PRINTER	2007-1

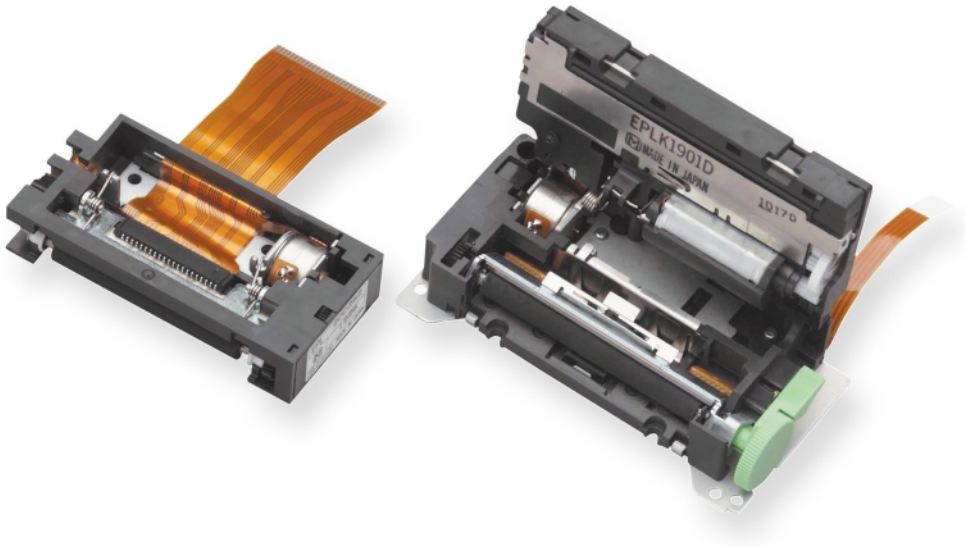
PRODUCT GUIDE

CITIZEN
Micro HumanTech

Leading Technology for Humanity

THERMAL PRINTER MECHANISM

EP SERIES



EPL5100 series

EPL2000 series

EPL1900 series

EPL1700 series

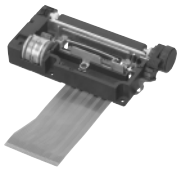
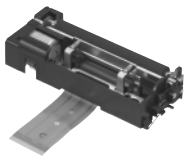
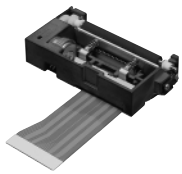
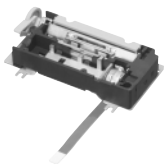
EPL1600 series

CITIZEN SYSTEMS JAPAN CO., LTD.

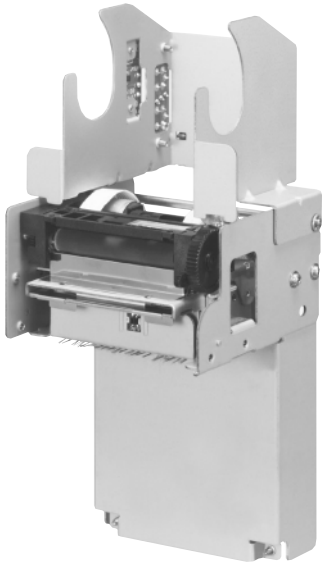
Figure of Product Number

Input/Output Units-Printer Unit

Quick Guide

Page	Series/Type	Part Number	Style	Features
3	Line Thermal Printer Unit (Subassembly) EPL5102T2	EPL5102T2		・24 V DC ・Head resolution : 8 dots/mm ・Control circuit is included ・Wide operating temperature (-20 ˚C to 70 ˚C) ・Paper width : 2 inch ・Paper auto cutter
4	Line Thermal Printer Unit (Subassembly) EPL5104T2	EPL5104T2		・24 V DC ・Head resolution : 8 dots/mm ・Control circuit is included ・Wide operating temperature (-20 ˚C to 70 ˚C) ・Paper width : 2 inch ・Paper auto cutter
5	Line Thermal Printer Unit Series:EPL2050	EPL205XXXXXX		・4.2 V DC to 8.5 V DC ・Greatly reduce the current of the printer head ・Head resolution : 8 dots/mm ・Paper width : 2 inch ・Small size, Light weight ・Paper auto cutter
6	Line Thermal Printer Unit Series:EPL2030	EPL203XXXXXX		・4.2 V DC to 8.5 V DC ・Head resolution : 8 dots/mm ・Platen Roller separated ・Paper width : 3 inch
7	Line Thermal Printer Unit Series:EPL2000	EPL200XXXXXX		・4.2 V DC to 8.5 V DC ・Head resolution : 8 dots/mm ・Platen Roller separated ・Greatly reduce the current of the printer head ・Paper width : 2 inch ・Small size, Light weight ・Paper auto cutter
8	Line Thermal Printer Unit Series:EPL1950	EPL195XXXXXX		・24 V DC ・Head resolution : 8 dots/mm ・Paper width : 2 inch ・Small size, Light weight ・Paper auto cutter
9	Line Thermal Printer Unit Series:EPL1900	EPL190XXXXXX		・5 V DC ・Head resolution : 12 dots/mm ・Paper width : 2 inch ・Small size, Light weight ・Paper auto cutter
10	Line Thermal Printer Unit Series:EPL1700	EPL170XXXXXX		・24 V DC ・Head resolution : 8 dots/mm ・Paper width : 2, 3, 4 inch ・Curl path and Straight path type
11	Line Thermal Printer Unit Series:EPL1600	EPL160XXXXXX		・4.2 V DC to 8.5 V DC ・Head resolution : 8 dots/mm ・Paper width : 2, 3, 4 inch ・Curl path and Straight path type

Line Thermal Printer Unit



EPL5102T2

Line Thermal Printer Unit

This printer unit has wide operating-temperature features and is suitable for the receipt or ticket issuing machines that are installed in open-air pubic facilities including gas stations, parking lots, and stations.
Its built-in auto paper cutter, recording-paper holder, and control circuit make it easy to install itself in a variety of equipment.

Features

- Wide operating temperature range (-20 ˚C to 70 ˚C)
- Auto paper cutter is attached
- Paper low sensor and JAM sensor is included
- Feed switch and Initial switch is included
- Control circuit is included
- Barcode printing : UPC,JAN,EAN,CODE39,ITF,NW7

Applications

- Receipt
- Ticket

Specifications

		EPL5102T2 (With auto paper cutter)
Printer	Resolution	8 dots/mm
	Total number of dots	432 dots/line
	Printing speed	480 dot-lines/s [max.] (60 mm/s)
	Paper width	60 mm
	Reliability	5×10^7 pulses, 50 km
Auto paper cutter	Cutting method	FULL cut
	Reliability	0.3 million times (M.C.B.F)
Control circut	Input/Output method	Parallel (simplified centronics)
	Built-in characters	364 types
	Character types	Extended graphics character set KATAKANA character set International character set KANJI, External character, Download character
	Character size	ANK : 24 dots(H)×16 dots(W) ANK : 16 dots(H)× 8 dots(W) KANJI : 24 dots(H)×24 dots(W) KANJI : 16 dots(H)×16 dots(W)
	Number of colums / line	27 (24 dots×16 dots characters) 54 (16 dots× 8 dots characters)
	Operating voltage	5 V DC ±0.25 V DC [logic] 24 V DC ±1.2 V DC [printer power]
Operating temp. range		-20 ～ 70 ˚C, 25 ～ 90(40 ˚C) %RH(No condensation)
Storage temp. range		-40 ～ 60 ˚C, 25 ～ 90 %RH(No condensation)
Weight		Approx. 1,200 g
Dimensions (W×D×H)		115 mm×202 mm×306 mm

EPL5104T2

Line Thermal Printer Unit

This printer unit has wide operating-temperature features and is suitable for the receipt or ticket issuing machines that are installed in open-air public facilities including gas stations, parking lots, and stations.
Its built-in auto paper cutter, recording-paper holder, and control circuit make it easy to install itself in a variety of equipment.

Features

- Wide operating temperature range (-20 ℃ to 70 ℃)
- Auto paper cutter is attached
- Paper low sensor and JAM sensor is included
- Feed switch and Initial switch is included
- Control circuit is included
- Barcode printing : UPC,JAN,EAN,CODE39,ITF,NW7

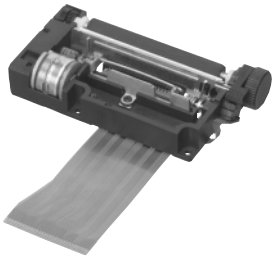
Applications

- Receipt
- Ticket

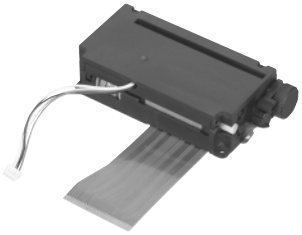
Specifications

		EPL5104T2 (With auto paper cutter)
Printer	Resolution	8 dots/mm
	Total number of dots	432 dots/line
	Printing speed	480 dot-lines/s [max.] (60 mm/s)
	Paper width	60 mm
	Reliability	5×10^7 pulses, 50 km
Auto paper cutter	Cutting method	FULL cut
	Reliability	0.3 million times (M.C.B.F)
Control circut	Input/Output method	Parallel (simplified centronics)
	Built-in characters	364 types
	Character types	Extended graphics character set KATAKANA character set International character set KANJI, External character, Download character
	Character size	ANK : 24 dots(H)×16 dots(W) ANK : 16 dots(H)× 8 dots(W) KANJI : 24 dots(H)×24 dots(W) KANJI : 16 dots(H)×16 dots(W)
	Number of colums / line	27 (24 dots×16 dots characters) 54 (16 dots× 8 dots characters)
	Operating voltage	5 V DC ±0.25 V DC [logic] 24 V DC ±1.2 V DC [printer power]
Operating temp. range		-20 ～ 70 ℃, 25 ～ 90(40 ℃) %RH(No condensation)
Storage temp. range		-25 ～ 70 ℃, 25 ～ 90 %RH(No condensation)
Weight		Approx. 1,700 g
Dimensions (W×D×H)		124.0 mm×125.0 mm×370.0 mm

Line Thermal Printer Unit



EPL2052S2



EPL2054S2
(with auto paper cutter)

EPL2050

Line Thermal Printer Unit

This unit is a line thermal printer with small size and light weight which can be driven by batteries. When a recording paper is inserted, it is automatically loaded.

Features

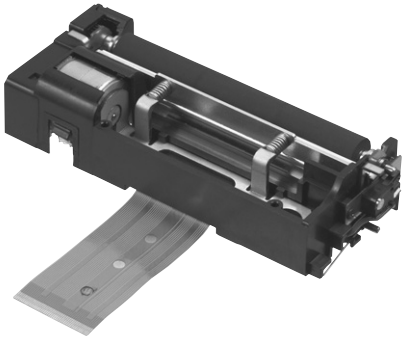
- Connector of printer is 1 FPC
- Small size, Light weight

Applications

- EFT-POS terminal
- PDA
- Handy instrument
- Portable terminals

Specifications

		EPL2052S2	EPL2054S2 (With auto paper cutter)
Resolution		8 dots/mm	
Total number of dots		384 dots/line	
Printing speed		500 dot-lines/s [max.](62.5 mm/s)	
Paper width		58 mm	
Number of colums / line		32 (24 dots×12 dots characters)	
Reliability		1×10^8 pulses, 100 km	
Operating voltage	Head, Motor	4.2 V DC to 8.5 V DC	
	Logic	2.7 V DC to 5.25 V DC	
	Auto paper cutter	–	4.2V DC to 6.0 V DC
Current	Head	1.3 A [max.](at 7.2 V, 64 dots coloring)	
	Motor	0.5 A [max.]	
Cutting method		–	PARTIAL cut
Cutting time		–	0.8 s
Cutting life		–	0.3 million times (M.C.B.F)
Operating temp. range		0 ～ 50 ℃, 35 ～ 85 %RH (No condensation)	5 ～ 40 ℃, 35 ～ 80 %RH (No condensation)
Storage temp. range		-25 ～ 70 ℃, 5 ～ 90 %RH (No condensation)	-20 ～ 70 ℃, 5 ～ 90 %RH (No condensation)
Weight		Approx. 50 g	Approx. 90 g
Dimensions (W×D×H)		69 mm×37 mm×12.5 mm	72 mm×42.2 mm×20 mm



EPL2030

Line Thermal Printer Unit

This unit is a 3-inch line thermal printer with small size and light weight which can be driven by batteries and has a platen-separated structure to make it easy to insert a recording paper.
It has also a lock-mechanism to remove or attach the platen.

Features

- Easy paper loading
- Connector of printer is 1 FPC
- Small size, Light weight

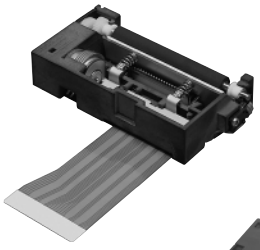
Applications

- EFT-POS terminal
- PDA
- Handy instrument
- Medical Measurement

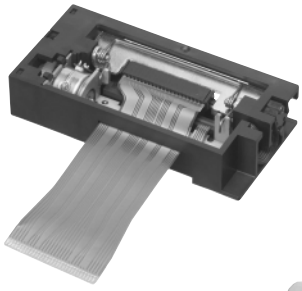
Specifications

		EPL2031S3A
Resolution		8 dots/mm
Total nember of dots		576 dots/line
Printing speed		560 dot-lines/s [max.] (70 mm/s)
Paper width		80 mm
Number of colums / line		48 (24 dots × 12 dots characters)
Reliability		1×10^8 pulses, 100 km
Operating voltage	Head, Motor	4.2 V DC to 8.5 V DC (Li-ion, Ni-MH, Ni-Cd)
	Logic	2.7 V DC to 5.25 V DC
Current	Head	2.5 A [max.] (at 7.2 V, 64 dots coloring)
	Motor	0.7 A [max.]
Operating temp. range		0 ～ 50 ℃, 35 ～ 85 %RH(No condensation)
Storage temp. range		-25 ～ 70 ℃, 5 ～ 90 %RH(No condensation)
Weight		Approx. 75 g
Dimensions (W×D×H)		100.6 mm × 40 mm × 22 mm

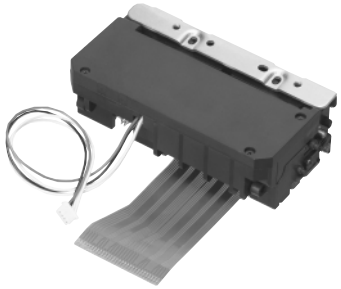
Line Thermal Printer Unit



EPL2001S2



EPL2002S2



EPL2003S2
(with auto paper cutter)

EPL2000

Line Thermal Printer Unit

This unit is a line-thermal printer with small size and light weight which can be driven by batteries and has a platen-separated structure to make it easy to insert a recording paper.
It has also features that greatly reduce the current of the printer head (approx. 50 % reduction compared with our current models).
Two different types are available: one type (EPL2001, 2003) is installed horizontally and the other (EPL2002) vertically.

Features

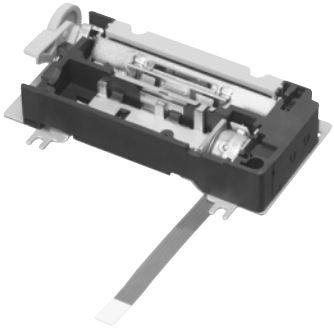
- Easy paper loading
- The current of thermal head is 50 % less
- Connector of printer is 1 FPC
- Small size, Light weight

Applications

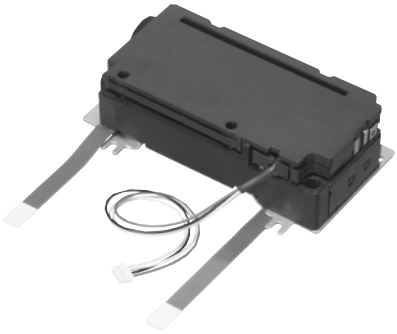
- EFT-POS terminal
- PDA
- Handy instrument
- Medical Measurement

Specifi cations

		EPL2001S2	EPL2002S2	EPL2003S2 (With auto paper cutter)
Resolution		8 dots/mm		
Total nember of dots		384 dots/line		
Printing speed		450 dot-lines/s [max.] (56.25 mm/s)		
Paper width		58 mm		
Number of colums / line		32 (24 dots×12 dots characters)		
Reliability		1×10^8 pulses, 100km		
Operating voltage	Head, Motor	4.2 V DC to 8.5 V DC (Li-ion, Ni-MH, Ni-Cd)		
	Logic	2.7 V DC to 5.25 V DC		
	Auto paper cutter	–		4.2 V dc to 5.5 V dc
Current	Head	1.3 A [max.] (at 7.2 V, 64 dots coloring)		
	Motor	0.5 A [max.]		
Cutting method		–		PARTIAL cut
Cutting time		–		0.8 s
Cutting life		–		0.3 million times (M.C.B.F)
Operating temp. range		0 ～ 50 ℃, 35 ～ 85 %RH (No condensation)	0 ～ 50 ℃, 35 ～ 85 %RH (No condensation)	5 ～ 40 ℃, 35 ～ 80 %RH (No condensation)
Storage temp. range		-25 ～ 70 ℃, 5 ～ 90 %RH (No condensation)	-25 ～ 70 ℃, 5 ～ 90 %RH (No condensation)	-20 ～ 70 ℃, 5 ～ 90 %RH (No condensation)
Weight		Approx. 50 g	Approx. 50 g	Approx. 100 g
Dimensions (W×D×H)		72 mm×37 mm×16 mm	78 mm×38 mm×16 mm	76 mm×44.3 mm×25.4 mm



EPL1952S2C



EPL1954S2C
(with auto paper cutter)

EPL1950

Line Thermal Printer Unit

This unit is a line thermal printer with a built-in auto cutter that is designed compactly and is driven by 24V DC.

Features

■ Small size, Light weight
■ Option(Paper auto cutter)

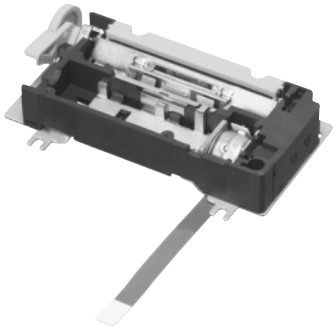
Applications

- EFT-POS terminal
- Electronic cash register
- Medical Measurement

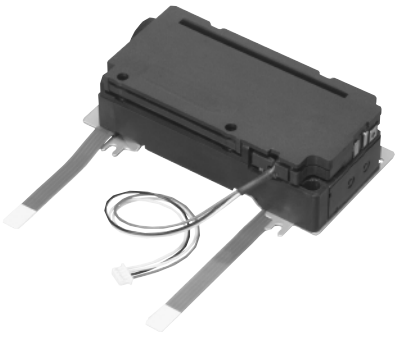
Specifi cations

		EPL1952S2C	EPL1954S2C (With auto paper cutter)
Resolution		8 dots/mm	
Total number of dots		432 dots/line	
Printing speed		600 dot-lines/s [max.] (75 mm/s)	
Paper width		58 mm	
Number of colums / line		36 (24 dots×12 dots characters)	
Reliability		1×10^8 pulses, 50 km	
Operating voltage	Head, Motor Auto paper cutter	24 V DC ± 2.4 V DC	
	Logic	5 V DC ± 0.25 V DC	
Current	Head	2.5 A [max.] (at 26.4 V, 144 dots coloring)	
	Motor	0.3 A [max.]	
Cutting method		–	PARTIAL cut
Cutting time		–	0.7 s
Cutting life		–	0.3 million times (M.C.B.F)
Operating temp. range		5 ～ 50 ℃, 35 ～ 80 %RH(No condensation)	
Storage temp. range		-20 ～ 70 ℃, 5 ～ 90 %RH(No condensation)	
Weight		Approx. 75 g	Approx. 130 g
Dimensions (W×D×H)		82 mm×41 mm×15.8 mm	82 mm×41 mm×25 mm

Line Thermal Printer Unit



EPL1902S2C



EPL1904S2C
(with auto paper cutter)

EPL1900

Line Thermal Printer Unit

This unit is a line thermal printer with a high-resolution thermal head (12 dots/mm) and an auto paper cutter can be in stalled in it.

Features

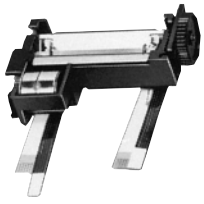
- High resolution head (12 dots/mm)
- Small size, Light weight
- Option (Auto paper cutter, Attachment plate, Paper feeding knod)

Applications

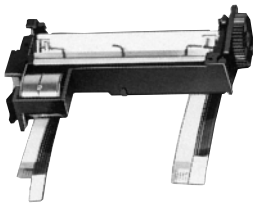
- EFT-POS terminal
- Electronic cash register
- Medical Measurement

Specifi cations

		EPL1902S2C	EPL1904S2C (With auto paper cutter)
Resolution		12 dots/mm	
Total number of dots		576 dots/line	
Printing speed		300 dot-lines/s [max.] (25.4 mm/s)	
Paper width		58 mm	
Number of colums / line		36 : 38 dots×16 dots characters	
Reliability		5×10^7 pulses, 30 km	
Operating voltage	Head, Motor Auto paper cutter	5 V DC ± 0.5 V DC	
	Logic	5 V DC ± 0.25 V DC	
Current	Head	2.5 A [max.] (at 5.5 V, 144 dots coloring)	
	Motor	0.65 A [max.] (at 5.5 V)	
Cutting method		–	PARTIAL cut
Cutting time		–	0.8 s
Cutting life		–	0.3 million times (M.C.B.F)
Operating temp. range		-5 ～ 50 ℃, 35 ～ 85 %RH (No condensation)	-5 ～ 40 ℃, 35 ～ 80 %RH (No condensation)
Storage temp. range		-25 ～ 70 ℃, 5 ～ 90 %RH (No condensation)	-20 ～ 70 ℃, 5 ～ 90 %RH (No condensation)
Weight		Approx. 75 g	Approx. 130 g
Dimensions (W×D×H)		82 mm×41 mm×15.8 mm	82 mm×41 mm×25 mm



EPL1701S2(V)



EPL1702S3(V)

EPL1703S4(V)

EPL1700

Line Thermal Printer Unit

This unit is a compact line thermal printer that is driven by 24V DC.

60mm, 80mm, and 112mm paper width types are available and they can also print on the label paper.

New types of a straight paper-path are available in addition to our conventional types of curl paper-path.

Features

■ Two kinds are prepared as a path course of paper
(Curl path type, Straight path type)

Applications

- Data communication peripherals
- POS peripherals
- Medical Measurement

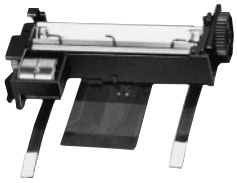
Specifi cations

		EPL1701S2(V)	EPL1702S3(V)	EPL1703S4(V)
Resolution		8 dots/mm		
Total number of dots		432 dots/line	576 dots/line	864 dots/line
Printing speed		480 dot-lines/s [max.] (60 mm/s)		
Paper width		60 mm	80 mm	112 mm
Number of colums / line		27 24 dots×16 dots characters	36 24 dots×16 dots characters	54 24 dots×16 dots characters
Reliability		5×10^7 pluses, 50 km		
Operating voltage	Head, Motor	24 V DC ± 1.2 V DC		
	Logic	5 V DC ± 0.25 V DC		
Current	Head	2.5 A [max.] (at 25.2 V, 144 dots coloring)		
	Motor	0.54 A [max.] (at 25.2 V)		
Operating temp. range		-5 ～ 50 ℃, 35 ～ 85 %RH(No condensation)		
Storage temp. range		-25 ～ 70 ℃, 5 ～ 90 %RH(No condensation)		
Weight		Approx. 83 g	Approx. 97 g	Approx. 125 g
Dimensions (W×D×H)		81 mm×52 mm×20 mm	101 mm×52 mm×20 mm	147 mm×54 mm×20 mm

(V) : Straight path type

Line Thermal Printer Unit

EPL1601S2(V)



EPL1602S3(V)

EPL1603S4(V)

EPL1600

Line Thermal Printer Unit

This unit is a compact line thermal printer that can be driven by batteries. Three types are available : 58mm, 80mm, and 112mm paper width types. New types of straight paper-path are available in addition to our conventional types of curl paper-path.

Features

■ Two kinds are prepared as a path course of paper (Curl path type, Straight path type)

Applications

- Data communication peripherals
- Handy instrument
- POS peripherals
- Medical Measureament

Specifi cations

		EPL1601S2(V)	EPL1602S3(V)	EPL1603S4(V)
Resolution		8 dots/mm		
Total number of dots		384 dots/line	576 dots/line	832 dots/line
Printing speed		450 dot-lines/s [max.] (56 mm/s)	400 dot-lines/s [max.] (50 mm/s)	
Paper width		58 mm	80 mm	112 mm
Number of colums / line		24 24 dots×16 dots characters	36 24 dots×16 dots characters	52 24 dots×16 dots characters
Reliability		5×10^7 pulses, 50km		
Operating voltage	Head, Motor	4.2 V DC to 8.5 V DC (Li-ion, Ni-MH, Ni-Cd)		
	Logic	5 V DC ± 0.25 V DC		
Current	Head	3.4 A [max.] (at 7.2 V, 64 dots coloring)		
	Motor	2.4 A [max.] (at 7.2 V)		
Operating temp. range		-5 ～ 50 ℃, 35 ～ 85 %RH(No condensation)		
Storage temp. range		-25 ～ 70 ℃, 5 ～ 90 %RH(No condensation)		
Weight		Approx. 85 g	Approx. 105 g	Approx. 125 g
Dimensions (W×D×H)		78.5 mm×51.2 mm×20 mm	101 mm×52 mm×20 mm	147 mm×54 mm×20 mm

(V) : Straight path type

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