

# MINI PRINTER



**Line Thermal Printers**

**Impact Dot Matrix Printers**

**Line Thermal Kiosk Units**

**Line Thermal Printer Mechanisms**

**Impact Dot Matrix Printer Mechanisms**

Leading Technology for Humanity

**CITIZEN SYSTEMS JAPAN CO., LTD.**

# Leading Technology for Humanity

Determined to develop as a corporation that offers new value for everyone everywhere through high-quality products and services . . .

. . . Citizen Systems is reinventing itself.

## “Leading Technology for Humanity”

— Our corporate slogan expresses the aspirations of every Citizen Systems employee, each of whom is striving to realize a shared ideal.

We have superior miniaturization and refinement technologies cultivated by members of the Citizen Group.

We have a desire to design products that are easy for anyone to use.

And we have the skills required to pursue quality at every turn, combined with an unswerving commitment to manufacturing.

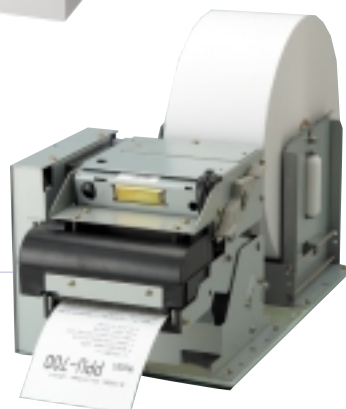
We draw on these strengths to manufacture more advanced products for a wide range of fields, including health information management, information/entertainment and business information equipment.

Our aim is to achieve advances in convenience, enabling people to lead more abundant and comfortable lives anytime and anywhere — and to disseminate people-friendly technologies and services that help individuals lead healthier, more fulfilling lives.

## “Leading Technology for Humanity”

— We continue to take up new challenges with an eye on our customers and with these words in mind.

Citizen Systems Co., Ltd.



# A full range of compact high-performance printers designed to satisfy your most rigorous requirements

Reliability, value and performance are three key strengths of CITIZEN POS printers and OEM mechanisms. In today's challenging business environment, you need to leverage every possible advantage, and the ability to select from one of the industry's widest ranges of dot matrix and thermal printers and mechanisms gives you this competitive edge. Standard features include semi-automatic paper loading, compact design and reliable high-speed performance. Convenient options such as winders, auto-cutters and multicolor ribbons are also available. Rely on the resources and reputation of a worldwide industry leader to meet your POS printer and OEM mechanism requirements. Get the CITIZEN advantage.



Citizen Systems engages actively in the field of Universal Design, introducing products to enthusiastic consumer response one after another and moving positively to open up new markets.

The design of products and environments to be usable by all people, to the greatest extent possible, without the need for adaptation or specialized design.

- Ron Mace -

## 7 Principles

- |  |                          |
|--|--------------------------|
| 1<br>Equitable Use                       | 2<br>Flexibility in Use  |
| 3<br>Simple and Intuitive Use            | 4<br>Equitable Use       |
| 5<br>Equitable Use                       | 6<br>Low Physical Effort |
| 7<br>Size and Space for Approach and Use |                          |

## Line Thermal Printers

- 3 CT-S300
- 5 CT-S2000
- 7 CBM1000 Type II
- 8 CT-S4000
- 9 CT-S280  
CBM-270L
- 10 CBM-262 Type II
- 11 CBM-291 / 293
- 12 CMP-10

## Line Thermal Kiosk Units

- 19 PPU-700 / PHU-331
- 20 PPU-231 / PHU-131

## Line Thermal Printer Mechanisms

- 23 LT-286
- 24 MLT-288 / 289
- 25 MLT-388 / 389
- 26 LT2220 / 2320
- 27 LT2221 / 2321
- 28 LT-281 / 481
- 29 LT-483 / LT1322
- 30

## Application / Feature

- 22 Accessories / Options
- 37
- |
- 40

## Impact Dot Matrix Printers

- 13 CD-S500 / 501 / 503
- 15 iDP3550 / 3551
- 16 iDP3420 / 3421 / 3423
- 17 CBM-910 Type II / CBM-920
- 18 CBM-820

## Impact Dot Matrix Printer Mechanisms

- 31 MD-910 / 911
- 32 DP-320 / 330  
DP-420 / 430
- 33 DP-555 / 575  
DP-61X SERIES
- 34 DP-654 / 657  
DP-62X SERIES
- 35 DP-630  
DP-730

# Line Thermal Printers

Citizen Systems is responding proactively to the world's need for thermal printers, beginning with printers for POS, ECR and kiosk applications. Positive characteristics such as quiet operation, high-speed printing and superior high-density barcode printing make thermal printers ideal for wide-ranging applications, and CITIZEN printers are setting the standard for this vital printer segment.



Standard type



Available in black



Vertical solution

## CT-S300



- 100 mm/sec printing speed
- 80 / 58mm selectable paper width
- Easy paper loading
- Optional interface cards
- Built-in AC adapter
- Black mark function (option)
- Cash drawer kick-out
- Bitmap data registration (NV memory)
- Barcode printing
- ESC/POS compatibility
- Page mode
- Two color printing
- Smoothing font
- Easy customization by software
- Availability in white or black

### Applications

- Receipt
- Coupon
- Ticket
- Daily report
- Kitchen
- Delivery
- Barcode

#### Type Classification

CT-S300 R F 230 S M1

1) 2) 3) 4) 5) 6)

1) Model type  
CT-S300

2) Interface  
P: Parallel  
R: Serial RS-232C  
U: USB

3) Character set  
F: International

4) Power source  
120: AC 120V  
230: AC 230V

5) Power supply  
S: Built-in AC adapter  
A: External AC adapter  
D: No AC adapter

## Easy paper loading

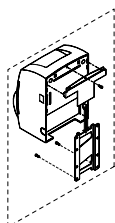


Just drop paper in and close the top cover.

## Accessories

## Wall mount kit

## WALL-CTS300



\*Available for external AC adapter type only.

## Splash proof cover

## SPROOF-CTS300



\*Available for built-in AC adapter type only.

## Interface cards



Parallel



Serial



USB

## Customization software for easy customization



Specifications	
Printing method	Line thermal dot printing
Printing width	80mm paper: 72mm/576 dots 58mm paper: 48mm/384 dots
Dot pitch	8 × 8 dots/mm (203 dpi × 203 dpi)
Printing speed	Max. 100mm/sec (23.6 lines/sec)
Number of columns	80mm paper: Font A-48/42 columns / Font B-64/56 columns / Font C-72/63 columns 58mm paper: Font A-32/30 columns / Font B-42/40 columns / Font C-48/45 columns
Character size (W × H)	Font A: 1.25 × 3.00mm (12 × 24 dots) / Font B: 0.88 × 2.13mm (9 × 17 dots) Font C: 0.88 × 2.00mm (8 × 16 dots)
Character table	Code page 437, 850, 852, 857, 858, 860, 863, 864, 865, 866, Katakana, WPC1252, Thai code 18
Barcode type	UPC-A/E, JAN-13/8, ITF, Code 39, Code 128, CODABAR, Code 93
Line spacing	4.23mm (1/6 inch); can be set by a command.
Paper	Thermal paper roll, 80 or 58mm (W) × ø83mm
Interface	Parallel: IEEE 1284 and Centronics compliant, Serial (RS-232C), USB
Input buffer	4K bytes / 45 bytes
NV user memory	256K bytes
Drawer kick-out	2 Drawers
Power supply	DC 24V ± 7%
AC adapter	Input: AC 100-230V, 50/60 Hz, 120VA Output: DC 24V, 2A
Weight	Approx. 1.2kg
Dimensions (W × D × H)	Standard type: 145 × 195 × 159mm External AC adapter type: 145 × 195 × 121mm
Operating environment	5 ~ 40°C, 35 ~ 85% RH
Storage environment	-20 ~ 60°C, 10 ~ 90% RH
Reliability	Thermal head: 100,000,000 pulses or 100km Auto cutter: 1,000,000 cuts
EMC and safety standards	UL, C-UL, FCC Class A, TUV-GS, CE marking

## 6) Blackmark sensor (Option)

None: No sensor  
M1: Left side  
M2: Right side

# Line Thermal Printers

**NEW**



Standard type



Available in black



Label type

## CT-S2000



Paper Roll  
82.5  
mm

Paper Roll  
80  
mm

Paper Roll  
60  
mm

Paper Roll  
58  
mm

- 220 mm/sec high-speed printing
- 82.5 / 80 / 60 / 58mm selectable paper width
- Front paper exit
- Water proof design(Conform to IPX1)
- One touch cover open and Easy paper loading
- Larger paper roll capability as  $\phi$  102 mm
- Optional interface cards
- USB is default in addition to Serial or Parallel interface board
- Built-in AC adapter
- Label/Black mark function(option)
- Cash drawer kick-out
- Bitmap data registration(NV memory)
- Barcode printing
- ESC/POS compatibility
- Page mode
- Two color printing
- Smoothing font
- Easy customization by software
- Availability in white or black or dark grey(option)

### Applications

- Receipt
- Coupon
- Ticket
- Daily report
- Kitchen
- Delivery
- Barcode

#### Type Classification

**CT-S2000 DC RS E BK L**

1) 2) 3) 4) 5) 6)

1) Model type  
CT-S2000

2) Power Supply  
None: AC power type  
DC: DC power supply type

3) Interface  
PA: Parallere + USB  
RS: Serial + USB  
UB: USB only (Option)

4) Character set  
U: USA  
E: Europe

5) Body case color  
WH: Cool white  
BK: Black  
GR: Dark Grey (Option)

## Easy paper loading



Just drop paper in and close the top cover.

## Accessories

## Interface cards



Parallel



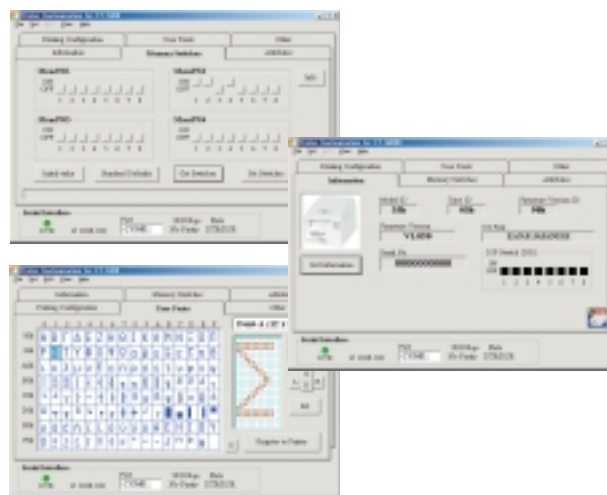
Serial



USB

USB is default in addition to Serial or Parallel interface board

## Customization software for easy customization



Specifications	
Printing method	Line thermal dot printing
Printing width	82.5 mm paper: 80mm / 640 dots 80 mm paper: 72mm / 576 dots 60 mm paper: 54.5mm / 436 dots 58 mm paper: 54mm / 432 dots
Dot pitch	8 x 8 dots / mm (203 dpi x 203 dpi)
Printing speed	Max. 220 mm/sec (52 lines/sec)
Number of columns	82.5 mm paper: Font A - 53 columns / Font B - 71 columns / Font C - 80 columns 80 mm paper: Font A - 48 columns / Font B - 64 columns / Font C - 72 columns 60 mm paper: Font A - 36 columns / Font B - 48 columns / Font C - 54 columns 58 mm paper: Font A - 35 columns / Font B - 46 columns / Font C - 52 columns
Character size (W x H)	Font A: 1.25 x 3.0 mm (12 x 24 dots) / Font B: 0.88 x 3.00mm (9 x 24 dots) / Font C: 0.88 x 2.00(8 x 16 dots)
Character table	Code page 437, 850, 852, 857, 858, 860, 863, 864, 865, 866, Katakana, WPC1252, Thai code 18
Barcode type	UPC-A / UPC-E / JAN(EAN)-13/8 / ITF / Code 39 / CODE 128 / CODABAR/ Code 93
Line spacing	4.23mm (1/6 inch), can be set by command
Paper	82.5/80/60/58 mm x $\phi$ 102 mm
Interface	Parallel(IEEE1284 and Centronics compliant)+USB, Serial(RS-232C compliant)+USB
Input buffer	4K bytes / 45 bytes
NV user memory	384K bytes
Drawer kick-out	2 drawers
Power supply	DC 24V $\pm$ 7%
AC adapter	Input: AC100-240V, 50/60Hz, 150VA Output: DC24V, 2A
Weight	AC power type: 2.0kg / DC power type: 1.8kg
Dimensions (W x D x H)	147 x 207 x 147 mm
Operating environment	5 ~ 40°C, 10 ~ 90% RH (No condensation)
Storage environment	-20 ~ 60°C, 10 ~ 90% RH (No condensation)
Reliability	Main unit: 20,000,000 lines, Thermal head: 200,000,000 pulse or 150 km, Auto cutter: 2,000,000 cuts
EMC and safety standard	UL, C-UL, FCC class A, TUV-GS, CE marking

## 6) Label/Black mark

None: Standard(No sensor type)  
L: Label sensor type  
M: Black mark sensor type

# Line Thermal Printers



Standard type

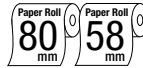


Available in black



Label type

## CBM1000 Type II



- 150 mm/sec printing speed
- 80 / 58mm selectable paper width
- Front paper exit
- Water proof design
- Easy paper loading
- Optional interface cards
- Built-in AC adapter
- Label/Black mark function(option)
- Cash drawer kick-out
- Bitmap data registration (NV memory)
- Barcode printing
- ESC/POS compatibility
- Page mode
- Two color printing
- Smoothing font
- Easy customization by software
- Availability in white or black or dark grey(option)

### Easy paper loading



Drop paper in and close the cover.  
Then it's ready to print.

### Applications

- Receipt
- Coupon
- Ticket
- Daily report
- Kitchen
- Delivery
- Barcode

### Accessories

#### Interface cards



Parallel

Serial

USB

Ethernet

#### Rear cover



### Specifications

Printing method	Line thermal dot printing
Printing width	80mm paper: 72mm/576 dots 58mm paper: 54mm/432 dots
Dot pitch	8 × 8 dots/mm (203 dpi × 203 dpi)
Printing speed	Max. 150mm/sec (35.4 lines/sec)
Number of columns	80mm paper: Font A - 48/42 columns Font B / 64/56 columns 58mm paper: Font A - 36/30 columns Font B / 48/40 columns
Character size (W × H)	Font A: 1.25 × 3.00mm (12 × 24 dots) / Font B: 0.88 × 3.00mm (9 × 24 dots)
Character table	Code page 437, 850, 852, 857, 858, 860, 863, 865, 866, Katakana, WPC1252
Barcode type	UPC-A/E, JAN-13/8, ITF, Code 39, Code 128, CODABAR, Code 93
Line spacing	4.23mm (1/6 inch), can be set by a command
Paper	Thermal paper roll, 80 / 58mm (W) × ø83mm
Interface	Parallel: IEEE1284 and Centronics compliant Serial: RS-232C, USB, 10/100 Base-T
Input buffer	4K bytes / 72 bytes
NV bit map data area	256K bytes
Drawer kick-out	2 Drawers
Power supply	DC 24V ± 7%
AC adapter	Input: AC100-240V, 50/60Hz, 120VA Output: DC24V, 1.9A
Weight	Standard type: 2.0kg/Compact type: 1.4kg
Dimensions (W × D × H)	Standard type: 145 × 190 × 152mm External AC adapter type: 145 × 190 × 114mm
Operating environment	5 ~ 40°C, 35 ~ 85% RH
Storage environment	-20 ~ 60°C, 10 ~ 90% RH
Reliability	Thermal head: 100,000,000 pulses or 100km Auto cutter: 1,000,000 cuts
EMC and safety standard	UL, C-UL, FCC class A, TUV-GS, CE marking

### Type Classification

CBM1000II R F 230 T L

1)

2)

3)

4)

5)

6)

1) Model type  
CBM1000 Type II

2) Interface  
P: Parallel  
R: Serial RS-232C

3) Character set  
F: International

4) Power source  
120: AC 120V  
230: AC 230V

5) Power supply  
T: Built-in AC adapter  
A: External AC adapter  
D: No AC adapter

6) Label/Blackmark sensor  
None: No sensor  
L: Label/Blackmark type





Standard type

Vertical solution

### Applications

- Receipt
  - Coupon
  - Ticket
  - Daily report
- Kitchen
  - Delivery slip
  - Barcode

### Accessories

#### Interface cards



Parallel



Serial

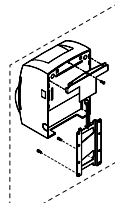


USB

USB is default in addition to Serial or Parallel interface board

#### Wall mount kit

### WALL-CTS300



\*Available for external AC adapter type only.

#### Customization software for easy customization



# CT-S4000



- 150 mm/sec high-speed printing
- 112 / 82.5 / 80mm selectable paper width
- Easy paper loading
- Larger paper roll capability as  $\phi$  102 mm
- Optional interface cards
- SB is default in addition to Serial or Parallel interface board
- Built-in AC adapter
- Label/Black mark function (option)
- Bitmap data registration (NV memory)
- Cash drawer kick-out
- Barcode printing
- ESC/POS compatibility
- Page mode
- Availability in black or white
- Two color printing
- Smoothing font
- Availability in white or black

### Specifications

Printing method	Line thermal dot printing
Printing width	112 mm paper: 104mm/832 dots 82.5 mm paper: 82.5m/660 dots 80 mm paper: 72mm/576 dots
Dot pitch	8 X 8 dots / mm (203 dpi X 203 dpi)
Printing speed	Max. 150 mm/sec (35.4 lines/sec)
Number of columns	112 mm paper: Font A - 69 columns / Font B - 92 columns / Font C - 104 columns 82.5 mm paper: Font A - 55 columns / Font B - 73 columns / Font C - 82 columns 80 mm paper: Font A - 48 columns Font B - 64 columns Font C - 72 columns
Character size (W x H)	Font A: 1.25 x 3.0 mm (12 x 24 dots) / Font B: 0.88 x 2.13mm (9 x 17 dots) / Font C: 0.88 x 2.00 (8 x 16 dots)
Character table	Code page 437, 850, 852, 857, 858, 860, 863, 864, 865, 866, Katakana, WPC1252, Thai code 18
Barcode type	UPC-A / UPC-E / JAN(EAN)-13/8 / ITF / Code 39 / CODE 128 / CODABAR/ Code 93
Line spacing	4.23mm (1/6 inch), can be set by command
Paper	112 / 82.5 / 80 mm x $\phi$ 102 mm
Interface	Parallel(IEEE1284 and Centronics compliant)+USB, Serial(RS-232C compliant)+USB
Input buffer	4K bytes / 45 bytes
NV user memory	384K bytes
Drawer kick-out	2 drawers
Power supply	DC 24V $\pm$ 7%
AC adapter	Input: AC100-240V, 50/60Hz, 150VA / Output: DC24V, 2A
Weight	AC power type: *. *kg / DC power type: *. *kg
Dimensions(W x D x H)	180 x 213 x 148 mm
Operating environment	5 ~ 45°C, 10 ~ 90% RH (No condensation)
Storage environment	-10 ~ 60°C, 10 ~ 90% RH (No condensation)
Reliability	Main unit: 20,000,000 lines, Thermal head: 100,000,000 pulse or 100 km, Auto cutter: 1,000,000 cuts
EMC and safety standard	UL, C-UL, FCC class A, TUV-GS, CE marking

### Easy paper loading



Just drop paper in and close the top cover.

### Type Classification

CT-S4000 DC RS E BK L

1) 2) 3) 4) 5) 6)

1) Model type  
CT-S4000

2) Power supply  
None: AC power type  
DC: DC power supply type

3) Interface  
PA: Parallel + USB  
RS: Serial + USB  
UB: USB (only Option)

4) Character set  
U: USA  
E: Europe

5) Body case color  
WH: Cool white  
BK: Black

6) Label/Black mark  
None: Standard(No sensor type)  
L: Label sensor type  
M: Black mark sensor type

# Line Thermal Printers



CT-S280



CBM-270L (Label type)

## Applications

- Receipt
- Kitchen
- Coupon
- Delivery
- Ticket
- Banking
- Daily report
- Medical equipment

## Easy paper loading

### CT-S280



Just drop paper in and close the top cover.

## Mechanism

### LT-286 for CBM-270L



# CT-S280/CBM-270L



## CT-S280

- 80 mm/sec speed printing
- 58mm paper width
- Easy paper loading
- Memory switch function
- Bitmap data registration (NV memory)
- Barcode printing
- ESC/POS compatibility
- Page mode
- Two color printing
- Wall mount installation



## CBM-270L Label model

- 50 mm/sec printing speed
- Paper auto loading
- 2K bytes input buffer

## Specifications

Model	CT-S280	CBM-270L
Printing method	Line thermal dot printing	
Printing width	48mm (384 dots/line)	
Printing speed	Max. 80 mm/sec (18.9 lines/sec)	Max. 50mm/sec, 400 dot-line/sec (11 lines/sec)
Number of columns	Font A: 32 columns / Font B: 42 columns / Font C: 48 columns	Font A: 32 columns. Font B: 42 columns. Font
Character size (W × H)	Font A: 1.25 x 3.0 mm (12 x 24 dots) / Font B: 0.88 x 3.00mm (9 x 24 dots) / Font C: 0.88 x 2.00 (8 x 16 dots)	Font A: 1.25 × 3.00 mm (12 × 24 dots) Font B: 0.88 × 3.00 mm (9 × 24 dots)
Character table	Code page 437, 860, 862, 867, 858, 860, 863, 864, 865, 866, Katakana, WPC1252, Thai code 18	Code page 437
Dot pitch	8 × 8 dots/mm(203dpi × 203dpi)	
Barcode type	UPC-A/UPC-E/JAN/EAN-13B/ITF/Code 39/CODE 128/COB4849/Code 93	UPC-A/E, JAN (EAN), ITF, COB4849, CODE93, CODE128
Line spacing	4.23mm (1/6 inch), can be set by a command (Min. 1/203 inch)	
Paper	Size: 58 mm x φ 83mm, Thickness: 0.065-0.075mm	Thermal roll paper: 58 × φ 83mm (max.), Thickness: 0.065-0.075mm Thermal label paper: 58 × φ 83mm (max.), Thickness: 0.150mm(max.) Label width: 56mm (max.) Label length: 25mm (min.)
Interface	Parallel(IEEE1284 and Centronics compliant), Serial(RS-232C compliant), USB	Parallel: Centronics, Serial: RS-232C
Input buffer	4K bytes / 45 bytes	2K bytes
NV user memory	256K bytes	—
Power supply	DC8.5V	DC 7.2V
AC adapter	Input: AC100-240V, Output: DC8.5V	Input: AC100-240V(274V), Output: DC7.2V 2A(Peak 6A)
Weight	Printer: Approx.430g, AC adapter: Approx.240g	Printer: Approx. 600g AC adapter: Approx.350g
Dimensions (W × D × H)	106 × 170 × 116.5mm	106 × 184 × 110mm
Operating temp.range	0 ~ 40°C, 10 ~ 85% RH (No condensation)	
Storage temp.range	-20 ~ 60°C, 5 ~ 90% RH (No condensation)	
Reliability	Thermal head: 100,000,000 pulse or 50 km	Thermal head: 50,000,000 pulses or 50km
EMC and safety standards	UL, C-UL, FCC class A, TUV-GS, CE marking	

## Type Classification

CT-S280-RS-E

1) 2) 3)

1) Model type  
CT-S280  
3) Region  
(Character + power cord)  
E: Europe  
U: North America  
2) Interface  
PA: Parallel  
RS: Serial RS-232C  
UB: USB

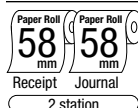
CBM-270 R F 230-L

1) 2) 3) 4) 5)

1) Model type  
CBM-270  
2) Interface  
P: Parallel  
R: Serial RS-232C  
3) Character set  
F: International  
4) Power source  
120: 120 V  
230: 230 V  
5) Label sensor  
L: Label type



## CBM-262 Type II



- Two station printing  
(Receipt and journal with paper winder)
- 80 mm/sec printing speed
- Paper auto loading
- Barcode printing
- Cash drawer kick-out
- ESC/POS compatibility
- Page mode
- Auto cutter (Receipt only)
- Smoothing font

### Applications

- Receipt
- Journal
- Coupon
- Ticket
- Daily report
- Kitchen
- Delivery
- Barcode

### Auto Cutter

#### ACS-220



### Mechanism

#### LT-289 (Receipt) LT-289D (Journal)



### Specifications

Printing method	Line thermal dot printing
Printing width	54mm, 432 dots
Printing speed	Max. 80mm/sec, 640 dot-line/sec (Approx. 19 lines/sec)
Number of columns	Font A: 36 columns Font B: 48 columns
Character size (W × H)	Font A: 1.25 × 3.00mm (12 × 24 dots) Font B: 0.88 × 2.13mm (9 × 17 dots)
Dot pitch	8 dots/mm (Horizontal/Vertical)
Barcode type	UPC-A/E, JAN-13/8, Code 39, ITF, CODABAR, Code 93, Code 128
Line spacing	4.23mm (1/6 inch), can be set by a command (Min. 1/203 inch)
Paper	Thermal paper roll, 58mm × φ 83mm
Interface	Parallel: Centronics Serial: RS-232C
Input buffer	8K bytes
Power supply	DC 24V
AC adapter	Input: AC 100-240V, 50/60Hz, 120V, Output: DC 24V, 1.8A
Weight	Main unit: 2.3kg, AC adapter: 0.4kg
Dimensions (W × D × H)	128 × 359.5 × 162.5mm
Operating temp. range	5 ~ 40°C
Storage temp. range	-10 ~ 60°C
Reliability	Thermal head: 50,000,000 pulses or 50km Auto cutter: 300,000 cuts
EMC and safety standards	UL, C-UL, FCC class A, TUV-GS, CE marking

### Type Classification

CBM-262II R F 230

1)

2) 3) 4)

1) Model type  
CBM-262 Type II

2) Interface  
P: Parallel  
R: Serial RS-232C

3) Character set  
F: International

4) Power source  
120: AC 120 V  
230: AC 230 V





Standard type



Mag stripe card reader type



Wireless communication using IrDA



Long battery life using Li-ion battery



Belt clip available as standard

### Easy paper loading



Just drop a paper in and close the top cover.

### Mechanism

MLT-289



### Accessories

#### Serial interface cable (option)

CA10-01



#### Softcase (option)

SC10-01



# CMP-10/CMP-10BT



- Palm size
- Easy paper loading
- IrDA and serial interface (Cable is option)
- Bluetooth type available
- Li-ion battery (Large capacity)
- ESC/POS compatibility
- Auto power off
- Low battery monitoring
- Belt clip
- 40 or 50 mm diameter cover
- Internal charging circuit
- Mag stripe card reader type available

### Applications

- Mobile
- Receipt
- Ticket
- Credit/ Debit
- Daily report
- Delivery slip
- Barcode
- Taxi meter

### Specifications

Printing method	Line thermal dot printing
Printing width	58mm/ 384 dots
Dot pitch	8 × 8 dots/mm (203dpi × 203dpi)
Printing speed	Max.50mm/sec
Number of columns	Font A: 32 columns: 12 × 24 dots Font B: 42 columns: 9 × 16 dots
Character size (W × H)	Font A: 1.25 × 3.00mm (12 × 24 dots) Font B: 0.88 × 2.13mm (9 × 16 dots)
Character table	ASCII, WPC1252 (Other code page data are ready to load)
Barcode type	UPC-A/E, JAN-13/8, Code 39, ITF, CODABAR, Code 93, Code 128
Line spacing	4.23mm (1/6 inch), Software selectable
Paper	Thermal paper roll width: 58mm, Thickness: 60-65 μm, Outer diameter: φ 50 or 40 (option), Core diameter: Min.8mm
Interface	IrDA Version 1.0 RS-232C with optional special cable (1200-115200 bps), Bluetooth (option)
Input buffer	64K bytes
Sensor & Error monitoring	Paper end, Cover-open, Low battery, Head overhead
Mag stripe card reader	Track 1, 2, 3
Power supply	Li-ion battery, 2000mAh AC adapter only for charging (Output DC9V, 2A)
Battery	40,000 print lines per charge Maximum recharge time: 3 hours
Auto power off	1-60min. (default 10min.) Software selectable
Weight	Approx. 370g (with 50mm dia cover + card reader)
Dimensions (W × D × H)	116 × 104 × 63mm (with 50mm dia cover + card reader)
Operating environment	5 ~ 40°C
Storage environment	-20 ~ 60°C
Reliability	Thermal head: 100,000 pulses or 50km Mechanism (MCFB) : 15,000,000 lines
EMC and safety standards	UL, C-UL, TUV, GS, CE Marking, FCC Class B, VCCI Class B

The Bluetooth trademarks are owned by Bluetooth SIG, Inc. ©Bluetooth SIG, Inc. 2004.

### Type Classification

CMP-10 E 5 M

1)

2) 3) 4)

1) Model type  
CMP-10: Standard type  
CMP-10BT: Bluetooth type

2) Power source  
U: AC 120V  
E: AC 230V

3) Diameter of paper roll in stock (Paper cover)  
4: 40mm  
5: 50mm

4) Mag stripe card reader  
None: Standard  
M: Mag stripe card reader type

# Impact Dot Matrix Printers

A standard among the expanding variety of printers, dot impact printers remain the top choice for a variety of applications. Their special strength in high-speed, plain-paper printing makes dot impact printers essential for check and validation applications, among others. Because CITIZEN brings all its precision machinery expertise to bear in the development of dot impact printers, it is perfectly positioned to meet every customer need.



CD-S500S  
(Standard type)



CD-S501S  
(With auto cutter type)  
Available in Black



CD-S503S  
(With auto  
cutter/winder type)



Vertical solution

## CD-S500/501/503



- 5.0 lines/sec high-speed printing
- 76.2 / 69.5 / 57.5mm selectable paper width
- Easy paper loading
- Logic-seeking control
- Optional interface cards
- Built-in AC adapter
- Black mark function (option)
- Cash drawer kick-out
- Memory switch function
- Build-in buzzer
- Bitmap data registration (NV memory)
- ESC/POS compatibility
- Page mode
- Two color printing
- 3 PLY paper printing capability
- Easy customization by software
- Availability in white or black
- High reliability and durability

### Applications

- Receipt
- Journal
- Ticket
- Daily report
- Kitchen
- Delivery

### Type Classification

CD-S500 S RS E WH M1

1) 2) 3) 4) 5) 6)

#### 1) Model type

CD-S500: Standard type  
CD-S501: With auto cutter type  
CD-S503: With auto cutter and winder type

#### 2) Power source type

S: Built-in AC adapter type

#### 3) Interface

PA: Parallel IEEE1284  
RS: Serial RS-232C  
UB: USB

## Easy paper loading



Just drop paper in and close the top cover.

## Accessories

- Ink ribbon: IR-31B (Black)
- Ink ribbon: IR-31P (Purple)
- Ink ribbon: IR-31RB (Red/Black)



## Accessories

## Wall mount kit

## WALL-CTS300



## Interface cards



Parallel



Serial



USB

## Customization software for easy customization



## Specifications

Printing method	Serial dot impact (Logic-seeking control)
Printing direction	Bi-directional
Font	Font A: 7 × 9, 9 × 9 matrix
Number of columns	76.2mm paper : Font A-40/42 columns / Font B-33/35 columns 69.5mm paper : Font A-36/30 columns / Font B-38/31 columns (69.5mm paper width) 57.5mm paper : Font A-30/25 columns / Font B-31/26 columns (57.5mm paper width)
Printing speed	5.0 lines/sec at 76.2mm width+40 columns 5.4 lines/sec at 69.5mm width+36 columns 6.0 lines/sec at 57.5mm width+30 columns
Character size (W × H)	Font A: 1.25 × 3.12mm(7 × 9 dots), Font B: 1.57 × 3.12mm(9 × 9 dots)
Character set	Alphanumeric, International, Code page 437,850,860,863,865,852,866,857,858, WPC1252
Line spacing	4.23mm
Line feed speed	40 lines/sec
Paper feed method	Friction
Paper	76.2/69.5/57.5±0.5mm × φ 83mm Thickness:0.06-0.085mm(1 Ply) 1Ply/2Ply/3Ply copy paper 0.05 - 0.14mm(Copy paper cut) 0.05 - 0.20mm(Copy paper print)
Interface	Parallel: IEEE1284 and Centronics compliant or Serial:RS-232C or USB
Input buffer	4K/40 bytes
NV bit map data area	128K bytes
Drawer kick-out	2 drawers
Ink ribbon	Red/Black, Black, Purple, Cassette
Power supply	DC24V±7%
AC adapter	Input:AC 100-230V,1.3A Output:DC24V±5%
Weight	Approx.2.8kg(Standard type) 3.2kg(With auto cutter/winder type)
Dimensions (W × D × H)	156 × 247.7 × 174.4mm(Standard type) 156 × 277.7 × 197.8mm(With auto cutter/winder type)
Operating environment	0 - 50°C, 10 - 90% RH
Storage environment	-20 - 70°C, 5 - 90% RH
Reliability	Printer:MCBF 7.5 million lines Print Head:150 million characters Auto cutter:1,000,000 cuts
EMC and Safety standards	UL, C-UL, FCC classA, TUV-GS, CE marking

## 4) Region(Characters + power cord)

E: Europe  
U: North America

## 5) Case Color

WH: Cool white  
BK: Black

## 6) Black mark sensor

None: No sensor  
M1: Left sensor for paper front  
M2: Right sensor for paper back  
M3: Left sensor for paper front  
M4: Right sensor for paper back

# Impact Dot Matrix Printers



iDP3550F  
(Standard Type)



iDP3551F  
(With auto cutter type)



iDP3550P+35PB-1 Paper basket



iDP3551F+AW-3 Winder

## Auto Cutter

AC-134

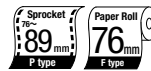


## Mechanism

DP-650 Series



## iDP3550/3551



- Paper auto loading
- Compatibility (CBM, ESC/POS, Star)
- 6K bytes input buffer
- Auto cutter (iDP3551)
- Auto winder option (AW-3)
- Cash drawer kick-out
- Pinfeed version (iDP3550P)
- Two color printing

## Applications

- Receipt
- Journal
- Ticket
- Label
- Credit/Debit
- Daily report
- Kitchen
- Delivery

## Accessories

- Winder: AW-3
- Paper basket: 35PB-1
- Ink ribbon: IR-61B (Black)
- Ink ribbon: IR-61P (Purple)
- Ink ribbon: IR-61RB (Red/Black)

## Specifications

Model	iDP3550F	iDP3550P	iDP3551F
Printing method	Serial impact dot matrix		
Printing direction	Bidirectional		
Font	7 × 9 matrix		
Number of columns	40 columns		
Printing speed	3.6 lines/sec (DP-654), 3.0 lines/sec (DP-657)		
Character size (W × H)	1.36 × 2.4mm (DP-654), 1.20 × 2.4mm (DP-657)		
Character set	Alphanumeric, International, Code page 437, 850, 860, 863, 865, 852, 866, 867, WPC1252		
Line spacing	4.23mm, (DP-654), 2.82mm (DP-657)		
Character pitch	1.59mm (DP-654), 1.46mm (DP-657)		
Line feed speed	18 lines/sec (DP-654), 15 lines (DP-657)		
Paper feed method	Friction	Sprocket	Friction
Paper	76mm roll paper	76 ~ 89mm fanfold paper	76mm roll paper
Interface	Parallel: Centronics, Serial: RS-232C		
Input buffer	6K bytes		
Paper end sensor	Equipped	None	Equipped
Paper cutter	None		Partial/Full cut
Paper winder	AW-3 (Option)	None	AW-3 (Option)
Cash drawer kick-out	2 drawers		
Ink ribbon	Red/Black, Cassette		
Power supply	AC 100/120/230V		
Power consumption	30W		
Weight	2.8kg		3.0kg
Dimensions (W × D × H)	160 × 184 × 173mm		160 × 184 × 199.3mm
Operating temp. range	0 ~ 40°C		
Storage temp. range	-20 ~ 60°C		
Reliability	Printer: MCBF 4.0 million lines Print head: 80 million characters		Printer: MCBF 4.0 million lines, Print head: 80 million characters, Cutter: 500,000 cuts
EMC and safety standards	UL, C-UL, FCC class A, TUV-GS, CE marking		

## Type Classification

iDP3551 F 40 R F 230 C

1) 2) 3) 4) 5) 6) 7)

- 1) Model type  
iDP3550: No cutter  
iDP3551: With cutter
- 2) Paper  
F: Friction feed
- 3) Column capacity  
40: 40 columns
- 4) Interface  
P: Parallel  
R: Serial RS-232C
- 5) Character set  
F: International
- 6) Power source  
120: AC 120 V  
230: AC 230 V
- 7) Mode  
C: Character  
G: Graphic





iDP3420  
(Standard type)



iDP3421  
(With auto cutter type)



iDP3423  
(With auto cutter + Auto winder type)

## iDP3420/3421/3423



- Auto cutter (iDP3421/3423)
- Auto winder (iDP3423)
- 6K bytes memory buffer
- Graphic printing
- Two color printing
- Cash drawer kick-out
- Compatibility (CBM, ESC/POS, Star)
- Paper auto loading

### Applications

- Receipt
- Journal
- Ticket
- Credit/Debit
- Delay report
- Kitchen
- Delivery

### Accessories

- Ink ribbon: IR-41B (Black)
- Ink ribbon: IR-41P (Purple)
- Ink ribbon: IR-41RB (Red/Black)

### Specifications

Model	iDP3420	iDP3421	iDP3423
Printing method	Serial impact dot matrix		
Printing direction	Bidirectional		
Font	7 × 9 matrix		
Number of columns	40/42 columns (Selectable by Dip switch)		
Printing speed	Approx. 3.0 line/sec		
Character size (W × H)	1.31 × 3.1mm		
Character set	Alphanumeric, International, Code page 437, 850, 860, 863, 865, 852, 866, 857, Windows code		
Line spacing	4.23mm (1/6 inch) or 2.82mm (1/9 inch) Min. 1.41mm (1/18inch)		
Paper	76mm Roll paper		
Interface	Parallel: Centronics, Serial: RS-232C		
Input buffer	6K bytes / 256 bytes		
Paper end sensor	Equipped		
Paper near end sensor	Equipped		
Paper cutter	None	Equipped	Equipped
Paper winder	None	None	Equipped
Cash drawer kick-out	2 drawers		
Ink ribbon	Red/Black, or Black (CBM Ink ribbon cassette)		
Power supply	AC 100/120/230V		
Power consumption	30W (During printing)		
Weight	2.4kg	2.6kg	2.8kg
Dimensions (W × D × H)	164 × 248 × 140mm		164 × 280 × 183mm
Operating environment	0 ~ 40°C, 35 ~ 85% RH		
Storage environment	-20 ~ 60°C, 10 ~ 90% RH		
Reliability	Printer: MCBF 2.5 million lines Print head: 80 million characters	Printer: MCBF 2.5 million lines Print head: 80 million characters Auto cutter: 500,000 cuts	Printer: MCBF 2.5 million lines Print head: 80 million characters Auto cutter: 500,000 cuts
EMC and safety standards	UL, C-UL, FCC class A, TUV-GS, CE marking		

### Auto Cutter

#### ACS-234



### Mechanism

#### DP-430



### Type Classification

## iDP3420 R F 230

1) 2) 3) 4)

#### 1) Model type

iDP3420: Standard type  
iDP3421: With auto cutter type  
iDP3423: With auto cutter  
and winder type

#### 2) Interface

P: Parallel  
R: Serial RS-232C

#### 3) Character set

F: International

#### 4) Power source

120: AC 120 V  
230: AC 230 V



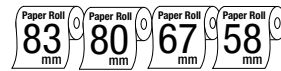


# Line Thermal Kiosk Units



Complete unit  
PPU-700/PHU-331  
\*The bottom plate is not included.

## PPU-700/PHU-331

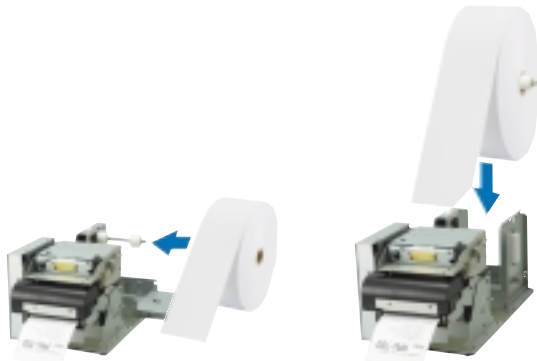


- 150 mm/sec high-speed printing
- 83 / 80 / 67 / 58mm selectable paper width
- Easy paper handling
- Optional interface cards
- Presenter unit incorporated
- Label/Black mark function(option)
- Bitmap data registration (NV memory)
- Barcode printing
- Page mode
- Two color printing
- Smoothing font
- Easy customization by software
- Large roll paper diameter up to 203mm (PHU-331/332)

### Easy roll paper installation

PPU-700/PHU-331S

PPU-700/PHU-331T



### Accessories

#### Interface cards

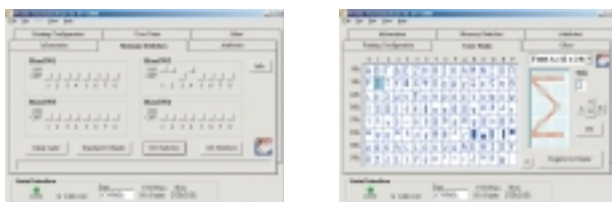


Parallel

Serial

USB

#### Customization software for easy customization



### Specifications

Printing method	Line thermal dot printing
Printing width	80mm/640 dots (paper width 83mm) 72mm/576 dots (paper width 80mm) 60mm/480 dots (paper width 67mm) 54mm/432 dots (paper width 58mm)
Dot pitch	8 × 8 dots/mm (203 dpi × 203 dpi)
Printing speed	Max. 150mm/sec, (35.4 lines/sec)
Number of columns	80mm paper: Font A - 48 columns Font B - 64 columns Font C - 72 columns
Character size (W × H)	1.25mm × 3.00mm (Font A: 12 × 24 dots) 0.88mm × 2.13mm (Font B: 9 × 17 dots) 0.88mm × 2.00mm (Font C: 8 × 16 dots)
Character table	Code page 437, 850, 852, 857, 858, 860, 863, 864, 865, 866, Katakana, WPC1252, Thai code 18
Barcode type	UPC-A/E, JAN-13/8, ITF, Code 39, Code 128, CODABAR, Code 93
Logo registration/print	Capable of registering user-defined characters print and logos into flash memory.
Line spacing	4.23mm (1/6 inch); can be set by a command.
Paper	Thermal paper roll: Paper width 58/67/80/83mm Paper roll diameter 203mm or less Paper thickness 0.065 - 0.150mm Core diameter: 12mm (paper thickness: 0.065 - 0.080mm) 25.4mm (paper thickness: 0.080 - 0.150mm) Recommended paper: TF-50KS-E-2D, TF-62KS-E (Nippon Paper industries)
Interface	Parallel: IEEE 1284 and Centronics compliant, Serial (RS-232C), or USB
Input buffer	4K bytes (72 bytes selectable with a DIP switch)
NV user memory	256K bytes
Sensors	Paper near end sensor (adjustable, for PHU series) (photo interrupter) Paper end sensor (mechanical switch) Black mark sensor (photo interrupter) Cover open sensor (mechanical switch) Presenter sensor (photo interrupter)
Power supply	24V ± 7%
Power consumption	100W
Weight	PPU700: 2.1 kg (incl. control PCB) PHU-331: 0.95 kg (excl. roll paper)
Dimensions (W × D × H)	PPU-700: 163.2 (incl. control PCB) × 176 × 143mm PHU-331: 114.4-138.9 × 122.6 × 137.2mm
Operating environment	5 ~ 40°C, 35 ~ 85% RH
Storage environment	-20 ~ 60°C, 10 ~ 90% RH
Reliability	Thermal head: 100,000,000 pulses or 100km Auto cutter: 1,000,000 cuts
EMC and safety standards	UL, C-UL, FCC Class A, TUV-GS, CE marking

### Type Classification

PPU-700 P U M1

1) 2) 3) 4)

- 1) Model type  
PPU-700
- 2) Interface  
P: Parallel  
R: Serial RS-232C
- 3) Character set  
U: US/Europe
- 4) Blackmark sensor (Option)  
None: No sensor  
M1: Left side of back  
M2: Right side of back  
(Open lever side)  
M3: Left side of front

PHU-331 S

1) 2) 3) 4)

- 1) Model type  
2) Length of roll paper shaft  
3: 58-82.5mm (Standard)  
2: 58mm fixed
- 3) Number of PNE sensor  
1: 1 sensor (Standard)  
2: 2 sensor
- 4) Roll paper installation  
S: From side (Standard)  
T: From top



# Printers Lineup

## Line Thermal Printers

### CT-S300

- 100mm/sec printing speed
- 80/58mm paper width
- Smallest size in its class
- Easy paper loading
- Built-in AC adapter
- Wall mount installation



▶ P3

### CT-S2000

- 220mm/sec high-speed printing
- 82.5/80/60/58mm paper width
- One touch cover open and easy paper loading
- Front paper exit and Water proof design
- Larger paper roll capability as  $\phi$  102mm
- Built-in AC adapter

▶ P5

### CBM1000 Type II

- 150mm/sec printing speed
- 80/58 mm paper width
- Easy paper loading
- Front paper exit
- Built-in AC adapter



▶ P7

### CT-S4000

- 150 mm/sec high-speed printing
- 112 mm paper width
- Easy paper loading
- Built-in AC adapter
- Wall mount installation

▶ P8

### CT-S280/CBM-270L

- 80 mm/sec printing speed
- 58mm paper width
- Easy paper loading
- Label paper printing(CBM-270L)
- Wall mount installation

▶ P9



### CBM-262 Type II

- 80mm/sec printing speed
- Two station printing
- Paper auto loading
- Auto cutter equipped(For receipt)
- Cash drawer kick-out

▶ P10



### CBM-291/293

- Panel mount installation
- 58mm(CBM-291)/80mm(CBM-293) paper width
- Compact design
- Auto cutter equipped
- Paper auto loading



▶ P11

### CMP-10/CMP-10BT

- Palm size
- 58 mm paper width
- Battery drive
- IrDA and serial interface
- Bluetooth type available

▶ P12



## Line Thermal Kiosk Units

### PPU-700/PHU-331

- 150mm/sec high speed printing
- 83/80/67/68 selectable paper width
- Thicker paper capability(0.065-0.150mm)
- Presenter unit incorporated
- Larger paper roll capability as  $\phi$  203mm(PHU-331)



▶ P19

### PPU-231/PHU-131

- 62.5mm/sec printing speed
- 80mm paper width
- Paper auto loading
- Presenter unit incorporated
- Larger paper roll capability as  $\phi$  203mm(PHU-131)

▶ P20



## Impact Dot Matrix Printers

### CD-S500/501/503

- 5.0 lines/sec high-speed printing
- 76/69/58mm paper width
- Easy paper loading
- Logic seeking control
- Wall mount installation



▶ P13

### iDP3550/3551

- 3.6lines/sec printing speed
- 76mm paper width
- Paper auto loading
- Auto cutter equipped(iDP3551)
- CBM, ESC/POS, STAR compatibility



▶ P15

### iDP3420/3421/3423

- 3.0lines/sec printing speed
- 76mm paper width
- Paper auto loading
- Auto cutter equipped(iDP3421)
- Auto cutter & Auto winder equipped(iDP3423)



▶ P16

### CBM-910 Type II

- Palm size and Light weight
- 58mm paper width
- Memory switch equipped
- CBM-910/iDP3110 emulation
- Bit image graphics printing



▶ P17

### CBM-920

- 58mm paper width
- Panel mount
- Paper auto loading
- Paper-end sensor



▶ P17

### CBM-820

- Slip paper printing
- Easy paper loading
- 3 ply paper printing capability
- Cash drawer kick-out



▶ P18

# Application / Feature

## Application Reference Table

### Line Thermal Printers

	CT-S300	CT-S2000	CBM1000II	CT-S4000	CBM-262II	CT-S280	CBM-270L	CBM-291 CBM-293	CMP-10	PPU-700 PHU-331	PPU-231 PHU-131
Receipt	●	●	●	●	●	●	●	●	●		
Journal					●						
Sales Slip											
Coupon	●	●	●	●	●	●	●	●	●		
Ticket	●	●	●	●	●	●	●	●	●	●	●
Label		Option	Option				●				
Credit / Debit							●		●		
Check											
Invoice											
Daily Report	●	●	●	●	●	●	●	●	●		
Kitchen	●	●	●	●	●	●	●	●			
Delivery	●	●	●	●	●	●	●	●	●		
Check Endorsement											
Barcode	●	●	●	●	●	●	●	●	●	●	●
Industrial machine								●		●	●
Portable									●		
Kiosk								●		●	●

### Impact Dot Matrix Printers

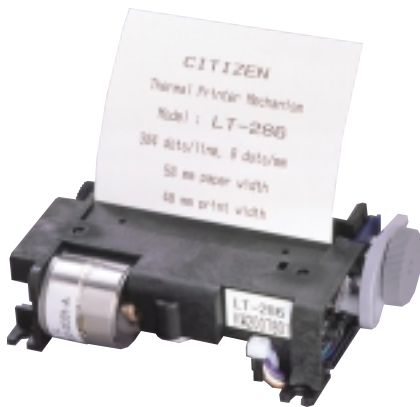
	CD-S500 CD-S501	CD-S503	iDP3550 iDP3551	iDP3420 iDP3421	iDP3423	CBM-910II	CBM-920	CBM-820
Receipt	●	●	●	●	●	●	●	●
Journal	●	●	●	●	●	●	●	
Sales Slip								●
Coupon								
Ticket	●	●	●	●	●	●	●	●
Label								
Credit / Debit	●	●	●	●	●	●	●	●
Check								●
Invoice								●
Daily Report	●	●	●	●	●	●	●	
Kitchen	●	●	●	●	●	●	●	
Delivery	●	●	●	●	●	●	●	●
Check Endorsement								●
Barcode								
Industrial machine							●	
Portable								
Kiosk								

## Feature Reference Table

Model name	Auto cutter	Presenter	Bar-code	Battery drive	Cash drawer kick-out	DC drive	ESC/POS	Internal power supply	Label printing	Page mode	Panel mount	Paper winder	Easy paper loading	Paper auto loading	Sprocket feed	Two station	Two color print	Validation print	80 columns
CT-S300	●		●		●		●	●		●			●				●		
CT-S2000	●		●		●		●	●	Option	●			●				●		
CBM1000II	●		●		●		●	●	Option	●			●				●		
CT-S4000	●		●		●		●		Option	●			●				●		●
CBM-262II	●		●		●		●			●		●			●				
CT-S280			●				●		●	●							●		
CBM-270L			●				●					●	●				●		
CBM-291	●		●			●	●				●								
CBM-293	●		●			●	●				●			●					
CMP-10			●	●			●			●			●						
PPU-700	●	●	●			●	●						●						
PPU-231	●	●	●			●	●						●						
CD-S500					●		●	●					●				●		
CD-S501	●				●		●	●					●				●		
CD-S503	●				●		●	●				●	●				●		
iDP3550F					●		●	●			Option		●				●		
iDP3550P					●		●	●					●	●			●		
iDP3551F	●				●		●	●			Option		●				●		
iDP3420					●		●	●					●				●		
iDP3421	●				●		●	●					●				●		
iDP3423	●				●		●	●				●	●				●		
CBM-910II						●							●						
CBM-920									●	●			●						
CBM-820					●		●											●	

# Line Thermal Printer Mechanisms

The many benefits of thermal printers include quiet operation, high-speed printing and excellent high-density barcode printing. Demand for thermal printers is rising steadily worldwide as POS, ECR and KIOSK applications proliferate. Citizen Systems provides a wide range of high-quality thermal printers to meet these expanding customer needs.



## LT-286



- 58mm paper width
- 5V operation
- 50mm/sec printing speed
- Compact design

### Accessories

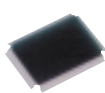
#### Control board

BD2-2860U



#### Gate array

202LA-00



#### Control chip

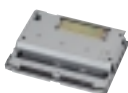
202PC-04



Interface	Parallel and RS-232C
Number of columns	Font A: 32 / Font B: 42
Font	Font A: 12 × 24 dots / Font B: 9 × 24
Command set	ESC/POS
Barcode	Supported
Firmware location	Masked CPU
Buffer	2k bytes
Supporting devices	Auto cutter, Paper sensor, Head-up, LF switch, Error LED, Paper out LED
Dimensions	80 × 80mm
Source voltage	5.0 ±5%
Gate array	202LA-00

#### Auto cutter

ACS-224



Cutting method	Slide cutting
Paper width	45 — 69mm
	0.06 — 0.15mm
Max. cutting frequency	20 cuts/min
Voltage	5V ±10%
Current (peak)	2.8A
Operating temperature	0 — 45°C
Size	80 × 55.7 × 15mm
Weight	140g
Reliability	500,000 cuts
Number of tab left	(F) uil cut blade type None (P) artical cut blade type None or 1 tab

### Specifications

Printing method	Line thermal dot printing
Total dots	384 dots/line
Dot density	8 dots/mm
Printing width	48mm
Printing speed	Max. 400 dot-lines/sec
Paper feeding pitch	0.125mm
Sensors	Head temperature Thermistor Paper presence Photo-interrupter Head-up Mechanical switch
Voltage range	VH DC 4.2 — 8.5V Vdd DC 4.75 — 5.25V
Current	Head (VH = 5V) Max. Approx. 2.3A Motor (VH = 5V) Max. Approx. 0.5A
Recommended consumption	Width 58mm Thickness 60–72µm Paper (Manufacturer) KF50-HAD (Shin-Oji)
Reliability	Head pulse-resistance 50,000,000 pulses or more Head wear-resistance 50km or more
Environment	Operation Temperature: 0 ~ 45°C Humidity: 35 ~ 85% RH Storage Temperature: -20 ~ 60°C Humidity: 10 ~ 90% RH
External dimensions (W × D × H)	75 × 56.5 × 21mm
Weight	Approx. 82g

### Type Classification

LT-286

1) Model  
LT-286

1) Model





## MLT-288



- 58mm paper width
- 5V operation
- 52.5mm/sec printing speed
- Ultra compact design

### Accessories

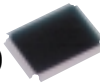
#### Control board

BD2-2880U



#### Gate array

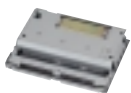
202LA-00



Interface	Parallel and RS-232C
Number of columns	Font A: 32 / Font B: 42
Font	Font A: 12 × 24 dots / Font B: 9 × 24 dots
Command set	ESC/POS
Barcode	Supported
Firmware location	Flash memory
Buffer	2k bytes
Supporting devices	Auto cutter, Paper sensor, Head-up sensor, LF switch, Error LED, Paper out LED
Dimensions	75 × 80mm
Source voltage	5.0 ±5%
Gate array	202LA-00

#### Auto cutter

ACS-228



Cutting method	Slide cutting
Paper width	45 — 69mm
thickness	0.06 — 0.15mm
Max. cutting frequency	20 cuts/min
Voltage	5V ±10%
Current (peak)	2.8A
Operating temperature	0 — 45°C
Size	80 × 55.7 × 15mm
Weight	140g
Reliability	500,000 cuts
Number of tab left	(Full cut blade type) None (Partial cut blade type) None or 1 tab

### Specifications

Printing method	Line thermal dot printing						
Total dots	384 dots/lines						
Dot density	8 dots/mm						
Printing width	48mm						
Printing speed	Max. 420 dot-lines/sec						
Paper feeding pitch	0.125mm						
Sensors	<table border="0"> <tr> <td>Head temperature</td> <td>Thermistor</td> </tr> <tr> <td>Paper presence</td> <td>Photo-interrupter</td> </tr> <tr> <td>Head-up</td> <td>Mechanical switch</td> </tr> </table>	Head temperature	Thermistor	Paper presence	Photo-interrupter	Head-up	Mechanical switch
Head temperature	Thermistor						
Paper presence	Photo-interrupter						
Head-up	Mechanical switch						
Voltage range	<table border="0"> <tr> <td>VH</td> <td>DC 4.2 — 8.5V</td> </tr> <tr> <td>Vdd</td> <td>DC 4.75 — 5.25V</td> </tr> </table>	VH	DC 4.2 — 8.5V	Vdd	DC 4.75 — 5.25V		
VH	DC 4.2 — 8.5V						
Vdd	DC 4.75 — 5.25V						
Current consumption	<table border="0"> <tr> <td>Head (VH = 5V)</td> <td>Max. Approx. 1.7A</td> </tr> <tr> <td>Motor (VH = 5V)</td> <td>Max. Approx. 0.5A</td> </tr> </table>	Head (VH = 5V)	Max. Approx. 1.7A	Motor (VH = 5V)	Max. Approx. 0.5A		
Head (VH = 5V)	Max. Approx. 1.7A						
Motor (VH = 5V)	Max. Approx. 0.5A						
Recommended paper	<table border="0"> <tr> <td>Width</td> <td>58mm</td> </tr> <tr> <td>Thickness</td> <td>60 — 72µm</td> </tr> <tr> <td>Paper (Manufacturer)</td> <td>TF50KS-E2D (Nippon Paper)</td> </tr> </table>	Width	58mm	Thickness	60 — 72µm	Paper (Manufacturer)	TF50KS-E2D (Nippon Paper)
Width	58mm						
Thickness	60 — 72µm						
Paper (Manufacturer)	TF50KS-E2D (Nippon Paper)						
Reliability	<table border="0"> <tr> <td>Head pulse-resistance</td> <td>100,000,000 pulses or more</td> </tr> <tr> <td>Head wear-resistance</td> <td>50km or more</td> </tr> </table>	Head pulse-resistance	100,000,000 pulses or more	Head wear-resistance	50km or more		
Head pulse-resistance	100,000,000 pulses or more						
Head wear-resistance	50km or more						
Environment	<table border="0"> <tr> <td>Operation</td> <td>Temperature: 0 ~ 45°C Humidity: 35 ~ 85% RH</td> </tr> <tr> <td>Storage</td> <td>Temperature: -20 ~ 60°C Humidity: 10 ~ 90% RH</td> </tr> </table>	Operation	Temperature: 0 ~ 45°C Humidity: 35 ~ 85% RH	Storage	Temperature: -20 ~ 60°C Humidity: 10 ~ 90% RH		
Operation	Temperature: 0 ~ 45°C Humidity: 35 ~ 85% RH						
Storage	Temperature: -20 ~ 60°C Humidity: 10 ~ 90% RH						
External dimensions (W × D × H)	72.7 × 38 × 15mm						
Weight	Approx. 45g						

### Type Classification

MLT-288 V

1) Model

2) Paper path

1) Model  
MLT-288

2) Paper path  
H: Curl  
V: Straight

# Line Thermal Printer Mechanisms



## MLT-289



- 58mm paper width
- 5V operation
- 52.5mm/sec printing speed
- Ultra compact design
- Platen removable design

Specifications		
Printing method		Line thermal dot printing
Total dots		384 dots/lines
Dot density		8 dots/mm
Printing width		48mm
Printing speed		Max. 420 dot-lines/sec
Paper feeding pitch		0.125mm
Sensors	Head temperature	Thermistor
	Paper presence	Photo-interrupter
	Platen	Mechanical switch
Voltage range	VH	DC 4.2 — 8.5V
	Vdd	DC 4.75 — 5.25V
Current	Head (VH = 5V)	Max. Approx. 1.7A
consumption	Motor (VH = 5V)	Max. Approx. 0.5A
Recommended paper	Width	58mm
	Thickness	65µm
	Paper (Manufacturer)	TF50KS-E2C (Nippon Paper)
Reliability	Head pulse-resistance	100,000,000 pulses or more
	Head wear-resistance	50km or more
Environment	Operation	Temperature: 0 ~ 45°C
		Humidity: 35 ~ 85% RH
	Storage	Temperature: -20 ~ 60°C
		Humidity: 10 ~ 90% RH
External dimensions (W × D × H)		76.8 × 37 × 16mm
Weight		Approx. 50g

### Accessories

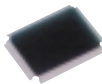
#### Control board

BD2-2890U



#### Gate array

202LA-00



Interface	Parallel and RS-232C
Number of columns	Font A: 32 / Font B: 42
Font	Font A: 12 × 24 dots / Font B: 9 × 24 dots
Command set	ESC/POS
Barcode	Supported
Firmware location	Flash memory
Buffer	2k bytes
Supporting devices	Auto cutter, Paper sensor, Head-up sensor, LF switch, Error LED, Paper out LED
Dimensions	75 × 80mm
Source voltage	5.0 ±5%
Gate array	202LA-00

### Type Classification

MLT-289

1) Model

1) Model  
MLT-289

2) Paper path  
None: Curl



## Accessories

## Control board

BD2-3880U



## Gate array

202LA-00



Interface	Parallel and RS-232C
Number of columns	Font A: 48 / Font B: 64
Font	Font A: 12 × 24 dots / Font B: 9 × 24 dots
Command set	ESC/POS
Barcode	Supported
Firmware location	Flash memory
Buffer	2k bytes
Supporting devices	Auto cutter, Paper sensor, Head-up sensor, LF switch, Error LED, Paper out LED
Dimensions	80 × 90mm
Source voltage	5.0 ±5%
Gate array	202LA-00

## Auto cutter

ACS-238



## MLT-388



- 80mm paper width
- 5V operation
- 60mm/sec printing speed
- Ultra compact design

## Specifications

Printing method	Line thermal dot printing
Total dots	576 dots/lines
Dot density	8 dots/mm
Printing width	72mm
Printing speed	Max. 480 dot-lines/sec
Paper feeding pitch	0.125mm
Sensors	Head temperature Paper presence Head-up
	Thermistor Photo-interrupter Mechanical switch
Voltage range	VH Vp Vdd
	DC 4.2 — 8.5V DC 4.2 — 8.5V DC 4.75 — 5.25V
Current consumption	Head (Vp = 5V) Motor (Vp = 5V)
	Max. Approx. 2.5A Max. Approx. 0.5A
Recommended paper	Width Thickness Paper (Manufacturer)
	80 0/~1mm 65µm TF50KS-E2D (Nippon Paper)
Reliability	Head pulse-resistance Head wear-resistance
	10,000,000 pulses or more 50km or more
Environment	Operation Storage
	Temperature: 0 ~ 45°C Humidity: 35 ~ 85% RH Temperature: -20 ~ 60°C Humidity: 10 ~ 90% RH
External dimensions (W × D × H)	99.5 × 41 × 21mm
Weight	Approx. 95g

## MLT-389



- 80mm paper width
- 5V operation
- 60mm/sec printing speed
- Ultra compact design
- Platen removable design



## Accessories

## Control board

BD2-3890U



## Gate array

202LA-00



Interface	Parallel and RS-232C
Number of columns	Font A: 32 / Font B: 42
Font	Font A: 12 × 24 dots / Font B: 9 × 24 dots
Command set	ESC/POS
Barcode	Supported
Firmware location	Flash memory
Buffer	2k bytes
Supporting devices	Auto cutter, Paper sensor, Head-up sensor, LF switch, Error LED, Paper out LED
Dimensions	75 × 80mm
Source voltage	5.0 ±5%
Gate array	202LA-00

## Specifications

Printing method	Line thermal dot printing
Total dots	576 dots/lines
Dot density	8 dots/mm
Printing width	72mm
Printing speed	Max. 480 dot-lines/sec
Paper feeding pitch	0.125mm
Sensors	Head temperature Paper presence Head-up
	Thermistor Photo-interrupter Mechanical switch
Voltage range	VH Vp Vdd
	DC 4.2 — 8.5V DC 4.2 — 8.5V DC 4.75 — 5.25V
Current consumption	Head (Vp = 5V) Motor (Vp = 5V)
	Max. Approx. 2.5A Max. Approx. 0.5A
Recommended paper	Width Thickness Paper (Manufacturer)
	80 0/~1mm 65µm TF50KS-E2D (Nippon Paper)
Reliability	Head pulse-resistance Head wear-resistance
	10,000,000 pulses or more 50km or more
Environment	Operation Storage
	Temperature: 0 ~ 45°C Humidity: 35 ~ 85% RH Temperature: -20 ~ 60°C Humidity: 10 ~ 90% RH
External dimensions (W × D × H)	99.5 × 41 × 21mm
Weight	Approx. 95g

## Type Classification

MLT-388

1) Model  
MLT-388  
MLT-389

1) Model

# Line Thermal Printer Mechanisms

## LT2220



- 58mm paper width
- 24V operation
- 150mm/sec high-speed printing
- Thick paper up to 0.15mm(LT2220A)
- Compact design

Specifications		
Printing method	Line thermal dot printing	
Total dots	432 dots/lines	
Dot density	8 dots/mm	
Printing width	54mm	
Printing speed	Max. 150mm /sec	
Paper feeding pitch	0.125mm	
Sensors	Head temperature	Thermistor
	Paper presence	Photo-sensor
	Head-up	Photo-sensor
Voltage range	VH	DC 21.6 — 26.4V
	Vdd	DC 4.75 — 5.25V
Current consumption	Head (Vp = 5V)	Max. Approx. 5.2A
	Motor (Vp = 5V)	Max. Approx. 0.41A
Recommended paper	Width	58mm
	Thickness	60 – 105µm (Standard) 110 – 150µm (A type)
	Paper (Manufacturer)	TF50KS-E2D (Nippon Paper) etc.
Reliability	Head pulse-resistance	50,000,000 pulses or more
	Head wear-resistance	50km or more
Environment	Operation	Temperature: 0 ~ 45°C
		Humidity: 35 ~ 85% RH
	Storage	Temperature: -20 ~ 60°C
		Humidity: 10 ~ 90% RH
External dimensions (W × D × H)	91.5 × 58 × 20mm	
Weight	Approx. 87g	

## LT2320



- 80mm paper width
- 24V operation
- 150mm/sec high-speed printing
- Thick paper up to 0.15mm(LT2320A)
- Compact design

Specifications		
Printing method	Line thermal dot printing	
Total dots	576 dots/lines	
Dot density	8 dots/mm	
Printing width	72mm	
Printing speed	Max. 150mm /sec	
Paper feeding pitch	0.125mm	
Sensors	Head temperature	Thermistor
	Paper presence	Photo-sensor
	Head-up	Photo-sensor
Voltage range	VH	DC 21.6 — 26.4V
	Vdd	DC 4.75 — 5.25V
Current consumption	Head (Vp = 5V)	Max. Approx. 5.2A
	Motor (Vp = 5V)	Max. Approx. 0.41A
Recommended paper	Width	80 mm
	Thickness	60 – 105µm (Standard) 110 – 150µm (A type)
	Paper (Manufacturer)	TF50KS-E2D (Nippon Paper) etc.
Reliability	Head pulse-resistance	50,000,000 pulses or more
	Head wear-resistance	50km or more
Environment	Operation	Temperature: 0 ~ 45°C
		Humidity: 35 ~ 85% RH
	Storage	Temperature: -20 ~ 60°C
		Humidity: 10 ~ 90% RH
External dimensions (W × D × H)	108 × 58 × 20mm	
Weight	Approx. 99g	



### Accessories

● LT2220 is still available

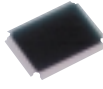
#### Control board

BD2-1220U



#### Gate array

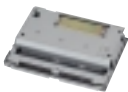
202LA-00



Interface	Parallel and RS-232C
Number of columns	36/48
Font	Font A: 12 × 24 dots / Font B: 9 × 24 dots
Command set	ESC/POS
Barcode	Supported
Firmware location	Flash memory
Buffer	2k bytes
Supporting devices	Auto cutter, Paper sensor, Head-up sensor, LF switch, Error LED, Paper out LED
Dimensions	90 × 65mm
Source voltage	5.0 ±5% and 24V ±5%
Gate array	202LA-00

#### Auto cutter

ACS-225



Cutting method	Slide cutting
Paper width	45 — 69mm
thickness	0.06 — 0.15mm
Max. cutting frequency	20 cuts/min
Voltage	24V ±10%
Current (peak)	0.8A
Operating temperature	0 — 45°C
Size	80 × 55.7 × 15mm
Weight	140g
Reliability	500,000 cuts
Number of tab left	(F)ull cut blade type None (P)artial cut blade type None or 1 tab

● LT1320 is still available



### Accessories

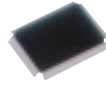
#### Control board

BD2-1220U



#### Gate array

202LA-00



Interface	Parallel and RS-232C
Number of columns	48/64
Font	Font A: 12 × 24 dots / Font B: 9 × 24 dots
Command set	ESC/POS
Barcode	Supported
Firmware location	Flash memory
Buffer	4k bytes
Supporting devices	Auto cutter, Paper sensor, Head-up sensor, LF switch, Error LED, Paper out LED
Dimensions	90 × 65mm
Source voltage	5.0 ±5% and 24V ±5%
Gate array	202LA-00

#### Auto cutter

ACS-235



Cutting method	Slide cutting
Paper width	50 — 89mm
thickness	0.06 — 0.15mm
Max. cutting frequency	20 cuts/min
Voltage	24V ±10%
Current (peak)	0.8A
Operating temperature	0 — 45°C
Size	102 × 55.7 × 15mm
Weight	180g
Reliability	500,000 cuts
Number of tab left	(F)ull cut blade type None (P)artial cut blade type None or 1 tab



Example for KIOSK unit

### Type Classification

LT-1220HA

1) 2) 3) 4) 5)

1) Size  
2: 2inch class  
3: 3inch class

2) Voltage  
2: 24V

3) Type  
0: Standard

4) Paper path  
H: Curl  
V: Straight

5) Paper pressure  
None: Standard (60-105µm)  
A: For thick paper (110-150µm)



● LT2221 is still available

### Accessories

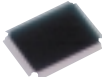
#### Control board

BD2-1221U



#### Gate array

202LA-00



Interface	Parallel and RS-232C
Number of columns	36/48
Font	Font A: 12 × 24 dots / Font B: 9 × 24 dots
Command set	ESC/POS
Barcode	Supported
Firmware location	Flash memory
Buffer	4k bytes
Supporting devices	Auto cutter, Paper sensor, Head-up sensor, LF switch, Error LED, Paper out LED
Dimensions	90 × 65mm
Source voltage	5.0 ±5% and 24V ±5%
Gate array	202LA-00

#### Specifications for Auto cutter

(Auto cutter only for LT2221C)

Cutting method	Slide cutting
Paper width	58mm
thickness	0.06 — 0.15mm
Max. cutting frequency	20 cuts/min
Voltage	24V ±10%
Current (peak)	0.8A
Operating temperature	0 — 45°C
Size	102 × 55.7 × 15mm
Weight	180g
Reliability	300,000 cuts
Number of tab left	(Full cut blade type) None (Partial cut blade type) None or 1 tab

# LT2221 LT2221C



- 58mm paper width
- 24V operation
- 150mm/sec high-speed printing
- Platen removable design
- Auto cutter equipped(LT2221C)
- Compact design

### Specifications

Printing method	Line thermal dot printing
Total dots	432 dots/lines
Dot density	8 dots/mm
Printing width	54mm
Printing speed	Max. 150mm /sec
Paper feeding pitch	0.125mm
Sensors	Head temperature Paper presence Platen
	Thermistor Photo-sensor Mechanical Switch
Voltage range	VH Vdd
	DC 21.6 — 26.4V DC 4.75 — 5.25V
Current consumption	Head (Vp = 5V) Motor (Vp = 5V)
	Max. Approx. 5.2A Max. Approx. 0.41A
Recommended paper	Width Thickness
	58mm 60 — 105µm (Standard) 110 — 150µm (A type)
	Paper (Manufacturer)
	TF50KS-E2C (Nippon Paper) etc.
Reliability	Head pulse-resistance Head wear-resistance
	50,000,000 pulses or more 50km or more
Environment	Operation
	Temperature: 0 ~ 45°C Humidity: 35 ~ 85% RH
	Storage
	Temperature: -20 ~ 60°C Humidity: 10 ~ 90% RH
External dimensions (W × D × H)	91.5 × 58 × 20mm(LT2221) 101.3 × 61.5 × 37.2mm(LT2221C)
Weight	Approx. 85g(LT2221) Approx. 273g(LT2221C)



● LT1321 is still available

### Accessories

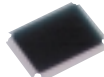
#### Control board

BD2-1221U



#### Gate array

202LA-00



Interface	Parallel and RS-232C
Number of columns	48/64
Font	Font A: 12 × 24 dots / Font B: 9 × 24 dots
Command set	ESC/POS
Barcode	Supported
Firmware location	Flash memory
Buffer	4k bytes
Supporting devices	Auto cutter, Paper sensor, Head-up sensor, LF switch, Error LED, Paper out LED
Dimensions	90 × 65mm
Source voltage	5.0 ±5% and 24V ±5%
Gate array	202LA-00

#### Specifications for Auto cutter

(Auto cutter only for LT2321C)

Cutting method	Slide cutting
Paper width	80mm
thickness	0.06 — 0.15mm
Max. cutting frequency	20 cuts/min
Voltage	24V ±10%
Current (peak)	0.8A
Operating temperature	0 — 45°C
Size	102 × 55.7 × 15mm
Weight	180g
Reliability	300,000 cuts
Number of tab left	(Full cut blade type) None (Partial cut blade type) None or 1 tab

# LT2321 LT2321C



- 80mm paper width
- 24V operation
- 150mm/sec high-speed printing
- Platen removable design
- Auto cutter equipped(LT2321C)
- Compact design

### Specifications

Printing method	Line thermal dot printing
Total dots	576 dots/lines
Dot density	8 dots/mm
Printing width	72mm
Printing speed	Max. 150mm /sec
Paper feeding pitch	0.125mm
Sensors	Head temperature Paper presence Platen
	Thermistor Photo-sensor Mechanical Switch
Voltage range	VH Vdd
	DC 21.6 — 26.4V DC 4.75 — 5.25V
Current consumption	Head (Vp = 5V) Motor (Vp = 5V)
	Max. Approx. 5.2A Max. Approx. 0.41A
Recommended paper	Width Thickness
	80mm 60 — 105µm (Standard) 110 — 150µm (A type)
	Paper (Manufacturer)
	TF50KS-E2C (Nippon Paper) etc.
Reliability	Head pulse-resistance Head wear-resistance
	50,000,000 pulses or more 50km or more
Environment	Operation
	Temperature: 0 ~ 45°C Humidity: 35 ~ 85% RH
	Storage
	Temperature: -20 ~ 60°C Humidity: 10 ~ 90% RH
External dimensions (W × D × H)	108 × 58 × 20mm(LT2321) 119 × 61.5 × 37.2mm(LT2321C)
Weight	Approx. 97g(LT2321) Approx. 330g(LT2321C)

### Type Classification

LT-1221C

1) 2) 3) 4)

1) Size  
2: 2inch class  
3: 3inch class

2) Voltage  
2: 24V

3) Type  
1: Removable platen model

4) Cutter  
None: Standard  
C: With cutter

# Line Thermal Printer Mechanisms



## LT-281



- 60mm paper width
- 24V operation
- 101.6mm/sec high-speed printing
- High reliability due to heavy duty design

### Accessories

Auto cutter	AC-5/5F	ACS-229
Cutting method	Guillotine	Slide cutting
Paper width thickness	59.5 ± 0.5mm 0.065mm	45 — 69mm 0.06 — 0.15mm
Max. cutting frequency	6 cuts/min	20 cuts/min
Voltage	24V ± 1.0%	24V ± 10%
Current (peak)	1.3A	0.8A
Operating temperature	5 — 40°C	0 — 45°C
Size	70 × 55 × 31.7mm	80 × 55.7 × 15mm
Weight	160g	140g
Reliability	300,000 cuts	500,000 cuts
Number of tab left (Full cut blade type) (Partial cut blade type)	None or 1 tab Several tabs	None None or 1 tab

### Specifications

Printing method	Line thermal dot printing	
Total dots	448 dots/lines	
Dot density	8 dots/mm	
Printing width	56mm	
Printing speed	Max. 101.6mm/sec (813 dot-lines/sec)	
Paper feeding pitch	0.125mm	
Sensors	Head temperature	Thermistor
	Paper presence	Photo-interrupter
	Head-up	Mechanical switch
Voltage range	Vp	24V DC ± 5%
	Vdd	5V DC ± 5%
Current consumption	Head	0.9A
	Motor	0.39A
Recommended paper	Width	59.5mm
	Paper (Manufacturer)	TF50SY-EY, TF50KS-E2D (Nippon Paper)
Reliability	Head pulse-resistance	100,000,000 pulses or more
	Head wear-resistance	100km or more
	Mechanical life (MCBF)	23,600,000 lines
Environment	Operation	Temperature: 5 ~ 40°C Humidity: 35 ~ 80% RH
	Storage	Temperature: -20 ~ 60°C Humidity: 10 ~ 90% RH
External dimensions (W × D × H)	111.5 × 53.5 × 40.8mm	
Weight	Approx. 300g	



LT-481H

LT-481V

## LT-481



- 112mm paper width
- 24V operation
- 100mm/sec high speed printing
- High reliability due to heavy duty design

### Accessories

Auto cutter	AC-6	ACS-249
Cutting method	Guillotine	Slide cutting
Paper width thickness	111.5 ± 0.5mm 0.065mm	55 — 115mm 0.06 — 0.13mm
Max. cutting frequency	6 cuts/min	20 cuts/min
Voltage	24V ± 10%	24V ± 10%
Current (peak)	1A	0.8A
Operating temperature	5 — 40°C	0 — 45°C
Size	130 × 55 × 21.5mm	130 × 55.7 × 15mm
Weight	260g	220g
Reliability	300,000 cuts	300,000 cuts
Number of tab left (Full cut blade type) (Partial cut blade type)	None or 1 tab Several tabs	None None or 1 tab

### Specifications

Printing method	Line thermal dot printing	
Total dots	832 dots/lines	
Dot density	8 dots/mm	
Printing width	104mm	
Printing speed	Max. 100mm/sec (800 dot-lines/sec)	
Paper feeding pitch	0.125mm	
Sensors	Head temperature	Thermistor
	Paper presence	Photo-interrupter
	Head-up	Mechanical switch
Voltage range	Vp	24V DC ± 5%
	Vdd	5V DC ± 5%
Current consumption	Head	1.6A
	Motor	0.48A
Recommended paper	Width	111.5mm
	Paper (Manufacturer)	TF50SY-EY, TF50KS-E2D (Nippon Paper)
Reliability	Head pulse-resistance	100,000,000 pulses or more
	Head wear-resistance	100km or more
	Mechanical life (MCBF)	8,000,000 lines
Environment	Operation	Temperature: 5 ~ 40°C Humidity: 35 ~ 80% RH
	Storage	Temperature: -20 ~ 60°C Humidity: 10 ~ 90% RH
External dimensions (W × D × H)	161 × 60 × 41mm	
Weight	Approx. 420g	

### Type Classification

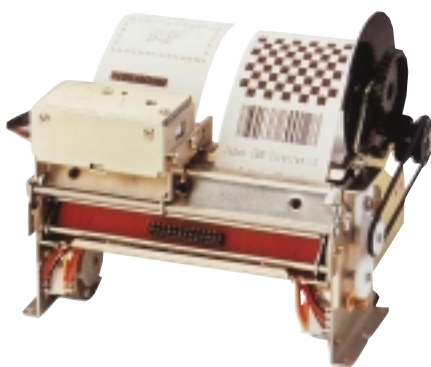
**LT-281**  
1) Model

1) Model  
LT-281

**LT-481 H**  
1) Model 2) Paper path

1) Model  
LT-481

2) Paper path  
H: Curl  
V: Straight



### Accessories

#### Auto Cutter

#### AC-4P / 4F

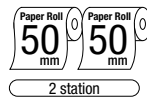
Cutting method	Guillotine
Paper width	49.5 ± 0.5mm
thickness	0.063mm
Max. cutting frequency	6 cuts/min
Voltage	24V ± 10%
Current (peak)	1.3A
Operating temperature	5 ~ 40°C
Size	60 ¥ 55 ¥ 23mm
Weight	260g
Reliability	300,000 cuts
Number of tab left	None or 1 tab
(F)ull cut blade type	None or 1 tab
(P)artial cut blade type	Several tabs

#### Paper winder

#### AW-4H / 4V



## LT-483



- 2 station printing
- 50+50mm paper width
- 24V operation
- 100mm/sec high speed printing
- High reliability due to heavy duty design

### Specifications

Printing method	Line thermal dot printing	
Total dots	832 dots/lines	
Dot density	8 dots/mm	
Printing width	44mm × 2	
Printing speed	Max. 100mm/sec (800 dot-lines/sec)	
Paper feeding pitch	0.125mm	
Sensors	Head temperature	Thermistor
	Paper presence	Photo-interrupter
	Head-up	Mechanical switch
Voltage range	Vp	24V DC ± 5%
	Vdd	5V DC ± 5%
Current	Head	1.2A
consumption	Motor	0.96A
Recommended	Width	49.5mm × 2
paper	Paper (Manufacturer)	TF50KS-E2D (Nippon Paper)
Reliability	Head pulse-resistance	100,000,000 pulses or more
	Head wear-resistance	100km or more
Environment	Operation	Temperature: 5 ~ 40°C
		Humidity: 35 ~ 80% RH
	Storage	Temperature: -20 ~ 60°C
		Humidity: 10 ~ 90% RH
External dimensions (W × D × H)	LT483: 155.2 × 60 × 71.5mm	
	LT483CF: 155.2 × 67 × 98.9mm	
	LT483CP: 155.2 × 67 × 100.2mm	
Weight	LT483: Approx. 560g	
	LT483CF: Approx. 750g	
	LT483CP: Approx. 760g	

## LT1322



- 2 station printing
- 38+38mm paper width
- 24V operation
- 80mm/sec speed printing

### Specifications

Printing method	Line thermal dot printing	
Total dots	248 dots/lines × 2	
Dot density	8 dots/mm	
Printing width	38mm × 2	
Printing speed	Max. 80mm/sec (640 dot-lines/sec)	
Paper feeding pitch	0.125mm	
Sensors	Head temperature	Thermistor
	Paper presence	Photo-interrupter
	Head-up	Photo-sensor
Voltage range	Vp	24V DC ± 10%
	Vdd	5V DC ± 5%
Current	Head	4.5A
consumption	Motor	0.4A
Recommended	Width	38mm × 2
paper	Paper (Manufacturer)	TF50KS-E2D (Nippon Paper)
Reliability	Head pulse-resistance	50,000,000 pulses or more
	Head wear-resistance	50km or more
Environment	Operation	Temperature: 0 ~ 45°C
		Humidity: 35 ~ 85% RH
	Storage	Temperature: -20 ~ 60°C
		Humidity: 10 ~ 90% RH
External dimensions (W × D × H)	120 × 58 × 24.5mm	
Weight	Approx. 97g	

### Type Classification

## LT-483CF

1) 2) 3) 4) 5)

#### 1) Size

4:4 inch class

#### 3) Type

483:2 station, 112mm, 24V

#### 5) Power Source

F:Full cut blade  
P:Partial cut blade

## LT1322

1) 2) 3)

#### 1) Size

3:3 inch class

#### 3) Type

2:2Station model

#### 2) Voltage

8:24V

# Impact Dot Matrix Printer Mechanisms

Despite the growth in demand for thermal printers, dot impact printers are still most appropriate for many applications and worldwide demand remains strong. Particularly well-suited to plain paper and high-speed printing, they are indispensable for check and validation and other such applications. As in its thermal printer development, Citizen Systems makes the most of its precision equipment technologies in the development of dot impact printers, drawing on its formidable strengths in this area to offer products that satisfy customers' dot impact printing needs fully and accurately.



## MD-910 / 911



- 58mm paper width
- 5V operation
- 2.5 lines/sec printing speed
- Ultra compact design

### Accessories

#### Control board

#### CBM-909-4D

(Only for MD-911)



Interface	Parallel and serial
Number of columns	40
Font	4 × 7 (including half dot)
Command set	Unique
Firmware location	Masked CPU
Buffer	1 line
Supporting devices	LF switch, On-line switch
Dimensions	80 × 55.5mm
Source voltage	4.0+0.7/-1.0V
Custom control chip	909PC-4DU

#### Control chip

#### 909PC-4DU

(Only for MD-911)



#### Paper winder

#### AW-5

(not supported by CBM-909)



#### Ink ribbon

#### IR-91, IR-91L (Long life)



### Specifications

Model	MD-910	MD-911
Printing method	Serial impact dot matrix	
Printing direction	One-way printing	
Printing speed	Approx. 2.5 lines/sec	Approx. 1.8 lines/sec
Number of columns	24 columns: 144 dots/line	40 columns: 180 dots/line
Font	5 × 7 matrix	4 × 7 matrix
Number of wires	8 pins (4 pins × 2 heads)	
Character size (W × H)	Approx. 1.7 × 2.4mm	Approx. 1.1 × 2.4mm
Character pitch	1.98mm (Interval of columns) 3.52mm (Interval of lines)	1.17mm (Interval of columns) / 3.52mm (Interval of lines)
Motor	Voltage: 5.0V DC / Peak current: Approx. 1A / Average current: 0.3A max.	
Dot pulse sensor	Photo interrupter	
Home pulse sensor	Leaf switch	
Printing sensor	Voltage: 5.0 V DC / Resistance: 1.7 ± 0.3Ω (25°C)	
Paper feeding solenoid	Voltage: 5.0 V DC / Resistance: 9 ± 2Ω (25°C)	
Connecting method	Copper foil patterns at 2.54mm pitch.	
Driving voltage	3.5 ~ 5.5V DC	
Printing paper	57.5 ± 0.5mm	
Copy	Original print + 1 copy	
Ink ribbon	Special ribbon cartridge of black or purple	
Paper feeding speed	Approx. 5 lines/sec	Approx. 3.6 lines/sec
External dimensions	90 × 45.5 × 16mm (W × D × H)	
Weight	105g ± 10%	
Operating temperature	0 ~ 50°C	
Storage temp. range	-25 ~ 70°C	
Reliability	MCFB: 1.5 million lines	MCFB: 1.0 million lines

### Type Classification

## MD-910-SS

1) 2)

#### 1) Type

910: 24 columns  
911: 40 columns

#### 2) Knob

SS: No knob  
HS: Horizontal knob  
VS: Vertical knob





# DP-320 / 330



- 58/76mm paper width
- 24V operation
- 5.6/4.3 lines/sec high-speed printing
- Logic seeking control
- 2 color printing

## Accessories

### Auto cutter

#### ACS-236



Cutting method		Slide cutting
Paper	width	50 — 89mm
	thickness	0.06 — 0.15mm
Max. cutting frequency		20 cuts/min
Voltage		24V ±10%
Current (peak)		0.8A
Operating temperature		0 — 45°C
Size		102 × 55.7 × 15mm
Weight		180g
Reliability		500,000 cuts
Number of tab left	(Full cut blade type)	None
	(Partial cut blade type)	None or 1 tab

### Ink ribbon

#### IR-31

\*Six sensor positions are available. Please contact dealer.



# DP-420 / 430



- 76mm paper width
- 24V operation
- 3.0 lines/sec speed printing
- 2 color printing

## Accessories

### Auto cutter

#### ACS-234



Cutting method		Slide cutting
Paper	width	50 — 89mm
	thickness	0.06 — 0.15mm
Max. cutting frequency		20 cuts/min
Voltage		24V ±10%
Current (peak)		0.8A
Operating temperature		0 — 45°C
Size		102 × 55.7 × 15mm
Weight		180g
Reliability		500,000 cuts
Number of tab left	(Full cut blade type)	None
	(Partial cut blade type)	None or 1 tab

### Paper winder

#### AW-2FA

### Ink ribbon

#### IR-41



## Specifications

Model	DP-420	DP-430
Printing method	Serial impact dot matrix	
Printing direction	Bi-directional	
Printing speed	Approx. 3.0 lines/sec	
Number of columns	42 columns, 189 dots/line	
Font	7 × 7 matrix	7 × 9 matrix
Number of wires	7 pins	9 pins
Character size (W × H)	1.31 × 2.4mm	1.31 × 3.1mm
Character pitch	1.52mm	
Line spacing	4.23 or 2.82mm (1/6 or 1/9 inch) / Minimum 1.41mm (1/18 inch)	
Motor	Voltage: 24V ±5% V DC / Current: Peak Approx. 1A / Average less than 0.2A	
Reset pulse sensor	Photo interrupter	
Dot pulse sensor	Photo interrupter	
Home position sensor	Photo interrupter	
Paper out sensor	Photo interrupter	
Black mark sensor (option)	Photo interrupter	
Printing solenoid	Voltage: 24V ±5% V DC / Resistance: 17Ω (25°C)	
Printing feed solenoid	Voltage: 24V ±5% V DC / Resistance: 34Ω (25°C)	
Color change solenoid	Voltage: 24V ±5% V DC / Resistance: 34Ω (25°C)	
Connecting method	FFC or FPC cable	
Paper feeding	Friction feed or sprocket feed	
Printing paper	Friction feed: 76 ±0.5 × φ 83mm	
Copy	Friction feed: original + 1 copy	
Ink ribbon	Exclusive ink ribbon cartridge / 2 color (Black/red), black or purple	
Paper feeding speed	Approx. 28 lines/sec	
External dimensions (W × D × H)	120 × 90 × 45mm	
Weight	Approx. 470g	
Operating temp. range	0 ~ 50°C	
Storage temp. range	-20 ~ 70°C	
Reliability	Mechanism: MCBF 2.5 million lines / Head: 80 million characters	

## Type Classification

DP-320 D F V \*

1) 2) 3) 4) 5)

### 1) Type

320: 58mm paper width  
330: 76mm paper width

### 2) Ribbon

D: 2 color  
M: 1 color

### 3) Paper feed method

F: Friction feed

### 4) Blackmark sensor volume

N: No volume

V: BM sensor volume

### 5) Blackmark sensor position

\*Six sensor positions are available. Please contact dealer.

DP-420-D F

1) 2) 3)

### 1) Type

420: 7 pin head  
430: 9 pin head

### 2) Ribbon

D: 2 color

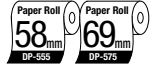
### 3) Paper feed method

F: Friction feed

# Impact Dot Matrix Printer Mechanisms



## DP-555 / 575



- 58/69mm paper width
- 1.9/1.2 lines speed printing
- 12/17V operation
- 2 color printing

### Specifications

Model	DP-555	DP-575
Printing method	Serial impact dot matrix	
Printing direction	L Series Left to right (Horizontal), R Series Right to left (Horizontal)	
Printing speed	Approx. 1.9 lines/sec	Approx. 1.2 lines/sec
Number of columns	24 columns	40 columns
Font	5 × 7 matrix	
Character size (W×H)	1.7 × 2.75mm	1.25 × 2.75mm
Character pitch	2mm	1.5mm
Line spacing	5.5mm	
Motor	Voltage: 12V ±1V DC / Peak current: Approx. 2.5A (12V, 25°C) Average current: Approx. 0.25A	
Dot pulse sensor	Photo interrupter	
Home switch	Voltage: 5V DC / Current: 100µA ~ 3mA (Resistance load)	
Printing solenoid	Voltage: 12V ±1V DC / Resistance: 4.9 ±0.5Ω (25°C) Energized time: 2 dot pulses (700 ±50µs) / Peak current: Approx. 2A	
Main solenoid	Voltage: 12V ±1V DC / Resistance: 18.4 ±1Ω (25°C) Energized time: 16ms±10% (Max. of 5 continuous seconds)	
Color change solenoid	Voltage: 12V ±1V DC / Resistance: 18.4 ±1Ω (25°C) Energized time: 20 ±2ms (Max. of 5 continuous seconds)	
Connecting method	Flexible cable (SMCD 18 × 91 ES10)	
Ink ribbon	Color 2 colors (Red and black), black or purple Spool diameter: 30mm or 35mm, width: 13mm	
Paper feeding speed	Approx. 8 lines/sec	
Printing paper	57.5 ± 0.5mm	69 + 1mm
External dimensions (W×D×H)	120.5 × 114 × 44.5mm	
Weight	Approx. 450g	
Operating temp. range	0 ~ 50°C	
Paper feeding traction	More than 100g (Citizen recommended paper)	
Reliability	Printer mechanism MCBF: 1.5 million lines / Dot head 50 million characters	

### Accessories

#### Auto cutter

#### AC-3 / 3F



Cutting method	Guillotine
Paper width	76 ±0.5mm
thickness	0.06 — 0.085mm
Max. cutting frequency	20 cuts/min
Voltage	12V ±10%
Current (peak)	1.2A
Operating temperature	0 — 40°C
Size	93 × 74 × 25mm
Weight	200g
Reliability	300,000 cuts
Number of tab left	None or 1 tab
(F)ull cut blade type	(P)artial cut blade type
	2 or 3 tabs

#### Paper winder

#### NW-58 (DP-555)

#### NW-69 (DP-575)



#### Ink ribbon

#### IR-01



DP-61XF

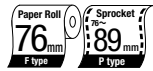


DP-61XP



DP-61XH

## DP-61X SERIES



- 76mm paper width
- 2 color printing
- 24V operation
- Sprocket feeding model (P type)
- 3.0 lines/sec speed printing (DP-614)

### Specifications

Model	DP-610	DP-612	DP-614	DP-617
Printing method	Serial impact dot matrix			
Printing direction	Bi-directional			
Printing speed	Approx. 4.0 lines/sec	Approx. 3.5 lines/sec	Approx. 3.0 lines/sec	Approx. 2.4 lines/sec
Number of columns	23 columns, 230 dots/line	28 columns, 280 dots/line	40 columns, 360 dots/line	40 columns, 400 dots/line
Font	7 × 9 matrix			
Character size (W×H)	1.8 × 2.4mm	1.5 × 2.4mm	1.36 × 2.4mm	1.2 × 2.4mm
Line spacing	1/6 inch			
Motor	Voltage: 24V DC / V DC / Peak current: Max. 21A (12V, 25°C) / Average current: Approx. 0.2A or less			
Dot pulse sensor	Photo interrupter			
Home position sensor	Photo interrupter			
Paper feeding motor	Voltage: 24V DC / V DC / Resistance: 48Ω (25°C) / Driving pulse width: 30 DP, Approx. 20ms			
Printing solenoid	Voltage: 24V ±1V DC / Resistance: 17Ω (24V DC, 25°C)			
Color change solenoid	Voltage: 24V DC / V DC / Resistance: 48Ω (24V DC, 25°C)			
Connector terminals	Connector 1 (S16B-PH-K-S (16P)): Counterpart PHR-16 (16P) manufactured by JST Connector 2 (S10B-PH-K-SC (10P)): Counterpart PHR-10 (10P) manufactured by JST			
Paper feeding	Friction feed or sprocket feed			
Printing paper	Friction feed: 76mm Roll paper × φ83mm / Sprocket feed: 76 — 89mm fanfold paper			
Copy	Friction feed: original + 1 copy / Sprocket feed: original + 2 copies			
Paper feed power	More than 100g (Citizen recommended paper)			
Ink ribbon	Two colors (Red and black) / Single color (Black or purple)			
Paper feeding speed	Approx. 25 lines/sec	Approx. 21 lines/sec	Approx. 18 lines/sec	Approx. 15 lines/sec
External dimensions (W×D×H)	Two colors: 137 × 136 × 63.5mm / Single color: 134 × 136 × 63.5mm			
Weight	Approx. 690g			
Operating temp. range	0 ~ 50°C			
Reliability	Printer: MCBF 4.0 million lines / Head: 80 million characters			

### Accessories

#### Ink ribbon

#### IR-61



#### Paper winder

#### AW-2FA

#### Auto cutter

#### AC-2 / 2F



#### AC-134



Cutting method	Guillotine	Guillotine
Paper width	76 ±0.5mm	50 — 89mm
thickness	0.06 — 0.085mm	0.06 — 0.09mm
Max. cutting frequency	20 cuts/min	20 cuts/min
Voltage	24V ±10%	24V ±10%
Current (peak)	0.8A	0.8A
Operating temperature	0 — 40°C	0 — 45°C
Size	99 ¥ 74 ¥ 30mm	120 ¥ 57 ¥ 15mm
Weight	200g	160g
Reliability	300,000 cuts	300,000 cuts
Number of tab left	None or 1 tab	None or 1 tab
(F)ull cut blade type	(P)artial cut blade type	
	2 or 3 tabs	2 or 3 tabs

### Type Classification

## DP-575 L 12 A

1) 2) 3) 4)

#### 1) Type

555: 24 columns  
575: 40 columns

#### 2) Printing direction

L: Left to right  
R: Right to left

#### 3) Voltage

12: 12V  
17: 17V

#### 4) Special feature

None: Regular model  
A: Cassette ribbon model

## DP-614 D F V V

1) 2) 3) 4) 5)

#### 1) Type

610: 23 columns  
612: 28 columns  
614: 40 columns (360dots)  
617: 40 columns (400dots)

#### 2) Ribbon

D: 2 color  
M: 1 color

#### 3) Paper feeding method

F: Friction feeding  
P: Sprocket feeding

#### 4) Character / Graphic

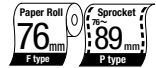
C: Character only  
G: Graphic

#### 5) Validation sensor

None: No validation  
V: Equipped



## DP-654 / 657



- 76mm paper width
- 24V operation
- 3.6 lines/sec speed printing(DP-654)
- 2 color printing
- Sprocket feeding model (P type)

### Accessories

#### Ink ribbon

IR-61



#### Paper winder

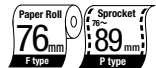
AW-2FA

Auto cutter	AC-2 / 2F	AC-134
Cutting method	Guillotine	Guillotine
Paper width	76±0.5mm Ma	50 — 89mm
thickness	0.06 — 0.085mm	0.06 — 0.09mm
Max. cutting frequency	20 cuts/min	20 cuts/min
Voltage	24V ±10%	24V ±10%
Current (peak)	0.8A	0.8A
Operating temperature	0 — 40°C	0 — 45°C
Size	99 ¥ 74 ¥ 30mm	120 ¥ 57 ¥ 15mm
Weight	200g	160g
Reliability	300,000 cuts	300,000 cuts
Number of tab left (F)ull cut blade type (P)artial cut blade type	None or 1 tab 2 or 3 tabs	None or 1 tab 2 or 3 tabs

### Specifications

Model	DP-654	DP-657
Printing method	Serial impact dot matrix	
Printing direction	Bi-directional	
Printing speed	3.6LPS ±10%	3.0LPS ±10%
Number of columns	40 columns, 360 dots/line	40 columns, 400 dots/line
Font	7 × 7 or 7 × 9 (half-dot)	
Character size (W × H)	1.36 × 2.4mm	1.2 × 2.4mm
Line spacing	1/6 inch	1/9 inch (DR617DFG)
Motor	Voltage: 24V V DC / Peak current: Approx. 1.5A / Average less than 0.3A	
Reset pulse sensor	Mechanical leaf switch	
Dot pulse sensor	Photo interrupter	
Home position sensor	Photo interrupter	
Printing solenoid	Voltage: 24V ±1V DC / Resistance: 17Ω (24V DC, 25°C)	
Paper feeding solenoid	Voltage: 24V DC Resistance: 33Ω ±10%	
Connector terminals	Connector 1 (S16B-PH-K-S (16P): Counterpart PHR-16 (16P) manufactured by JST) Connector 2 (S10B-PH-K-SC (8P): Counterpart PHR-10 (8P) manufactured by JST)	
Connecting method	Pin connector	
Paper feeding	Friction feeding or sprocket feeding	
Ink ribbon	Dedicated ink ribbon cartridge (Red/Black or single color Black)	
Paper feeding speed	18 lines/sec	
Printing paper	Receipt and journal 37 ~ 38mm, Outer dia Max. φ83mm	
External dimensions (W × D × H)	137 × 138 × 63.5mm	
Weight	Approx. 690g	
Operating temp. range	0 ~ 50°C	
Storage temp. range	-25 ~ 70°C	
Reliability	Mechanism: MCBF 4.0 million lines / Head: 80 million characters	

## DP-62X SERIES



- 76mm paper width
- 24V operation
- 3.6 lines/sec speed printing(DP-654)
- 2 color printing
- Sprocket feeding model (P type)



DP-62FX

DP-61XP

### Accessories

#### Ink ribbon

IR-61



#### Paper winder

AW-2FA

#### Auto cutter

AC-134 / 134F



Cutting method	Guillotine
Paper width	50 — 89mm
thickness	0.06 — 0.09mm
Max. cutting frequency	20 cuts/min
Voltage	24V ±10%
Current (peak)	0.8A
Operating temperature	0 — 40°C
Size	102 ¥ 57 ¥ 15mm
Weight	160g
Reliability	300,000 cuts
Number of tab left (F)ull cut blade type (P)artial cut blade type	None or 1 tab 2 or 3 tabs

### Specifications

Model	DP-622	DP-624	DP-627
Printing method	Serial impact dot matrix		
Printing direction	Bi-directional		
Printing speed	Approx. 4.2 lines/sec	Approx. 3.6 lines/sec	Approx. 3.0 lines/sec
Number of columns	28 columns, 280 dots/line	40 columns, 360 dots/line	40 columns, 400 dots/line
Font	7 × 9 matrix		
Character size (W × H)	1.5 × 2.4mm	1.36 × 2.4mm	1.2 × 2.4mm
Line spacing	Min. 1/144 inch		
Motor	Voltage: 24V DC V DC / Peak current: Max. 1.5A Average current: Approx. 0.3A or less		
Dot pulse sensor	Photo interrupter		
Home position sensor	Photo interrupter		
Paper feeding motor	4 shase 48 poles permanent magnet type stepping motor 24V DC ±10% (Drive voltage) / 5V DC ±15% (Hold voltage) Mean current: Approx. 300mA / Hold current: Approx. 150mA		
Printing solenoid	Voltage: 24 ±1V DC / Resistance: 17Ω (24V DC, 25°C)		
Connector terminals	Connector 1 (53156-1710 (17P): Counter part 51049-1700 (17P) manufactured by Molex) Connector 2 (53015-0610 (6P): Counter part 51004-0600 (6P) manufactured by Molex) Connector 3 (51004-0600 (6P): Counter part 57014-0610 (6P) manufactured by Molex)		
Paper feeding	Friction feeding or sprocket feeding		
Printing paper	Friction feeding: 76mm roll paper × ø83mm / Sprocket feeding: 76-89mm fanfold paper		
Copy	Friction feeding: original + 1 copy / Sprocket feeding: original + 2 copies		
Paper feeding power	More than 100g (Citizen recommended paper)		
Ink ribbon	Single color (Black or purple)		
Paper feeding speed	Approx. 25 lines/sec		
External dimensions (W × D × H)	140.9 × 153.2 × 63.5mm		
Weight	Approx. 730g		
Operating temp. range	0 ~ 50°C		
Reliability	Printer: MCBF 5.0 million lines / Head: 80 million characters		

### Type Classification

DP-654DFCV

1) 2) 3) 4) 5)

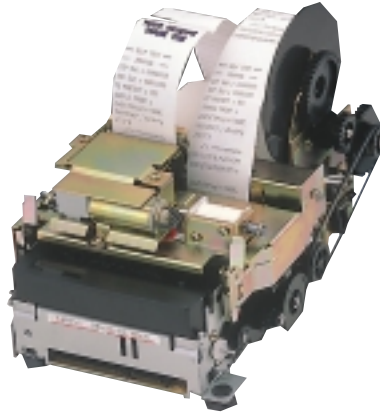
- 1) Type  
654: 40 columns (360dots)  
657: 40 columns (400dots)
- 2) Ribbon  
L: Left to right  
R: Right to left
- 3) Paper feeding method  
F: Friction feeding  
P: Sprocket feeding
- 4) Paper path  
C: Character only  
G: Graphic
- 5) Paper pressure  
None: No validation  
V: Equipped

DP-624MPCS

1) 2) 3) 4) 5)

- 1) Type  
622: 28 columns  
624: 40 columns (360 dots)  
627: 40 columns (400 dots)
- 2) Ribbon  
M: 1 color
- 3) Paper feeding method  
F: Friction feeding  
P: Sprocket feeding
- 4) Copy capability  
None: No sensor  
S: with sensor
- 5) Auto loading sensor  
None: No sensor  
S: with sensor

# Impact Dot Matrix Printer Mechanisms



## Options

- Validation sensor
- Paper winder
- Mark sensor
- Auto cutter
- Paper near end sensor
- Stamp

## Accessories

**Paper winder**  
PW-2

**Ink ribbon**  
IR-61

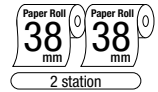


## Options

- Validation sensor
- Paper winder
- Mark sensor
- Auto cutter
- Paper near end sensor
- Stamp

## Accessories

**Ink ribbon**  
IR-71



## DP-630

- 2 station printing
- 38+38mm paper width
- 24V operation
- 3.0 lines/sec speed printing
- Validation printing (option)

### Specifications

Model	DP-630
Printing method	Serial impact dot matrix
Printing direction	Bi-directional
Font	7 × 9 matrix
Number of columns (validation)	18 columns × 2 (40 columns)
Number of total dot/line (half dot)	180 (360) dots
Number of wires	9 pins (dot pitch 0.353mm)
Printing speed	Approx. 3.0 lines/sec
Character size (W × H)	1.36 × 2.4mm
Line spacing	5.08mm
Character pitch	Character = 1.59mm
Ink ribbon	Exclusive ink ribbon cartridge (single color, black or purple) IR-61
Motor	Voltage: 24V +1/-2V DC / Current: Peak Approx. 1A Average less than 0.2A
Reset pulse sensor	Mechanical leaf switch
Dot pulse sensor	Photo interrupter
Home position sensor	Photo interrupter
Printing solenoid	Voltage: 24V ±1V DC Resistance: 17Ω
Paper feeding solenoid	Voltage: 24V +1/-2V DC Resistance: 32Ω ±10%
Connecting method	Pin connector
Paper feeding	Friction feed
Printing paper Receipt and journal	37 — 38mm / Outer dia Max. φ83mm
Paper feeding speed	18 lines/sec
External dimensions (W × D × H)	134 × 136 × 63.5mm
Weight	Approx. 690g
Operating temp. range	0 ~ 50°C
Storage temp. range	-25 ~ 70°C
Reliability	Mechanism MCBF 2.5 million lines Head 50 million characters



## DP-730

- 2 station printing
- 45+45mm paper width
- 24V operation
- 3.0 lines/sec speed printing
- Validation printing (option)

### Specifications

Model	DP-730
Printing method	Serial impact dot matrix
Printing direction	Bi-directional
Font	7 × 9 matrix
Number of columns (validation)	24 columns × 2 (55 columns)
Number of total dot/line (half dot)	248 (495) dots
Number of wires	9 pins (dot pitch 0.353mm)
Printing speed	Approx. 3.0 lines/sec
Character size (W × H)	1.36 × 2.4mm or 1.36 × 3.1mm
Line spacing	4.23mm (1/6 inch)
Character pitch	Character = 1.59mm
Ink ribbon	Exclusive ink ribbon cartridge (single color, black or purple) IR-71
Motor	Voltage: 24V ±10% / Current: Peak Approx. 2.5A Average less than 0.45A
Reset pulse sensor	Mechanical leaf switch
Dot pulse sensor	Photo interrupter
Home position sensor	Photo interrupter
Printing solenoid	Voltage: 24V ±10% / Resistance: 10.5Ω ±10%
Paper feeding solenoid	Voltage: 24V ±10% / Resistance: 34Ω ±10%
Connecting method	Pin connector
Paper feeding	Friction feed
Printing paper Receipt and journal	44.5 ±0.5mm / Outer dia Max. φ83mm
Validation	135 — 210 (W) × 70 (H) mm
Paper feeding speed	30 lines/sec
External dimensions (W × D × H)	151 × 234.6 × 123.7mm
Weight	Approx. 1,250g
Operating temp. range	0 ~ 50°C
Storage temp. range	-25 ~ 70°C
Reliability	Mechanism Head MCBF 4 million lines 100 million characters

### Type Classification

DP-630 V-S C

1) 2) 3)

- 1) Validation sensor V: Equipped  
None: No validation sensor
- 2) Stamp S: Equipped  
None: No stamp
- 3) Cutter C: Equipped  
None: No cutter

DP-730 F R C B

1) 2) 3)

- 1) Validation sensor R: No validation sensor  
M: Multi-line validation sensor  
P: 1 line L/R sensor  
None: 1 line right sensor
- 2) Cutter C: Equipped  
None: No cutter
- 3) Winder W: Equipped  
None: No winder

# Printer Mechanisms Lineup

## Line Thermal Printer Mechanisms

### LT-286

- 58mm paper width
- 5V operation
- 50mm/sec printing speed
- Compact design

▶ P23



### MLT-288

- 58mm paper width
- 5V operation
- 52.5mm/sec printing speed
- Ultra compact design

▶ P24



### LT-289

- 58mm paper width
- 5V operation
- 52.5mm/sec printing speed
- Ultra compact design
- Platen removable design

▶ P25



### MLT-388

- 80mm paper width
- 5V operation
- 60mm/sec printing speed
- Ultra compact design

▶ P26



### MLT-389

- 80mm paper width
- 5V operation
- 60mm/sec printing speed
- Ultra compact design
- Platen removable design

▶ P26



### LT2220

- 58mm paper width
- 24V operation
- 150mm/sec high-speed printing
- Thick paper up to 0.15mm(LT2220A)
- Compact design

▶ P27



### LT2320

- 80mm paper width
- 24V operation
- 150mm/sec high-speed printing
- Thick paper up to 0.15mm(LT2320A)
- Compact design

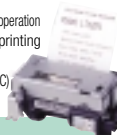
▶ P27



### LT2221 / 2221C

- 58mm paper width
- 24V operation
- 150mm/sec high-speed printing
- Platen removable design
- Auto cutter equipped(LT2221C)
- Compact design

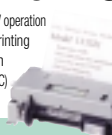
▶ P28



### LT2321 / 2321C

- 80mm paper width
- 24V operation
- 150mm/sec high-speed printing
- Platen removable design
- Auto cutter equipped(LT2321C)
- Compact design

▶ P28



### LT-281

- 60mm paper width
- 24V operation
- 101.6mm/sec high-speed printing
- High reliability due to heavy duty design

▶ P29



### LT-481

- 112mm paper width
- 24V operation
- 100mm/sec high speed printing
- High reliability due to heavy duty design

▶ P29



### LT-483

- 2 station printing
- 50+50mm paper width
- 24V operation
- 100mm/sec high speed printing
- High reliability due to heavy duty design

▶ P30



### LT1322

- 2 station printing
- 38+38mm paper width
- 24V operation
- 80mm/sec speed printing

▶ P30

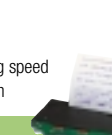


## Impact Dot Matrix Printer Mechanisms

### MD-910 / 911

- 58mm paper width
- 5V operation
- 2.5 lines/sec printing speed
- Ultra compact design

▶ P31



### DP-320 / 330

- 58/76mm paper width
- 24V operation
- 5.6/4.3 lines/sec high-speed printing
- Logic seeking control
- 2 color printing

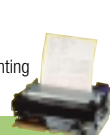
▶ P32



### DP-420 / 430

- 76mm paper width
- 24V operation
- 3.0 lines/sec speed printing
- 2 color printing

▶ P32



### DP-555 / 575

- 58/69mm paper width
- 12/17V operation
- 1.9/1.2 lines speed printing
- 2 color printing

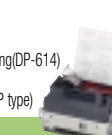
▶ P33



### DP-61X SERIES

- 76mm paper width
- 24V operation
- 3.0 lines/sec speed printing(DP-614)
- 2 color printing
- Sprocket feeding model (P type)

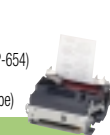
▶ P33



### DP-654 / 657

- 76mm paper width
- 24V operation
- 3.6 lines/sec speed printing(DP-654)
- 2 color printing
- Sprocket feeding model (P type)

▶ P34



### DP-62X SERIES

- 76mm paper width
- 24V operation
- 3.6 lines/sec speed printing(DP-654)
- 2 color printing
- Sprocket feeding model (P type)

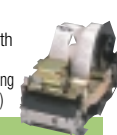
▶ P34



### DP-630

- 2 station printing
- 38+38mm paper width
- 24V operation
- 3.0 lines/sec speed printing
- Validation printing (option)

▶ P35



### DP-730







- 2 station printing
- 45+45mm paper width
- 24V operation
- 3.0 lines/sec speed printing
- Validation printing (option)

▶ P35



# Accessories / Options

## Specifications

Model	Printer mechanism	Interface	Number of columns	Font	Command set	Bar-code	Firmware location	Buffer	Supporting devices	Dimensions (W×D)	Source voltage	Custom control chip	Gate array
<b>BD2-1220/1221</b> 	LT1220/1320/ 1221/1321	Parallel and RS-232C	LT1220/1221 : 32/42 LT1320/1321 : 48/64	Font A: 12×24 dots Font B: 9×24 dots	ESC/ POS	Supported	Flash memory	4K bytes	Auto cutter Paper sensor Head-up sensor LF switch Error LED Paper out LED	90 × 65mm	5V ±5% and 24V ±5%	—	202LA-00
<b>BD2-2860</b> 	LT-286	Parallel and RS-232C	Font A: 32 Font B: 42	Font A: 12×24 dots Font B: 9×24 dots	ESC/ POS	Supported	Masked CPU	2K bytes	Auto cutter Paper sensor Head-up sensor LF switch Error LED Paper out LED	80 × 80mm	5V ±5%	202PC- 04	202LA-00
<b>BD2-2880 / 2890</b> 	MLT- 288/289	Parallel and RS-232C	Font A: 32 Font B: 42	Font A: 12×24 dots Font B: 9×24 dots	ESC/ POS	Supported	Flash memory	2K bytes	Auto cutter Paper sensor Head-up sensor LF switch Error LED Paper out LED	80 × 75mm	5V ±5%	—	202LA-00
<b>BD2-3880 / 3890</b> 	MLT- 388/389	Parallel and RS-232C	Font A: 48 Font B: 64	Font A: 12×24 dots Font B: 9×24 dots	ESC/ POS	Supported	Flash memory	2K bytes	Auto cutter Paper sensor Head-up sensor LF switch Error LED Paper out LED	90 × 80mm	5V ±5%	—	202LA-00
<b>BD1-3000</b> 	DP-320/330	Parallel and RS-232C, USB	DP-320: 30 DP-330: 42	7 x 9	ESC/ POS	—	Flash memory	4K/ 40 bytes	Auto cutter Auto winder Paper end sensor Paper near end sensor LED's (Power/Error/On-line) Switches(LF/On-line)	132 x 126mm	5V ±5% and 24V ±5%	—	—
<b>CBM-909</b> 	MD-911	Parallel and serial	MD-911: 40	MD-911: 4×7 (including half dot)	Unique	—	Masked CPU	1 line	LF switch On-line switch	80×55.5mm	4V +0.7/−1.0V	909PC- 4D	—

\*ESC/POS is a trademark of Seiko Epson Corporation.

## Control Chip / Gate Array











### Control Chip

Model	202PC-04	909PC-4DU
Printer mechanism	LT-286	MD-911
		







### Gate Array

Model	202LA-00
Printer mechanism	LT-series
	


## Cutters

Model	Cutting Method	Paper width thickness	Max. cutting frequency	Voltage	Current (peak)	Operating temperature	Size	Weight	Reliability	Number of tab left (F)ull cut blade type (P)article cut blade type	Applicable mechanism (cutter model name with mounting bracket and paper guide)
 AC-120	Guillotine	38 — 69mm 0.06—0.09mm	20cuts/min	24V±10%	0.8A	0 — 45°C	80×57×15mm	130g	300,000cuts	None or 1 tab 2 or 3 tabs	CT1220/2220(AC-125) LT2220(AC-125)
 AC-130	Guillotine	50 — 89mm 0.06—0.09mm	20cuts/min	24V±10%	0.8A	0 — 45°C	102×57×15mm	160g	300,000cuts	None or 1 tab 2 or 3 tabs	DP-6XX(AC-134) LT2320 (AC-135)
 ACS-220	Slide cutting	45 — 69mm 0.06—0.15mm	20cuts/min	24V±10%	0.8A	0 — 45°C	80×55.7×15mm	140g	500,000cuts	None None or 1 tab	LT-286 (ACS-224) 5V CT1220/2220(AC-225) MLT-288 (ACS-228) 5V LT-281 (ACS-229)
 ACS-230	Slide cutting	50 — 89mm 0.06—0.15mm	20cuts/min	24V±10%	0.8A	0 — 45°C	102×55.7×15mm	180g	500,000cuts	None None or 1 tab	DP-420 (ACS-234) DP-430 (ACS-234) CT1320/2320(ACS-235) MLT-388 (ACS-238) 5V DP-320/330 (ACS-236)
 ACS-240	Slide cutting	55 — 115mm 0.06—0.13mm	20cuts/min	24V±10%	0.8A	0 — 45°C	130×55.7×15mm	220g	300,000cuts	None None or 1 tab	LT481 (ACS-249)
 AC-2	Guillotine	76 ± 0.5mm 0.06—0.085mm	20cuts/min	24V±10%	0.8A	0 — 40°C	99×74×30mm	200g	300,000cuts	None or 1 tab 2 or 3 tabs	DP-6XX (AC-2)
 AC-3	Guillotine	76 ± 0.5mm 0.06—0.085mm	20cuts/min	12V±10%	1.2A	0 — 40°C	93×74×25mm	200g	300,000cuts	None or 1 tab 2 or 3 tabs	DP-5XX (AC-3)
 AC-4	Guillotine	49.5 ± 0.5mm 0.063mm	6cuts/min	24V±10%	1.3A	5 — 40°C	60×55×23mm	260g	300,000cuts	None or 1 tab several tabs	LT-483 (AC-4)
 AC-5	Guillotine	59.5 ± 0.5mm 0.065mm	6cuts/min	24V±10%	1.3A	5 — 40°C	70×55×31.7mm	160g	300,000cuts	None or 1 tab several tabs	LT-281 (AC-5)
 AC-6	Guillotine	111.5 ± 0.5mm 0.065mm	6cuts/min	24V±10%	1A	5 — 40°C	130×55×21.5mm	260g	300,000cuts	None or 1 tab several tabs	LT-481 (AC-6)

## Ribbons

Model	IR-01 RB/BL/P	IR-31 RB/B/P	IR-41 RB/B/P	IR-61 RB/B/P	IR-71P	IR-82P	IR-91 P/B IR-91 L(ling liife)
Mini printers	—	CD-S500/501/503	DP3420/3421/3423	DP3550/3551	—	CBM-820	CBM-910/920
Printer mechanism	DP-555/575	DP-320/330	DP-420/430	DP-6XX	DP-730	—	MD-910/911
							

## Winders

Model	NW-58 NW-69	AW-5
Printer mechanism	DP-555/575	MD-910/911
		

# Accessories / Options

## Accessory Reference Table

### Line Thermal Printer Mechanisms

Model		LT-286	MLT-288	MLT-388	LT2220	LT2320	LT2221	LT2321	LT-281	LT-481	LT-483
Ribbon	IR-01RB/B/P										
	IR-31RB/B/P										
	IR-41RB/B/P										
	IR-61RB/B/P										
	IR-61B/P										
	IR-71P										
	IR-82P										
	IR-91B/P										
Cutter	AC-12X										
	AC-13X										
	AC-22X								ACS-229		
	ACS-22X(5V)	ACS-224	ACS-228		ACS-228						
	ACS-23X					ACS-228					
	ACS-23X(5V)										
	ACS-24X									ACS-249	
	AC-2										
	AC-3										
	AC-4										●
Winder	AC-5								●		
	AC-6									●	
	NW-58										
	NW-69										
	PW-2										
	AW-2										
	AW-2FA										
	AW-3										
	AW-4										●
	AW-5										

### Impact Dot Matrix Printer Mechanisms

Model		MD-910 MD-911	DP-320 DP-330	DP-420 DP-430	DP-555 DP-575	DP-61X	DP-65X	DP-62X	DP-630	DP-730
Ribbon	IR-01RB/B/P				●					
	IR-31RB/B/P		●							
	IR-41RB/B/P			●						
	IR-61RB/B/P					●	●			
	IR-61B/P							●	●	
	IR-71P									●
	IR-82P									
	IR-91B/P	●								
Cutter	AC-12X									
	AC-13X					AC-134	AC-134	AC-134		
	ACS-22X									
	ACS-22X(5V)									
	ACS-23X		ACS-236	ACS-234						
	ACS-23X(5V)									
	ASC-24X									
	AC-2					●	●			
	AC-3				●					
	AC-4									
Winder	AC-5									
	AC-6									
	NW-58				●					
	NW-69				●					
	PW-2									
	AW-2								●	
	AW-2FA			●		●	●	●		
	AW-3									
	AW-4									
	AW-5	●								



Peripherals



# Cash Drawers

- 8 coin drawer  
420(W) × 450(D) × 98(H) mm
- 5 coin drawer  
420(W) × 420(D) × 98(H) mm

### Model Classification

**23 8 5 E-DR-MS**  
(1) (2)(3)(4) (5)

- (1) Connector  
23 - Modalar (RJ-11)
- (2) Number of coins  
8 or 5
- (3) Number of bills  
5 or 4
- (4) Key option  
E : 3 position key  
None : 2 position key
- (5) Microswitch option  
MS: Microswitch equipped  
None : No microswitch



# Customer Display

- 8 coin drawer  
420(W) × 450(D) × 98(H) mm
- 5 coin drawer  
420(W) × 420(D) × 98(H) mm

### Specifications

MODEL	C2202-PD
Display method	Vacuum fluorescent display
Display color	Blue green
Number of character	20 columns x 2 lines
Brightness	700 cd/m <sup>2</sup>
Character font	5 x 7 dot matrix, comma, decimal point
Character size	9.2 x 5.25 mm
Character pitch	8.3 mm
Code page	PC-437 / 850 / 860 / 863 / 865, Slavonic, Russian, Katakana
Emulation	CBM standard, ESC/POS
Interface	RS-232C (with path through function)
Power supply	12V DC
Power consumption	4.5 W
MTBF	25,000 hours
Dimensions	230(W) x 100(H) x 42(D) mm
Viewing angle	±30 degrees
Rotation angle	Maximum 270 degrees
Weight	0.9 kg
Safety	FCC class B, CE

### Included items

- Display unit
- AC adapter
- Base unit
- AC cable
- Short pole
- Long pole
- Interface cable  
(DB25 female - DB9 male)
- User's manual



Available in black

## Accessory Reference Table

### Complete Printers

Model	CT-S300 CT-S2000 CBM1000 Type II CT-S2000 CBM-262 Type II	CD-S500 CD-S501 CD-S503	iDP3550 iDP3551	iDP3420 iDP3421 iDP3423	CBM-910 Type II CBM-920	CBM-820
RIBBON	—	IR-31RB/B/P	IR-61RB/B/P	IR-41RB/B/P	IR-91B/P	IR-82P
WINDER	—	●(CD-S503)	AW-3	●(iDP3423)	—	—
DRAWER	23XXDR	23XXDR	23XXDR	23XXDR	—	23XXDR

### Printer Mechanisms

#### Impact Dot Matrix

Model	MD-910 MD-911	DP-320 DP-330	DP-420 DP-430	DP-555 DP-575	DP-614	DP-62X	DP-630	DP-730
RIBBON	IR-91B/P	IR-31RB/B/P	IR-41RB/B/P	IR-01RB/B/P	IR-61RB/B/P	IR-61RB/B/P	IR-61RB/B/P	IR-71P
CUTTER	—	—	ACS-234	AC-3 ACS-236	AC-134 ACS-236 AC-2	AC-134	—	AC-5 AC-7
WINDER	AW-5	AW-2FA	AW-2FA NW-69	NW-58	AW-2FA	AW-2FA	AW-2	—

#### Line Thermal

	LT-286	MLT-288	MLT-289	CT1220 LT2220	CT1221 LT2221	CT1320 LT2320	CT1321 LT2321	LT-481	LT-281	LT-483
RIBBON	—	—	—	—	—	—	—	—	—	—
CUTTER	ACS-224	ACS-228	—	ACS-225	—	ACS-235	—	ACS-249	ACS-229 AC-5	—
WINDER	—	—	—	—	—	—	—	—	—	AW-4



## CITIZEN SYSTEMS JAPAN CO.,LTD.

**OVERSEAS SALES DEPT., SALES DIVISION :**

6-1-12,TANASHI-CHO,NISHI-TOKYO-SHI,TOKYO 188-8511,JAPAN

Tel.(81)-424-68-4608 Fax.(81)-424-68-4996

<http://www.citizen-systems.co.jp>

e-mail : [sales-op@systems.citizen.co.jp](mailto:sales-op@systems.citizen.co.jp)

CITIZEN IS A REGISTERED TRADEMARK OF CITIZEN WATCH CO., LTD., JAPAN

All specifications are subject to change without prior notice.

All trademarks or registered trademarks are the property of their respective owners.

Printed in Japan



Printed on 100% recycled paper

## Free Manuals Download Website

<http://myh66.com>

<http://usermanuals.us>

<http://www.somanuals.com>

<http://www.4manuals.cc>

<http://www.manual-lib.com>

<http://www.404manual.com>

<http://www.luxmanual.com>

<http://aubethermostatmanual.com>

Golf course search by state

<http://golfingnear.com>

Email search by domain

<http://emailbydomain.com>

Auto manuals search

<http://auto.somanuals.com>

TV manuals search

<http://tv.somanuals.com>