Weber®
LABELS & LABELING SOLUTIONS

PRINTER SPECIFICATIONS

Specifications are provided for reference and are based on printer tests using Zebra brand ribbons and labels. Results may vary in actual application settings. Weber recommends always qualifying any application with thorough testing.

Xi4 Standard Features

Physical Features

- New full-function front panel and large multilingual back-lit LCD display — with user-programmable password protection
- Clear media side door — easy monitoring of supplies usage without opening the printer.
- Thin film printhead — with E^{3}® Element Energy Control
- 8 MB Flash memory — including 2.0 MB user-available non-volatile memory storage for downloadable objects
- Serial RS-232 and bi-directional parallel ports — with auto detect
- USB 2.0 port
- Dual media sensors — transmissive and reflective, selectable through software or front panel
- Internal ZebraNet 10/100 Print Server — supports 10Base-T, 100Base-TX, and fast Ethernet 10/100 auto-switching networks.

Firmware

- ZPL® or ZPL II® programming language — selectable through software or front panel
- XML Enabled Printing — allows XML communications for barcode label printing, eliminating license fees and printer server hardware and lowering customization and programming costs

Printer Operation

- 32 bit 133 Mhz RISC processor
- 16 MB SDRAM memory (12 MB user-available)
- Internal real-time clock
- Advanced label/media counters
- Thermal transfer and Direct thermal printing of bar codes, text, and graphics
- Auto calibration—printer calibrates when printer is turned on or when printhead is closed using approximately two labels
- Early Warning Systems — provide low label, low ribbon, and clean printhead alerts via the front panel and ZebraLink Alerts
- Zebra Universal Printer Driver — for Microsoft® Windows® 2000/XP/Vista operating systems

Optional Features

Printer Options

- Clear media side bi-fold door — allows shorter media door opening radius
- Full-width rotary knife cutter and catch tray — operates under software control cutting labels individually or in strips
- Media rewind spindle — rewinds finished roll internally onto 3 in. (76 mm) core or enables label peel and liner rewind
- Applicator interface — provides status and control signals for applicators and remote control devices
- Media supply spindle for 3 in. (76 mm) core or 40 mm core
- Flash Memory — factory installed 64 MB (61 MB user available)
- Additional fonts

ZebraNet Print Server Options

Features provided by ZebraNet Print Servers include:

- Web View web pages — connect and control Zebra bar code printers via the printer's web interface using common internet browsers
- Alerts —provide alerts via any e-mail-enabled, wired, or wireless device to minimize downtime

- ZebraNet Internal Wireless Plus Print Server
- ZebraNet Wireless Plus Print Server

Other Networking Options

- IBM® Twinax interfaceIBM Coax interface
- IBM Coax interface

Firmware Options

- Zebra's Alternative Programming Language (APL) — allows integration into mixed printer environments without re-programming formats
  - APL-I Firmware — allows a 203dpi Zebra printer to parse and print IPL code intended for an Intermec 3400D or 86xx printer (With APL-I firmware installed, ZPL is no longer recognized and ZPL specific features are not available).
  - APL-D Firmware — allows a 203 dpi Zebra printer to parse and print DPL code intended for Datamax Prodigy Plus, Prodigy, or Allegro Printers (With APL-D installed, ZPL programming language is not recognized, and ZPL specific features are not available.)

ZebraLink Solutions

- ZebraDesigner Pro — an intuitive, easy-to-use software program for creating complex label designs (option).
- ZebraDesigner — offers basic features for simple label design
- ZebraDesigner for myXML — easy-to-use label design software that enables printing on XML enabled printers
- ZebraNet Bridge Enterprise — centrally manage Zebra printers from a computer anywhere on your network.
- ZebraNet Utilities v 7.0 — provides enhanced printing, conversion, and administration capabilities; message management; and more.

Media Specifications

- Media type: continuous, die-cut, or black mark, notch.
- Minimum label length: *
  - Rewind mode: 0.25 in. (6 mm)
  - Peel mode: 0.5 in. (13 mm)
  - Tear-off mode: 0.7 in. (18 mm)
  - Cutter mode: 1.5 in. (38 mm)
- Media thickness (label and liner):
  0.003 in. (0.076 mm) to 0.012 in. (0.305 mm)
- Maximum media roll size:
  8.0 in. (203 mm) outside diameter
  on a 3 in. (76 mm) inside diameter core
- Transmissive (gap) sensing standards:
  - Interlabel gap: 2–4 mm, preferably 3 mm
  - Sensing notch: 0.25 in.W (6 mm) × 0.12 in.L (3 mm)
  - Sensing hole: 0.125 in. (3 mm) diameter
- Reflective (black mark) sensing standards:
  - Black mark length (parallel to inside media edge):
    0.12 in.–0.43 in. (3–11 mm)
  - Black mark width (perpendicular to inside media edge):
    0.43 in. (> 11 mm)
  - Black mark location:
    within 0.040 in. (1 mm) of inside media edge:
  - Black mark density: >1.0 Optical Density Units (ODU)
  - Maximum media density: 0.5 ODU

Ribbon Specifications

- Standard Lengths: 1476' (450 m) or 984' (300 m)
  Provides 2:1 and 3:1 media roll to ribbon ratios
- Maximum ribbon roll size:
  3.2 in. (81.3 mm) outside diameter
  on a 1.0 in. (25.4 mm) inside diameter core
- Ribbon wound coated-side out

Electrical Specifications

- Universal power supply with power-factor correction 90–264 VAC, 48–62 Hz
- Agency approvals: IEC 60950-1, EN 55022 Class B, EN 55024, EN 61000-3-2, EN 61000-3-3
- Product Markings: cTUVus, CE, FCC-B, ICES-003, VCCI, C-Tick, NOM, S-Mark(Arg), CCC, GOST-R, BSMI, KCC, STB, and UkrSEPRO

Environmental Specifications

- Operating environment:
  - Thermal transfer = 40ºF to 105ºF (5º to 40ºC)
  - Direct thermal = 32ºF to 105ºF (0º to 40ºC)
  - 20% to 85% non-condensing relative humidity
- Storage/Transportation environment:
  – 40ºF to 140ºF (– 40º to 60ºC)
  5% to 85% non-condensing relative humidity

Font Specifications

- Bitmap fonts A through H and GS symbols are expandable up to 10 times, height and width independent
- Smooth scalable font Ø (CG Triumvirate™ Bold Condensed) is expandable dot-by-dot, height and width independent
- IBM Code Page 850 International Characters

Communications Specifications

- ZebraNet Internal Wireless Plus Print Server — supports advanced wireless securities through an integrated, internal, theft-resistant radio card.
- ZebraNet Wireless Plus Print Server — supports advanced wireless securities through an external radio card.
- ZebraNet 10/100 Print Server — supports 10Base-T, 100Base-TX, and fast Ethernet 10/100 auto-switching networks.
- Support for ZebraNet PrintServer II — 10Base-T Ethernet network
- USB 2.0 — 12 Mbits/second
- High-speed bi-directional parallel interface — IEEE 1284-1994 compatibility, ECP, nibble mode.
- High-speed serial interfaces:
  - RS-232C with DB9F connector, optional converter for DB25F available
  - Optional RS-422/485 with multidrop capability to network multiple printers from a single host with external adapter
  - Software (XON/XOFF) or hardware (DTR/DSR) communication handshake protocols
- IBM Twinax interface — emulates IBM System 3*x* and IBM AS/400® printers
- IBM Coax interface — emulates IBM System 3270 printers
- Applicator interface — with DB15F connector

Zebra Programming Language® (ZPL and ZPL II)

- Communicates in printable ASCII characters
- Unicode™ - Compliant (Version V53.17 and higher)
- Compatible with mainframe, mini, and PC hosts
- Downloadable objects include graphics, scalable and bitmap fonts, label templates, and formats
- Object copying between memory areas (RAM, Onboard Flash memory locations)
- Adjustable print cache
- Data compression
- Automatic memory allocation for format while printing
- Automatic serialization of fields
- Format inversion (white on black)
- Mirror-image printing
- Four position field rotation (0º, 90º, 180º, 270º)
- Slew command
- Programmable label quantities with print, pause, cut control
- User-programmable password
- Status messages to host on request

Bar Code Symbologies and Specifications

- Bar code ratios: 2:1, 7:3, 5:2, and 3:1
- Linear bar codes: Code 11, Code 39, Code 93, Code 128 with subsets A/B/C and UCC Case Codes, ISBT-128, UPC-A, UPC-E, EAN-8, EAN-13, UPC and EAN 2-or 5-digit extensions, Plessey, Postnet, Standard 2-of-5, Industrial 2-of-5, Interleaved 2-of-5, Logmars, MSI, Codabar and Planet Code
- 2-dimensional bar codes: Codablock, PDF417, Code 49, DataMatrix, MaxiCode, QR Code, TLC 39, MicroPDF, RSS-14 (and composite), Aztec

* *Media registration and minimum label length are affected by media type and width, ribbon type, and print speed. Performance improves as these factors are optimized. Zebra recommends always qualifying any application with thorough testing.*

110Xi4™ 203 dpi

Printing Specifications

- 203 dpi resolution (8 dots/mm)
- Dot size (W × L):
  0.0049 in. × 0.0049 in.
  (0.125 mm × 0.125 mm)
- First dot location measured from inside media edge:
  0.14 in. ±0.05 in. (3.5mm ±1.25 mm)
- Maximum print width: 4.0 in. (102 mm)
- Maximum non-continuous media print length (with 16 MB memory):
  39 in. (991 mm)
- Maximum continuous media print length (with 16 MB memory):
  150 in. (3810 mm)
- Media registration tolerance: *
  - Vertical:
    ± 0.030 in. (± 0.75 mm)
    at print speeds at or below 4 ips on non-continuous media
    ± 0.060 in. (± 1.5 mm)
    at print speeds higher than 4 ips
  - Horizontal:
    ± 0.060 in. (± 1.5 mm)
- Programmable print speeds (inches per second):
  2.4, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
- Bar code modulus "X" dimension:
  - Picket fence (non-rotated) orientation: 4.9 mil to 49 mil
  - Ladder (rotated) orientation: 4.9 mil to 49 mil

Media and Ribbon Specifications

- Media width (label and liner):
  0.79 in. (20 mm) to 4.5 in. (114 mm)
- Minimum label length: See media specifications on page 2
- Maximum full-width media thickness for cutter:
  0.23 mm (0.009 in.)
- Ribbon width:
  0.79 in. (20 mm) to 4.33 in. (110 mm)

General Specifications

- Power consumption:
  - Idle = 20 W
  - Printing = 121 W (printing pause test label at lowest speed)
  - Standby = 25 W
- Height: 15.5 in. (393.7 mm)
- Width: 10.31 in. (261.9 mm)
- Depth: 20.38 in. (517.5 mm)
- Weight: 50 lbs. (22.7 kg)
- RFID ready is standard (UHF EPC Gen 2, Class 1 compliant)

110Xi4™ 300 dpi

Printing Specifications

- 300 dpi resolution (12 dots/ mm)
- Dot size (W × L):
  0.0033 in. × 0.0039 in.
  (0.084 mm × 0.01 mm)
- First dot location measured from inside media edge:
  0.08 in. ±0.05 in. (2.1 mm ±1.25 mm)
- Maximum print width: 4.0 in. (102 mm)
- Maximum non-continuous media print length (with 16 MB memory):
  39 in. (991 mm)
- Maximum continuous media print length (with 16 MB memory):
  100 in. (2540 mm)
- Media registration tolerance: *
  - Vertical:
    ± 0.030 in. (± 0.75 mm)
    at print speeds at or below 4 ips on non-continuous media
    ± 0.060 in. (± 1.5 mm)
    at print speeds higher than 4 ips
  - Horizontal:
    ± 0.060 in. (± 1.5 mm)
- Programmable print speeds (inches per second):
  2.4, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12
- Bar code modulus "X" dimension:
  - Picket fence (non-rotated) orientation: 3.3 mil to 49 mil
  - Ladder (rotated) orientation: 3.9 mil to 39 mil

Media and Ribbon Specifications

- Media width (label and liner):
  0.79 in. (20 mm) to 4.5 in. (114 mm)
- Minimum label length: See media specifications on page 2
- Maximum full-width media thickness for cutter:
  0.23 mm (0.009 in.)
- Ribbon width:
  0.79 in. (20 mm) to 4.33 in. (110 mm)

General Specifications

- Power consumption:
  - Idle = 20 W
  - Printing = 121 W (printing pause test label at lowest speed)
  - Standby = 25 W
- Height: 15.5 in. (393.7 mm)
- Width: 10.31 in. (261.9 mm)
- Depth: 20.38 in. (517.5 mm)
- Weight: 50 lbs. (22.7 kg)
- RFID ready is standard (UHF EPC Gen 2, Class 1 compliant)

110Xi4™ 600 dpi

Printing Specifications

- 600 dpi resolution (23.5 dots/mm)
- Dot size (W × L):
- 0.0016 in. × 0.0016 in.
  (0.042 mm × 0.042 mm)
- First dot location measured from inside media edge:
  0.08 in. ±0.05 in. (2.1 mm ±1.25 mm)
- Maximum print width: 4.0 in. (102 mm)
- Maximum non-continuous media print length (with 16 MB memory):
  39 in. (991 mm)
- Maximum continuous media print length (with 16 MB memory):
  50 in. (2540 mm)
- Media registration tolerance: *
  - Vertical:
    ± 0.030 in. (± 0.75 mm)
    at print speeds at or below 4 ips on non-continuous media
    ± 0.060 in. (± 1.5 mm)
    at print speeds higher than 4 ips
  - Horizontal:
    ± 0.060 in. (± 1.5 mm)
- Programmable print speeds (inches per second):
  1.5, 2, 3, 4, 5, 6
- Bar code modulus "X" dimension:
  - Picket fence (non-rotated) orientation: 1.6 mil to 16 mil
  - Ladder (rotated) orientation: 1.6 mil to 16 mil

Media and Ribbon Specifications

- Media width (label and liner):
  0.79 in. (20 mm) to 4.5 in. (114 mm)
- Minimum label length: See media specifications on page 2
- Maximum full-width media thickness for cutter:
  0.23 mm (0.009 in.)
- Ribbon width:
  0.79 in. (20 mm) to 4.33 in. (110 mm)

General Specifications

- Power consumption:
  - Idle = 20 W
  - Printing = 121 W (printing pause test label at lowest speed)
  - Standby = 25 W
- Height: 15.5 in. (393.7 mm)
- Width: 10.31 in. (261.9 mm)
- Depth: 20.38 in. (517.5 mm)
- Weight: 50 lbs. (22.7 kg)
- RFID ready is standard (UHF EPC Gen 2, Class 1 compliant)

* *Media registration and minimum label length are affected by media type and width, ribbon type, and print speed. Performance improves as these factors are optimized. Zebra recommends always qualifying any application with thorough testing.*

140Xi4™ 203 dpi

Printing Specifications

- 203 dpi resolution (8 dots/mm)
- Dot size (W × L):
  0.0049 in. × 0.0049 in.
  (0.125 mm × 0.125 mm)
- First dot location measured from inside media edge:
  0.10 in. ±0.035 in. (2.5mm ±0.9 mm)
- Maximum print width: 5.04 in. (128 mm)
- Maximum non-continuous media print length (with 16 MB memory):
  39 in. (991 mm)
- Maximum continuous media print length (with 16 MB memory):
  - 150 in. (3810 mm)
- Media registration tolerance: *
  - Vertical:
    ± 0.030 in. (± 0.75 mm)
    at print speeds at or below 4 ips
    on non-continuous media
    ± 0.060 in. (± 1.5 mm)
    at print speeds higher than 4 ips
  - Horizontal:
    ± 0.060 in. (± 1.5 mm)
- Programmable print speeds (inches per second):
  2.4, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
- Bar code modulus "X" dimension:
  Picket fence (non-rotated) orientation:
  4.9 mil to 49 mil
  Ladder (rotated) orientation:
  4.9 mil to 49 mil

Media and Ribbon Specifications

- Media width (label and liner):
  1.57 in. (40 mm) to 5.51 in. (140 mm)
- Minimum label length: See media specifications on page 2
- Maximum full-width media thickness for cutter:
- 0.23 mm (0.009 in.)
- Ribbon width: 1.57 in. (40 mm) to 5.1 in. (130 mm)

General Specifications

- Power consumption:
  - Idle = 20 W
  - Printing = 180 W (printing pause test label at lowest speed)
  - Standby = 25 W
- Height: 15.5 in. (393.7 mm)
- Width: 11.31 in. (287.3 mm)
- Depth: 20.38 in. (517.5 mm)
- Weight: 55 lbs. (25.0 kg)

170Xi4™ 203 dpi

Printing Specifications

- 203 dpi resolution (8 dots/mm)
- Dot size (W × L):
  0.0049 in. × 0.0049 in.
  (0.125 mm × 0.125 mm)
- First dot location measured from inside media edge:
  0.10 in. ±0.035 in. (2.5mm ±0.9 mm)
- Maximum print width: 6.6 in. (168 mm)
- Maximum non-continuous media print length (with 16 MB memory):
  39 in. (991 mm)
- Maximum continuous media print length (with 16 MB memory):
  - 203 dpi: 150 in. (3810 mm)
- Media registration tolerance: *
  - Vertical:
    ± 0.060 in. (± 1.5 mm)
    on non-continuous media
  - Horizontal:
    ± 0.060 in. (± 1.5 mm)
- Programmable print speeds (inches per second):
  2.4, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12
- Bar code modulus "X" dimension:
  Picket fence (non-rotated) orientation:
  3.3 mil to 49 mil
  Ladder (rotated) orientation:
  3.9 mil to 39 mil

Media and Ribbon Specifications

- Media width (label and liner):
  2.0 in. (51 mm) to 7.1 in. (180 mm)
- Minimum label length: See media specifications on page 2
- Maximum full-width media thickness for cutter:
- 0.18 mm (0.007 in.)
- Ribbon width: 2.0 in. (51 mm) to 6.7 in. (170 mm)

General Specifications

- Power consumption:
  - Idle = 20 W
  - Printing = 220 W (printing pause test label at lowest speed)
  - Standby = 25 W
- Height: 15.5 in. (393.7 mm)
- Width: 13.31 in. (338.1 mm)
- Depth: 20.38 in. (517.5 mm)
- Weight: 67 lbs. (30.5 kg)

170Xi4™ 300 dpi

Printing Specifications

- 300 dpi resolution (12 dots/mm)
- Dot size (W × L):
  0.0033 in. × 0.0033 in.
  (0.084 mm × 0.084 mm)
- First dot location measured from inside media edge:
  0.10 in. ±0.035 in. (2.5mm ±0.9 mm)
- Maximum print width: 6.6 in. (168 mm)
- Maximum non-continuous media print length (with 16 MB memory):
  39 in. (991 mm)
- Maximum continuous media print length (with 16 MB memory):
  - 300 dpi: 100 in. (2540 mm)
- Media registration tolerance: *
  - Vertical:
    ± 0.060 in. (± 1.5 mm)
    on non-continuous media
  - Horizontal:
    ± 0.060 in. (± 1.5 mm)
- Programmable print speeds (inches per second):
  2.4, 3, 4, 5, 6, 7, 8
- Bar code modulus "X" dimension:
  Picket fence (non-rotated) orientation:
  3.3 mil to 49 mil
  Ladder (rotated) orientation:
  3.9 mil to 39 mil

Media and Ribbon Specifications

- Media width (label and liner):
  2.0 in. (51 mm) to 7.1 in. (180 mm)
- Minimum label length: See media specifications on page 2
- Maximum full-width media thickness for cutter:
- 0.18 mm (0.007 in.)
- Ribbon width: 2.0 in. (51 mm) to 6.7 in. (170 mm)

General Specifications

- Power consumption:
  - Idle = 20 W
  - Printing = 220 W (printing pause test label at lowest speed)
  - Standby = 25 W
- Height: 15.5 in. (393.7 mm)
- Width: 13.31 in. (338.1 mm)
- Depth: 20.38 in. (517.5 mm)
- Weight: 67 lbs. (30.5 kg)

220Xi4™ 203 dpi

Printing Specifications

- 203 dpi resolution
  (8 dots/mm)
- Dot size (W × L):
  - 203 dpi:
    0.0049 in. × 0.0049 in. (0.125 mm × 0.125 mm)
- First dot location measured from inside media edge:
  0.10 in. ±0.035 in. (2.5mm ±0.9 mm)
- Maximum print width: 8.5 in. (216 mm)
- Maximum non-continuous media print length (with 16 MB memory):
  39 in. (991 mm)
- Maximum continuous media print length (with 16 MB memory):
  - 203 dpi: 150 in. (3810 mm)
- Media registration tolerance: *
  - Vertical:
    ± 0.060 in. (± 1.5 mm)
    on non-continuous media
  - Horizontal:
    ± 0.060 in. (± 1.5 mm)
- Programmable print speeds
  (inches per second):
  - 203 dpi:
    2.4, 3, 4, 5, 6, 7, 8, 9, 10
- Bar code modulus "X" dimension:
  Picket fence (non-rotated) orientation: 4.9 mil to 49 mil
  Ladder (rotated) orientation:
  4.9 mil to 49 mil

Media and Ribbon Specifications

- Media width (label and liner):
  4.25 in. (108 mm) to 8.8 in. (224 mm)
- Minimum label length: See media specifications on page 2
- Maximum full-width media thickness for cutter:
  0.005 in. (0.14mm)
- Ribbon width: 4.25 in. (108 mm)
  to 8.6 in. (220 mm)

General Specifications

- Power consumption:
  - Idle = 20 W
  - Printing = 269 W (printing pause test label at lowest speed)
  - Standby = 25 W
- Height: 15.5 in. (393.7 mm)
- Width: 15.81 in. (401.6 mm)
- Depth: 20.38 in. (517.5 mm)
- Weight: 72 lbs. (32.7 kg)

220Xi4™ 300 dpi

Printing Specifications

- 300 dpi resolution
  (12 dots/mm)
- Dot size (W × L):
  - 300 dpi (W × L):
    0.0033 in. × 0.0033 in. (0.084 mm × 0.084 mm)
- First dot location measured from inside media edge:
  0.10 in. ±0.035 in. (2.5mm ±0.9 mm)
- Maximum print width: 8.5 in. (216 mm)
- Maximum non-continuous media print length (with 16 MB memory):
  39 in. (991 mm)
- Maximum continuous media print length (with 16 MB memory):
  - 300 dpi: 100 in. (2540 mm)
- Media registration tolerance: *
  - Vertical:
    ± 0.060 in. (± 1.5 mm)
    on non-continuous media
  - Horizontal:
    ± 0.060 in. (± 1.5 mm)
- Programmable print speeds
  (inches per second):
  - 300 dpi:
    2.4, 3, 4, 5, 6
- Bar code modulus "X" dimension:
  Picket fence (non-rotated) orientation: 4.9 mil to 49 mil
  Ladder (rotated) orientation:
  4.9 mil to 49 mil

Media and Ribbon Specifications

- Media width (label and liner):
  4.25 in. (108 mm) to 8.8 in. (224 mm)
- Minimum label length: See media specifications on page 2
- Maximum full-width media thickness for cutter:
  0.005 in. (0.14mm)
- Ribbon width: 4.25 in. (108 mm)
  to 8.6 in. (220 mm)

General Specifications

- Power consumption:
  - Idle = 20 W
  - Printing = 269 W (printing pause test label at lowest speed)
  - Standby = 25 W
- Height: 15.5 in. (393.7 mm)
- Width: 15.81 in. (401.6 mm)
- Depth: 20.38 in. (517.5 mm)
- Weight: 72 lbs. (32.7 kg)

* *Media registration and minimum label length are affected by media type and width, ribbon type, and print speed. Performance improves as these factors are optimized. Zebra recommends always qualifying any application with thorough testing.*

Standard Printer Fonts

Fonts A through V are Expandable up to 10 times, height and width independently. Fonts E and H, however are not considered “in-spec” (OCR-A and OCR-B) when expanded.

The scalable smooth font 0 is expandable on a dot-by-dot basis, height and width independent, while maintaining smooth edges. Maximum character size depends on available memory. IBM Code Page 850 international character sets are available in fonts A through G, and 0 through software control.

Font Specifications (203dpi) 8 dot/mm

Font	Matrix (in dots) (H × W)	Type†	Min. Char. Size (H × W) in inches (mm)	Max. CPI
A	9 × 5	U-L-D	0.044 × 0.029 (1.1 × 0.74)	33.9
B	11 × 7	U	0.054 × 0.044 (1.37 × 1.1)	22.6
C, D	18 × 10	U-L-D	0.088 × 0.059 (2.2 × 1.5)	16.9
E	28 × 15	OCR-B	0.138 × 0.098 (3.5 × 2.5)	10.1
F	26 × 13	U-L-D	0.128 × 0.079 (3.3 × 2.0)	12.7
G	60 × 40	U-L-D	0.295 × 0.236 (7.5 × 6.0)	4.2
H	21 × 13	OCR-A	0.103 × 0.093 (2.6 × 2.4)	10.7
GS	24 × 24	SYMBOL	0.118 × 0.118 (3.0 × 3.0)	8.4
P	20 x 18	U-L-D	0.098 x 0.089 (2.50 x 2.25)	N/A
Q	28 x 24	U-L-D	0.138 x 0.113 (3.50 x 3.00)	N/A
R	35 x 31	U-L-D	0.172 x 0.153 (4.38 x 3.88)	N/A
S	40 x 35	U-L-D	0.197 x 0.172 (5.00 x 4.38)	N/A
T	48 x 42	U-L-D	0.236 x 0.207 (6.00 x 5.25)	N/A
U	59 x 53	U-L-D	0.290 x 0.261 (7.38 x 6.63)	N/A
V	80 x 71	U-L-D	0.394 x 0.349 (10.0 x 8.88)	N/A
Ø	variable	U-L-D	variable	N/A

†U—Uppercase L—Lowercase D—Descenders

Font Specifications (300dpi) 12 dot/mm

Font	Matrix (in dots) (H × W)	Type†	Min. Char. Size (H × W) in inches (mm)	Max. CPI
A	9 × 5	U-L-D	0.030 × 0.020 (0.76 × 0.51)	50.0
B	11 × 7	U	0.037 × 0.030 (0.94 × 0.76)	33.3
C, D	18 × 10	U-L-D	0.060 × 0.040 (1.5 × 1.0)	25.0
E	41 × 20	OCR-B	0.137 × 0.087 (3.5 × 2.2)	11.5
F	26 × 13	U-L-D	0.087 × 0.053 (2.2 × 1.3)	18.8
G	60 × 40	U-L-D	0.200 × 0.160 (5.1 × 4.1)	6.3
H	30 × 19	OCR-A	0.100 × 0.093 (2.5 × 2.37)	10.7
GS	24 × 24	SYMBOL	0.080 × 0.080 (2.03 × 2.03)	12.5
P	20 x 18	U-L-D	0.067 x 0.060 (1.69 x 1.52)	N/A
Q	28 x 24	U-L-D	0.093 x 0.080 (2.37 x 2.03)	N/A
R	35 x 31	U-L-D	0.117 x 0.103 (2.96 x 2.62)	N/A
S	40 x 35	U-L-D	0.133 x 0.117 (3.39 x 2.96)	N/A
T	48 x 42	U-L-D	0.160 x 0.140 (4.06 x 3.56)	N/A
U	59 x 53	U-L-D	0.197 x 0.177 (5.00 x 4.49)	N/A
V	80 x 71	U-L-D	0.267 x 0.237 (6.77 x 6.01)	N/A
Ø	variable	U-L-D	variable	N/A

†U—Uppercase L—Lowercase D—Descenders

Font Specifications (600dpi) 24 dot/mm

Font	Matrix (in dots) (H × W)	Type†	Min. Char. Size (H × W) in inches (mm)	Max. CPI
A	9 × 5	U-L-D	0.015 × 0.010 (0.38 × 0.25)	100.0
B	11 × 7	U	0.018 × 0.015 (0.45 × 0.38)	66.7
C, D	18 × 10	U-L-D	0.030 × 0.020 (0.77 × 0.51)	50.0
E	82 × 40	OCR-B	0.137 × 0.087 (3.4 × 2.2)	11.54
F	26 × 13	U-L-D	0.043 × 0.027 (1.1 × 0.69)	37.5
G	60 × 40	U-L-D	0.100 × 0.080 (2.5 × 2.0)	12.5
H	60 × 38	OCR-A	0.100 × 0.093 (2.5 × 2.4)	10.71
GS	24 × 24	SYMBOL	0.040 × 0.040 (1.0 × 1.0)	25.0
P	20 x 18	U-L-D	0.033 x 0.030 (0.85 x 0.77)	N/A
Q	28 x 24	U-L-D	0.047 x 0.040 (1.19 x 1.02)	N/A
R	35 x 31	U-L-D	0.059 x 0.052 (1.49 x 1.32)	N/A
S	40 x 35	U-L-D	0.067 x 0.059 (1.70 x 1.49)	N/A
T	48 x 42	U-L-D	0.080 x 0.070 (2.04 x 1.79)	N/A
U	59 x 53	U-L-D	0.099 x 0.089 (2.51 x 2.25)	N/A
V	80 x 71	U-L-D	0.134 x 0.199 (3.40 x 3.02)	N/A
Ø	variable	U-L-D	variable	N/A

†U—Uppercase L—Lowercase D—Descenders