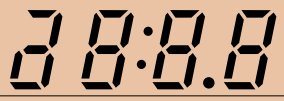
Alphanumeric Type for Data Terminals

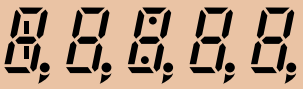
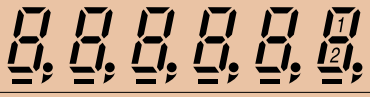
Type No.	No. of Digits	Character Format, Symbol	Character Dimensions		Outline Dimensions				
			C.H (mm)	C.W (mm)	P.H (mm)	P.L (mm)	P.T (mm)	L.P (mm)	L.L (mm)
FIP6A8BR	6		8.15	4.4	28.0±1.0	78.0±1.0	8.0±0.7	2.54	20.0
FIP10A6CR	10		6.0	3.0	20.0±1.0	86.0±1.0	6.5±0.7	2.54	26.8
FIP16J5R	16		5.0	3.0	20.0±1.0	110.0±1.0	6.5±0.7	2.54	10.0
FIP16J5AR	16		5.0	3.0	20.0±1.0	110.0±1.0	6.5±0.7	2.54	6.2
FIP16B13AR	16		12.5	7.0	33.0±1.0	205.0±1.0	8.0±0.7	5.08	10.0
FIP16D9R	16		9.35	4.8	35.0±1.0	170.0±1.0	8.0±0.7	2.54	14.0
FIP20D6R	20		6.0	3.0	20.0±1.0	134.0±1.0	6.5±0.7	2.54	14.0

Alphanumeric Type for Automative and Others

FIP4B6CS	4		6.0	3.0	18.5±1.0	44.0±1.0	6.5±0.7	2.0	8.7
FIP4A8FS	4		7.6	4.0	24.5±1.0	55.4±1.0	6.5±0.7	2.54	8.7
FIP4E8BS	4		7.6	4.0	20.0±1.0	48.0±1.0	6.1±0.5	2.54	8.2
FIP4Y8S	4		7.6	4.0	20.0±1.0	48.0±1.0	6.5±0.7	2.54	8.7
FIP4Q8S	4		8.0	4.4	20.0±1.0	48.0±1.0	6.5±0.7	2.54	8.2
FIP4Q8AS	4		8.0	4.4	20.0±1.0	48.0±1.0	6.5±0.7	2.54	5.0
FIP4BF8S	4		7.6	4.0	20.0±1.0	48.0±1.0	6.1±0.5	2.54	5.0

Package No.	Recommended Electrical Ratings									L	
	Filament	Ef (V rms)	If (mA rms)	Operation	eb = ec (Vp-p) *Eb = Ec (Vdc)	Duty	Ek (Vdc)	ib/dig (mA)	ic/dig (mA)	(cd/m^2)	(fL)
A-2	AC	2.8	134	dynamic	26	1/20	5	4.5	9.8	620	(180)
C-1	AC	3.2	57	dynamic	26	1/11	5	2.5	2.5	850	(250)
A-1	AC	4.3	80	dynamic	24	1/20	6	2.5	3.0	690	(200)
A-3	AC	4.3	80	dynamic	24	1/20	6	2.5	3.0	690	(200)
A-2	AC	8.2	133	dynamic	47	1/20	10	13.0	12.0	1030	(300)
C-4	AC	5.4	120	dynamic	40	1/20	5.5	9.0	9.0	1030	(300)
D-3	AC	5.8	57	dynamic	32	1/24	7	3.5	3.5	1030	(300)
B-5	DC	1.6	57	static	*12	—	0	0.7	4.0	2060	(600)
B-5	DC	2.0	83	static	*12	—	0	1.5	8.4	2060	(600)
B-5	DC	1.4	78	static	*12	—	0	0.8	5.0	2060	(600)
B-5	DC	1.5	110	static	*12	—	0	1.4	8.0	2740	(800)
B-5	DC	1.5	110	static	*12	—	0	1.9	8.0	2740	(800)
B-5	DC	1.5	110	static	*12	—	0	1.9	8.0	2740	(800)
B-5	DC	1.4	102	static	*12	—	0	1.9	8.0	2740	(800)

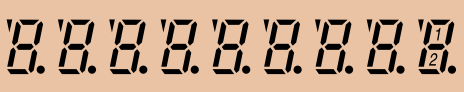
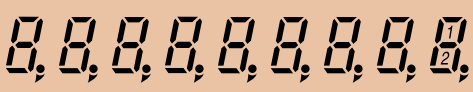
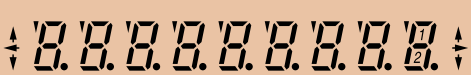
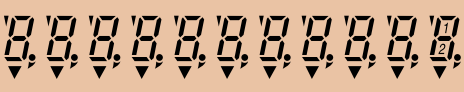
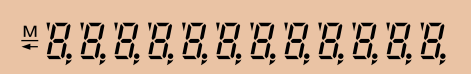
Alphanumeric Type for Digital Clocks, Timers, and Measuring Meters

Type No.	No. of Digits	Character Format, Symbol	Character Dimensions		Outline Dimensions				
			C.H (mm)	C.W (mm)	P.H (mm)	P.L (mm)	P.T (mm)	L.P (mm)	L.L (mm)
FIP4D15	4		15.0	8.4	33.0±1.0	98.0±1.0	8.0±0.7	2.54	11.0
FIP4F8CS	4		7.6	3.6	24.5±1.0	55.4±1.0	6.5±0.7	2.54	8.7
FIP4H5	4		5.0	2.5	14.5±1.0	41.0±1.0	6.5±0.7	2.54	8.0
FIP4Q8A	4		8.0	5.0	24.5±1.0	59.0±1.0	6.5±0.7	2.54	11.0
FIP5B15B	5		15.0	8.0	33.0±1.0	98.0±1.0	8.0±0.7	2.54	6.2
FIP5D8BS	5		7.6	3.6	24.5±1.0	55.4±1.0	6.5±0.7	2.54	8.7
FIP6C13E	6		12.5	6.8	33.0±1.0	98.0±1.0	8.0±0.7	4.0	10.5
FIP6C15E	6		15.0	8.0	33.0±1.0	110.0±1.0	8.0±0.7	4.0	10.5
FIP6D15C	6		15.0	7.5	33.0±1.0	98.0±1.0	8.0±0.7	2.54	15.0
FIP6D15D	6		15.0	7.5	33.0±1.0	98.0±1.0	8.0±0.7	2.54	6.5
FIP6F13A	6		12.5	6.8	33.0±1.0	98.0±1.0	8.0±0.7	2.54	5.2
FIP7B13	7		13.0	6.0	33.0±1.0	98.0±1.0	8.0±0.7	2.54	7.4
FIP7B25A	7		25.4	12.0	48.0±1.0	164.0±1.0	10.5±0.7	4.0	10.5
FIP7P8C	7		8.0	4.6	24.5±1.0	76.0±1.0	6.1±0.7	2.54	7.5

NEC

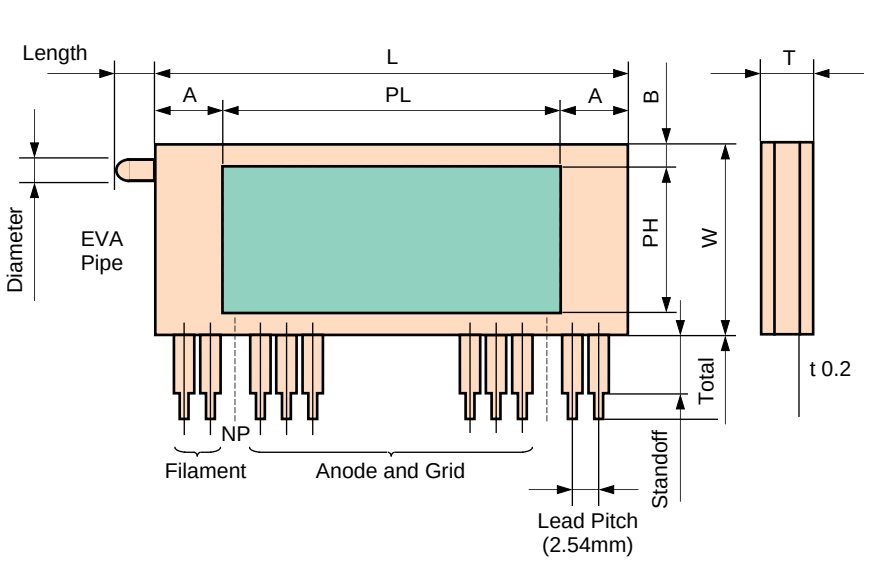
Package No.	Recommended Electrical Ratings									L	
	Filament	Ef (V rms)	If (mA rms)	Operation	eb = ec (Vp-p) *Eb = Ec (Vdc)	Duty	Ek (Vdc)	ib/dig (mA)	ic/dig (mA)	(cd/m^2)	(fL)
A-6	AC	4.0	95	dynamic	22	1/5	5.5	9.0	10.0	1028	(300)
B-5	DC	1.9	81	static	*12	—	0	1.1	6.0	1370	(400)
A-4	DC	1.5	40	dynamic	22	1/4	2	0.5	1.0	1030	(300)
A-6	AC	2.4	81	dynamic	27	1/7	3.5	3.5	5.0	1030	(300)
C-2	AC	3.6	135	dynamic	43	1/28	5	12.0	15.0	620	(180)
B-5	DC	1.9	80	static	*12	—	0	0.8	6.0	1370	(400)
C-1	AC	3.8	113	dynamic	26	1/7	4	5.0	7.0	685	(200)
C-1	AC	4.1	161	dynamic	30 42	1/7.5	6	10.0 20.0	13.0 25.0	1370 3000	(400) (900)
A-3	AC	3.7	110	dynamic	35	1/16	5	13.0	20.0	1030	(300)
C-2	AC	3.7	110	dynamic	35	1/16	5	13.0	20.0	1030	(300)
C-2	AC	3.2	100	dynamic	42	1/21	4	9.5	11.0	1230	(360)
A-5	AC	3.3	104	dynamic	35	1/19	4	5.5	6.5	860	(250)
C-1	AC	5.5	175	dynamic	34.5	1/7.5	8	17.5	14.0	690	(200)
A-2	AC	2.3	106	dynamic	26	1/7	4	2.5	4.5	1370	(400)

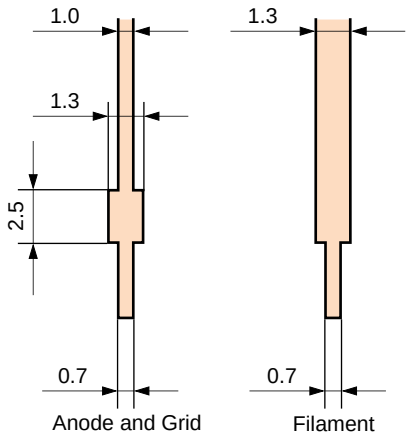
Alphanumeric Type for Electronic Cash Registers and Others

Type No.	No. of Digits	Character Format, Symbol	Character Dimensions		Outline Dimensions				
			C.H (mm)	C.W (mm)	P.H (mm)	P.L (mm)	P.T (mm)	L.P (mm)	L.L (mm)
FIP6A13C	6		13.0	6.5	39.0±1.0	108.0±1.0	8.0±0.7	2.54	10.0
FIP8B11C	8		10.5	5.0	33.0±1.0	98.0±1.0	8.0±0.7	2.54	5.2
FIP9H8	9		7.6	4.0	23.0±1.0	93.0±1.0	6.5±0.7	2.54	38.0
FIP9B10D	9		10.0	4.8	31.0±1.0	112.0±1.0	8.0±0.7	2.54	11.0
FIP9G13A	9		12.5	6.2	33.0±1.0	125.0±1.0	8.0±0.7	2.54	14.0
FIP11F10	11		9.6	4.2	24.5±1.0	113.0±1.0	7.5±0.7	2.54	16.0
FIP11B13B	11		18.0	6.0	33.0±1.0	147.0±1.0	8.0±0.7	2.54	7.4
FIP13Y8A	13		8.0	3.3	20.5±1.0	112.0±1.0	6.1±0.5	2.54	36.0

Package No.	Recommended Electrical Ratings									L	
	Filament	Ef (V rms)	If (mA rms)	Operation	eb = ec (Vp-p) *Eb = Ec (Vdc)	Duty	Ek (Vdc)	ib/dig (mA)	ic/dig (mA)	(cd/m^2)	(fL)
A-2	AC	3.5	126	dynamic	35	1/16	7	5.0	8.0	690	(200)
C-2	AC	3.6	108	dynamic	47	1/32	6	6.0	8.0	620	(180)
C-1	AC	3.2	75	dynamic	25	1/14	5	6.0	7.0	1000	(292)
C-1	AC	3.5	75	dynamic	30	1/16	6	3.2	4.5	580	(170)
C-2	AC	3.9	140	dynamic	29	1/16	5	7.5	7.5	690	(200)
A-1	AC	4.8	78	dynamic	25	1/15	9.5	4.0	4.0	690	(200)
D-3	AC	5.5	78	dynamic	35	1/19	7	5.5	6.5	900	(263)
A-2	AC	4.2	55	dynamic	26	1/16	4	3.0	3.0	700	(200)

Semicustom FIP Package





Lead Detail

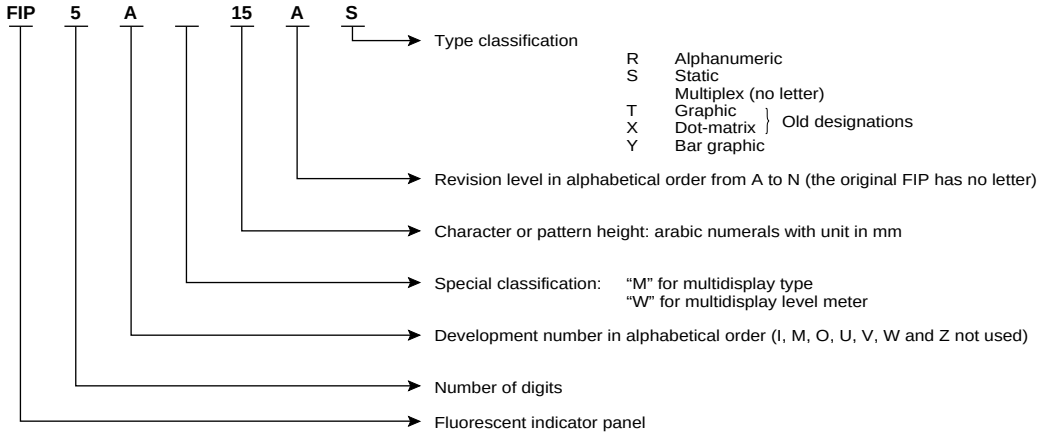
Package List

No.	Package Size (mm)			Max. Graphic Area (mm)		Lead Terminal				EVA Pipe		Relative Position	
						Length (mm)		Number		Length	Diameter		
	W	L	T	PH	PL	Total	Standoff	Filament	Anode and Grid	(mm)	(mm)	A	B
1	25.0	67.2	6.1	13.5	41.2	15.0	9.5	4	16 max.	6 max.	ø 3 max.	13.0	5.5
2	25.0	98.0	6.1	13.5	72.0	15.0	9.5	4	29 max.	6 max.	ø 3 max.	13.0	5.5
3	25.0	129.0	6.1	13.5	103.0	15.0	9.5	4	41 max.	6 max.	ø 3 max.	13.0	5.5
4	29.0	78.4	7.5	17.0	52.4	15.0	9.5	4	21 max.	9 max.	ø 4 max.	13.0	5.5
5	29.0	98.0	7.5	17.0	72.0	15.0	9.5	4	29 max.	9 max.	ø 4 max.	13.0	5.5
6	29.0	110.2	8.0	17.0	84.2	15.0	9.5	4	33 max.	9 max.	ø 4 max.	13.5	5.5
7	29.0	125.0	8.0	17.0	99.0	15.0	9.5	4	39 max.	9 max.	ø 4 max.	13.5	5.5
8	29.0	135.2	8.0	17.0	109.2	15.0	9.5	4	43 max.	9 max.	ø 4 max.	13.5	5.5
9	33.5	98.0	8.0	21.5	71.0	15.0	9.5	4	29 max.	9 max.	ø 4 max.	13.5	5.5

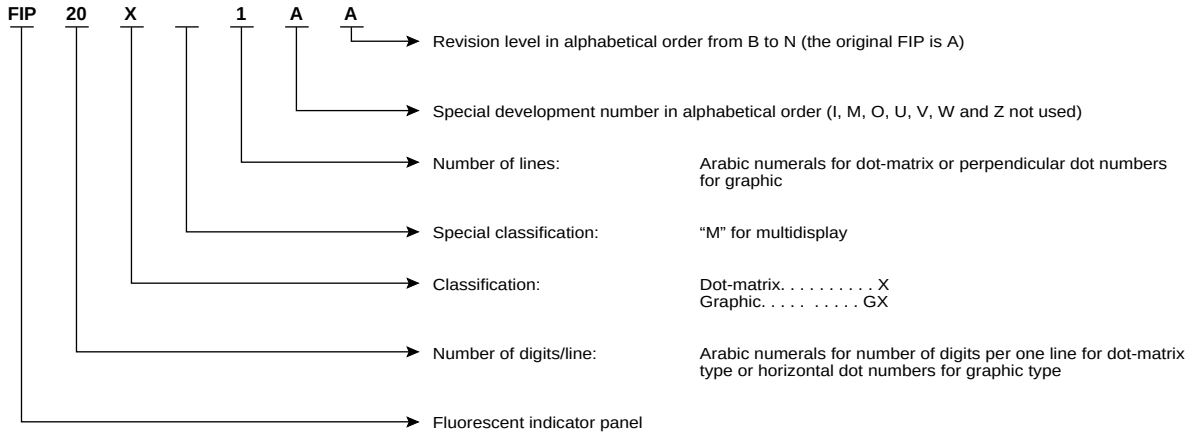
NEC

Part Numbering

(1) General



(2) Dot-Matrix and Graphic Types

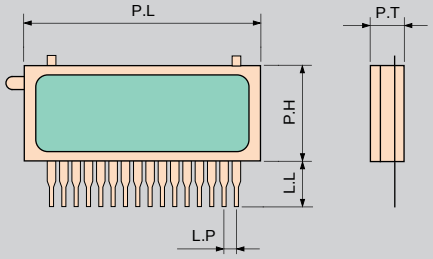


Abbreviations

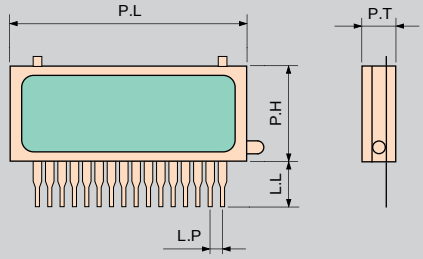
C.H.	Character height or pattern height
C.W.	Character width or pattern width
P.H.	Panel height
L.P.	Lead pitch
L.L.	Lead length
E_f	Filament voltage (AC = unit in V rms; DC = unit in V_{dc})
I_f	Filament current (AC = unit in mA rms; DC = unit in mA_{dc})
e_b, e_c	Peak anode voltage and peak grid voltage

E_b, E_c	DC anode voltage and DC grid voltage
Duty	Duty cycle or duty factor
E_k	Cathode bias voltage or cutoff bias voltage
i_b/dig	Peak anode current per digit or per bar in multiplex operation; DC anode current per digit or per bar in static operation
i_c/dig	Peak grid current per digit in multiplex operation; DC grid current per panel in static operation
L	Brightness in cd/m^2 (SI unit) Bright value [cd/m^2] shown in the table is the calculated value according to the equation. 1 [fL] = 3.43 [cd/m^2]

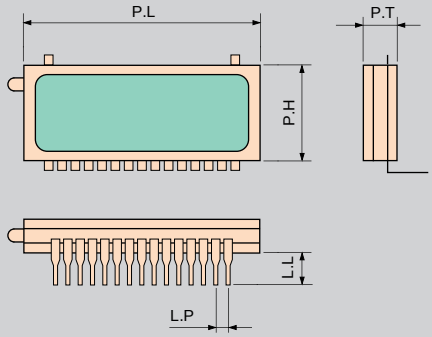
A-1



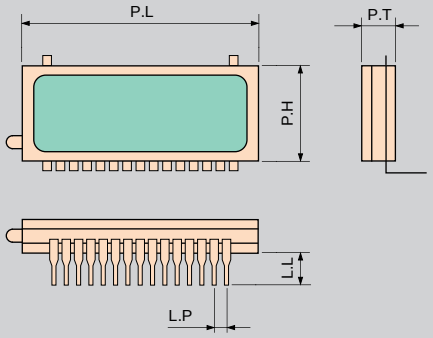
A-2



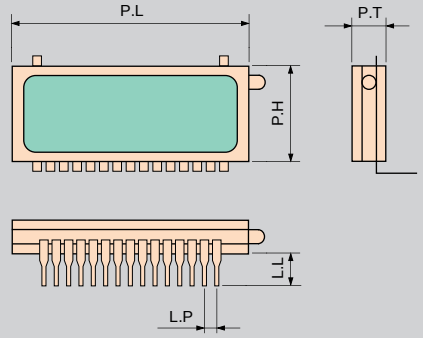
A-3



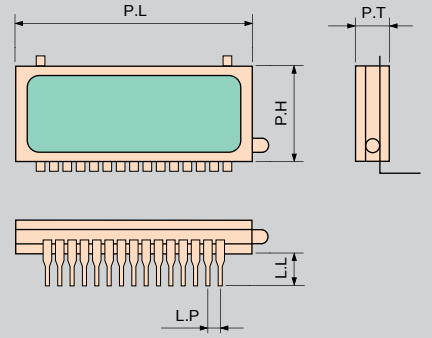
A-4



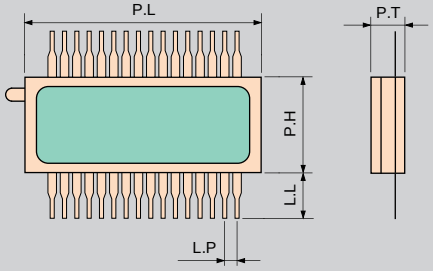
A-5



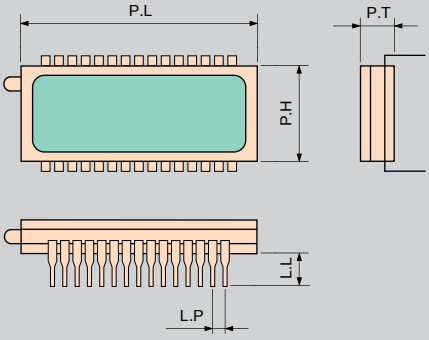
A-6



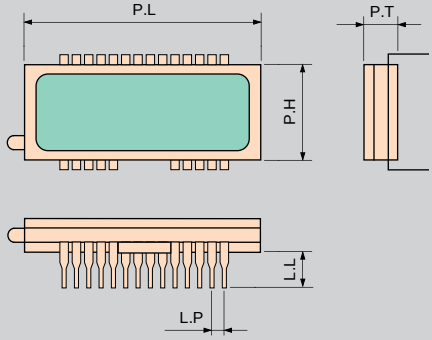
B-1



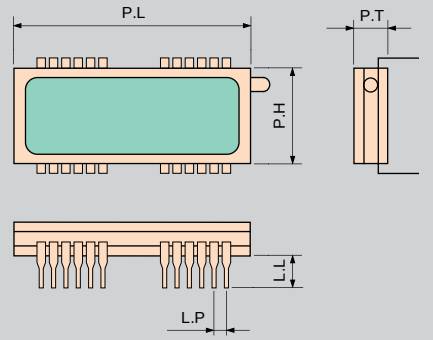
B-2



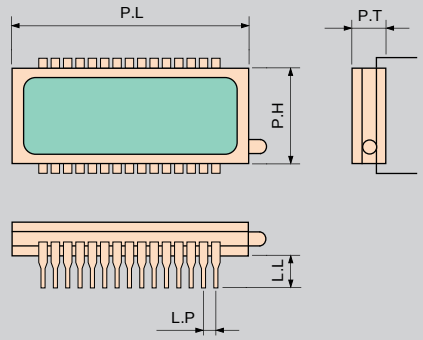
B-3



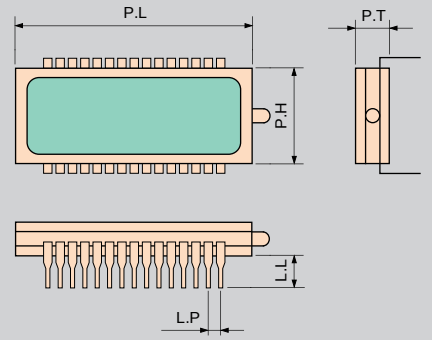
B-4



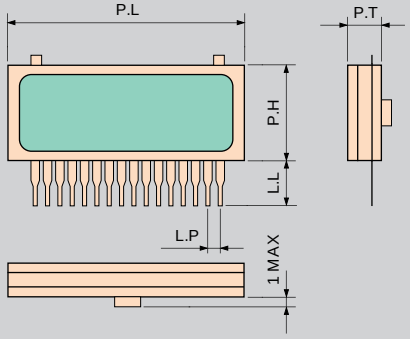
B-5



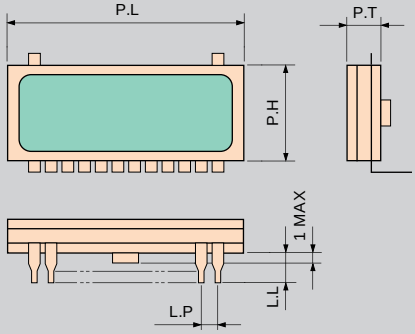
B-6



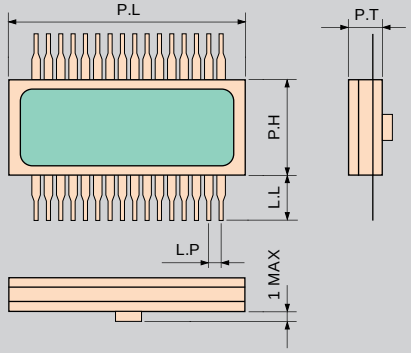
C-1



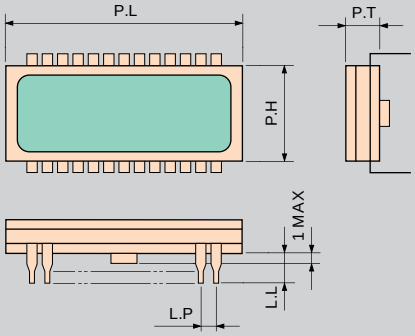
C-2



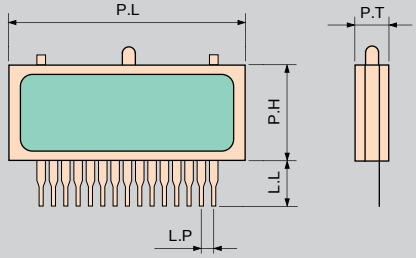
C-3



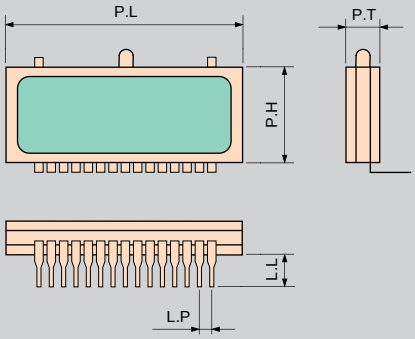
C-4



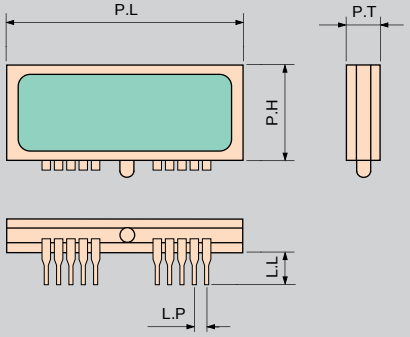
D-1



D-2



D-3



D-4