all supplemental variants; Code 39, Code 39 Full ASCII, Interleaved 2 of 5 (two lengths), Discrete 2 of 5 (two lengths), Code 128, Code 93, MSI Plessey, Codabar
Orientation Tolerance:	Pitch: $\pm 55^\circ$ minimum; Skew: $\pm 65^\circ$ minimum Specular Dead Zone: $\pm 2^\circ$
Laser Safety:	LS 1220: CDRH Class II Device LS 1220LR: CDRH Class IIIA
Power:	LS 1220: 5 VDC $\pm 5\%$ ; 170 mA typical; 47 mA standby LS 1220LR: 5 VDC $\pm 5\%$ ; 170 mA typical; 47 mA standby

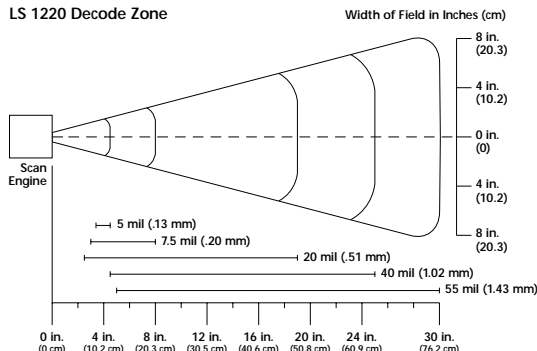
## User Environment

Operating Temperature:	-4° to 122°F (-20° to 50°C) Note: Protection circuitry shuts down the laser when case temperature exceeds 122°F (50°C)
Storage Temperature:	-40° to 140°F (-40° to 60°C)
Humidity:	5% to 95% (non-condensing)
Drop:	Repeated 3 ft. drops to concrete
Shock:	1500 G applied via any mounting surface
Ambient Light Immunity:	Artificial: 150 ft. candles; Sunlight: 8,000 ft. candles

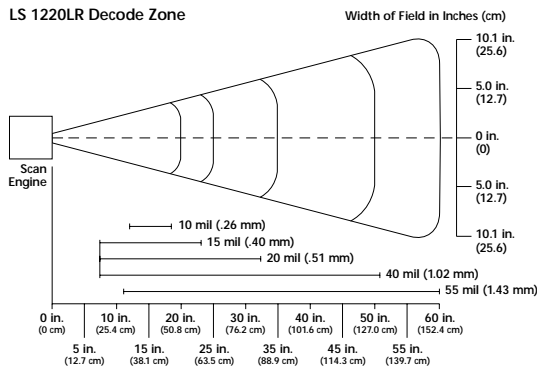
## Systems Compatibility

Interface:	RS-232-C
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LS 1220 Decode Zone



LS 1220LR Decode Zone



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