

#### **Seiko Instruments**

Thermal Printer Division

# LTPD/CAPD Series Low Voltage **Printer** Mechanisms



Designing mobile devices is increasingly challenging. Customers expect each new product generation to be smaller and faster, with long battery life. To be competitive, device manufacturers must reduce product size and increase speed. Time to market is crucial and reliability is non-negotiable.

New low voltage LTPD/CAPD series printer mechanisms tackle these challenges with dramatic advances in design flexibility, reliability, and printing performance.

#### **Small**

LTPD/CAPD series mechanisms free up critical design real estate. The new mechanisms provide a smaller overall form factor, innovative angled paper guide requiring less depth, and a smaller pitch flexible print circuit (FPC) cable.

#### **Fast**

LTPD/CAPD series mechanisms are fast, rated for up to 100 mm/second print speeds. This gives mobile devices a much needed performance boost.

#### Reliable

LTPD/CAPD series mechanisms offer a minimum of 50 km of total printing and 100 million pulses. CAPD models offer a new built-in auto-cutter design, improving cutter reliability. The result: reliable media output, every time.

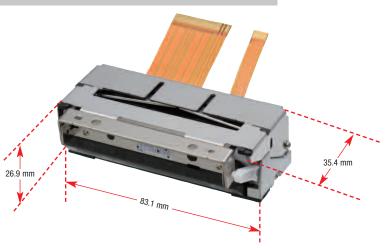
#### **Flexible**

LTPD/CAPD series mechanisms offer a wide array of form factor choices to provide versatility and flexibility for smoother integration. Options include EZ-OP clamshell-style and auto-loading models, ASIC and interface board solutions, and both horizontal and vertical mechanical orientation designs.

- 2" and 3" print width models
- High speed printing (up to 100 mm/second)
- Choice of horizontal and vertical orientations
- EZ-OP clamshell and auto-loading paper replacement options
- Platen latch for better shock absorption
- **Built-in auto-cutter (CAPD models)**



2" LTPD model and 2" CAPD model.





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#### **Product Specifications**

Model		LTPD245	LTPD345	CAPD245	CAPD345	
	Method	Thermal line dot printing				
Printing	Number of dots/line	384	576	384	576	
	Resolution(dots/mm)	8				
	Paper width (mm)	58+0-1	80+0-1	58+0-1	80+0-1	
	Printing width (mm)	48	72	48	72	
	Speed (max mm/sec)	100	80	100	80	
	Paper path	Curved				
Sensors	Head temperature	By thermistor				
	Platen position detection	By mechanical switch				
	Out of paper detection	By photo interrupter				
	Cutter home position detect	ion -	-	By photo	interrupter	
Power	Operating Voltage (Vdd)	2.7 to 3.6/4.75 to 5.25				
supply (V)	Operating Voltage (Vp)	-	4.75 to 9.5	-	6.5 to 9.5	
Peak current (A)	Head	3.66 (9.5V/64dots)	3.60 (9.5V/64dots)	3.66 (9.5V/64dots)	3.60 (9.5V/64dots)	
		5.49 (9.5V/96dots)	5.40 (9.5V/96dots)	5.49 (9.5V/96dots)	5.40 (9.5V/96dots)	
	Motor	0.6	0.6	0.6	0.6	
	Cutter motor	-	-	0.7	0.7	
Service life	Pulse activation (pulses)	100 million		100 million		
	Abrasion resistance (km)*	50 *		50 *		
Operating temperature (°C)		-10 to 50		-10 to 50		
Dimensions	Horizontal	69.0 x 30.0 x 15.0 **	91.0 x 30.0 x 15.0 **	83.1 x 35.4 x 26.9 **	105.1x35.4x27.2***	
(W x D x H mm)*	Vertical	69.0 x 15.0 x 30.0 **	91.0 x 15.0 x 30.0 **			
Mass(g)		Approx. 40	Approx. 58	Approx. 125	Approx. 148	
Auto-cutter	Method	-	-	Slide cutting		
	Paper thickness (um)	-	-	54 to 90*	54 to 78*	
	Cutting type	-	-	Full cut and partial cut (1.5±0.5mm tab left at the cente		
	Operating time (sec/cycle) Minimum paper cutting	-	-	Approx 1.0		
	length (mm)			11		
	3 , ,	-	-	10		
	Cutting frequency (max cuts/min)	_		30		
	, ,		-		30	
Life span	Paper cutting (cuts)	-	-	50	0,000 *	

<sup>\*</sup>Use recommended thermal paper. \*\*Excluding convex section.
\*\*\*Excluding mounting part. Specifications are subject to change without notice.

#### **IF Board Specifications**

	-			
		IFD501-01UK-E	IFD501-01SK-E	
CPU		PTD50P01-E		
Corresponding Model		LTPD245, LTPD345 Series CAPD245, CAPD345 Series		
Operating Voltage (V)		Vp:4.75 to 9.5		
Character matrix (H x W dots)		16 dots character: 16 x 8, 16 x 16		
		24 dots character: 24 x 12, 24 x 24		
	Optional font	Yes	Yes	
	Downloaded character	Yes	Yes	
Character	User-defined character	Yes	Yes	
Туре	Extend graphics character set	Yes	Yes	
турс	Katakana character set	Yes	Yes	
	Codepage 1252	Yes	Yes	
	JIS 1&2 level kanji	Yes	Yes	
Communication interface		USB(2.0)	Serial (RS-232C)	
Dimensions (W x D x H mm)		69.0 x 50.0 x 14.0		

### **Optional Cables**

Accessory	Product
Power Cable	DC-04100A-E
Switch Cable	OC-D1430A-E
Serial Cable	OC-D0730A-E
USB Cable	IFC-U01-1-E

#### **ASIC Specifications:**

	PTD50P01-E	
Corresponding model	LTPD245, LTPD345 series	
	CAPD245, CAPD345 series	
Package form	120pin QFP	
Operating voltage (V)	Vp:4.75 to 9.5,Vcc:3.0 to 3.6	
Operating frequency (MHz)	12MHz±0.01%	
Configuration	C-MOS LSI	
Communication interface	Parallel, Serial, USB	
Character type	Extended graphics character set Other characters available	
	With CGs or external memory	
Character matrix	16 dot character: 16 x 8, 16 x 16	
(H x W dots)	24 dot character: 24 x 12, 24 x 24	
Dimensions (W x D x H mm)	16.0 x 16.0 x 1.7	
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DC-04100A-E IFD501-01UK-E LTPD245A-384-E LTPD245B-384-E LTPD245C-384-E LTPD345A-576-E LTPD345A-576-E PTD50P01-E CAPD345A-E OC-D0730A-E OC-D1430A-E IFD501-01SK-E CAPD347D-E CAPD247D-E CAPD245D-E