LS 1220

Fixed-Mount or Embedded Scanner

symbol®

Big Performance, Small Size for Fixed-Mount or Embedded Scanning Applications

The LS 1220 series from Symbol Technologies provides the easiest and most flexible integration of bar code scanning into your host device. Symbol packs compact, durable construction with proven scanning technology, delivering a reliable fixed-mount or embedded scanner.

The LS 1220 features superior performance and durability in a compact form factor that easily integrates into portable or fixed-mount OEM devices at an affordable price. The LS 1220 is available in three models for additional flexibility—standard, wide angle (WA), or very high-density (VHD) versions. Featuring a die-cast metal housing with mounting features, the LS 1220 is the right choice for OEM devices requiring accurate unattended automated data entry.

Reliable High-Quality Scanning, Low Power Consumption

The superior scanning performance and sophisticated decoding algorithms for all major bar code symbologies ensure that the LS 1220 scanners deliver the highest rate of first-time read accuracy. A Mylar® scan element resonates at a fixed frequency for motion without wear and tear. That translates into operation that is virtually nonstop and unmatched in reliability and dependability.

Symbol LS 1220 scanners offer the industry's lowest power consumption—the result of our patented Mylar scan element. Additional features include RS 232 output, "scan" and "good decode" LED indicators, bar code programming menus for easy set-up, host and external trigger options, your choice of models to best meet your needs, and a variety of optional accessories.

MiniScan Applications

The LS 1220 Wide Angle scan engine features a broad 60° scan angle to accommodate larger bar codes at or near contact. The LS 1220WA is ideal for high-volume, near-contact scanning such as kiosks, ATMs, lottery machines and other applications that require superior scanning performance in a complete package. The LS 1220 scan 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 including lottery terminals. When used as a fixed-mount scanner, the LS 1220 modules are ideal for library, document tracking, manufacturing and warehousing applications.

The LS 1220 Very High Density scan engine reads printed

Features	Benefits
Wide scan angle (60°) easily accommodates larger barcodes at or near contact	**Perfect for high volume scanning applications that require contact scanning such as kiosks or ATMs**
Industrial class housing ensures reliability and durability	**Small rugged housing is optimized for easy integration into fixed mount or embedded applications**
Superior scanning performance and sophisticated decoding algorithms	**Assures the highest first-time read rate and accuracy, even on damaged or poorly printed symbols**
Available in standard, wide angle, or very high density versions	**Flexible scanning performance for a wide range of applications in almost any industry.**
Mylar® scan element	**Unsurpassed scanning performance without friction or wear; covered by a lifetime warranty**

symbols with element widths as narrow as 3 to 5 mm. In fact the LS 1220VHD is so accurate it even delivers reliable scanning performance on symbols as small as 2 mm. The LS 1220VHD is a great fit for circuit board manufacturing, small-item retail and pharmaceutical marking applications. Optimized for high-density symbols, it reads medium and low-density bar codes as well—bringing even more flexibility to your OEM design.
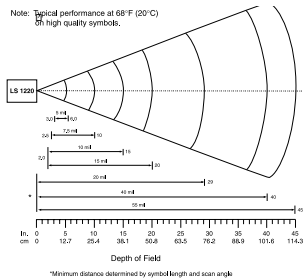
Trust Symbol for Fixed Mount or Embedded Scanning Performance

Choose the best scan module for your embedded or fixed-mount OEM solutions—the LS 1220—unmatched in reliability, performance, and durability, and backed by Symbol's global service and support network. For more information about Symbol scan engines, visit **www.symbol.com/oem**

LS 1220 Specifications
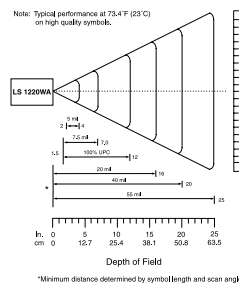
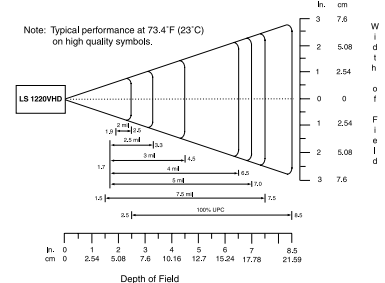| Physical Characteristics	LS 1220	LS 1220WA	LS 1220VHD
Dimensions:	1.3" in. H x 2.13" in. W x 2.18" in. D 3.3 cm H x 5.4 cm W x 5.5 cm D	1.3" in. H x 2.13" in. W x 2.18" in. D 3.3 cm H x 5.4 cm W x 5.5 cm D	1.3" in. H x 2.13" in. W x 2.18" in. D 3.3 cm H x 5.4 cm W x 5.5 cm D
Weight:	6.5 oz (184 gm)	6.5 oz (184 gm)	6.5 oz (184 gm)
Performance Characteristics			
Light Source:	Visible Laser Diode 650 nm	Visible Laser Diode 650 nm	Visible Laser Diode 650 nm
Scan Rate:	35 (± 5) scans/sec (bidirectional)	35 (± 5) scans/sec (bidirectional)	35 (± 5) scans/sec (bidirectional)
Scan Angle:	42° nominal	60° nominal	37° nominal
Scan Patterns:	Linear	Linear	Linear
Print Contrast Minimum:	20% absolute dark/light reflectance differential, measured at 650 nm	20% absolute dark/light differential, measured at 650 nm	40% absolute dark/light differential, measured at 650 nm
Decode Capability:	UPC/EAN, Code 39, Code 39 full ASCII, Code 93, Codabar, I 2 of 5, Code 128, EAN 128, Discrete 2 of 5, MSI Plessey	UPC/EAN, Code 39, Code 39 full ASCII, Code 93, Codabar, I 2 of 5, Code 128, EAN 128, Discrete 2 of 5, MSI Plessey	UPC/EAN, Code 39, Code 39 full ASCII, Code 93, Codabar, I 2 of 5, Code 128, EAN 128, Discrete 2 of 5, MSI Plessey
Programmable Parameters:	Laser on time, Trigger Mode, Bidirectional redundancy, Symbology types/lengths, Data formatting, RS 232 communication parameters	Laser on time, Trigger Mode, Bidirectional redundancy, Symbology types/lengths, Data formatting, RS 232 communication parameters	Laser on time, Trigger Mode, Bidirectional redundancy, Symbology types/lengths, Data formatting, RS 232 communication parameters
Interfaces Supported:	RS 232	RS 232	RS 232
User Environment			
Ambient Light Artificial: Sunlight:	450 ft. candles (4,884 lux) 8,000 ft. candles (86,112 lux)	450 ft. candles (4,884 lux) 8,000 ft. candles (86,112 lux)	450 ft. candles (4,884 lux) 8,000 ft. candles (86,112 lux)
Operating Temperature:	-4° to 122° F/-20° to 50° C	-4° to 122° F/-20° to 50° C	-4° to 122° F/-20° to 50° C
Storage Temperature:	-40° to 140° F/-40° to 60° C	32° to 104° F/0° to 40° C	32° to 140° F/0° to 104° C
Humidity:	5% to 95% noncondensing	5% to 95% noncondensing	5% to 95% noncondensing
Power Input Voltage: Input Current: Standby Current:	5VDC ± 5% 170 mA typical 47 mA	5VDC ± 5% 170 mA typical 47 mA	5VDC ± 5% 170 mA typical 47 mA
Shock:	2,000 G	2,000 G	2,000 G
Regulatory			
Laser Classification:	CDRH Class II	CDRH Class II	CDRH Class II
Electrical Safety:	UL, VDE, and CUL recognized laser	UL, VDE, and CUL recognized laser component	UL, VDE, and CUL recognized laser component

LS 1220 Decode Zone

Note: Typical performance at 68°F (20°C) on high quality symbols.

*Minimum distance determined by symbol length and scan angle

LS 1220WA Decode Zone

Note: Typical performance at 73.4°F (23°C) on high quality symbols.

*Minimum distance determined by symbol length and scan angle

LS 1220VHD Decode Zone

Note: Typical performance at 73.4°F (23°C) on high quality symbols.

For system, product or services availability and specific information within your country, please contact your local Symbol Technologies office or Authorized Business Partner.

IA 06/02