Absolute Maximum Ratings at T_A=25℃

OPERATING TEMPERATURE RANGE..	-25℃ TO + 60℃
STORAGE TEMPERATURE RANGE..	-25℃ TO +60℃
LEAD SOLDERING TEMP. (1.6mm FROM SEATING PLANE).................	260℃ FOR 3 SEC.

Electrical/optical characteristics For LED at T_A=25℃

PART NUMBER	LED CHIP		FACE COLOR		PEAK WAVELENGTH @ I_B=0.4mA (nm)	LUMINOUS INTENSITY @ I_B=0.4mA (mcd)	
	MATERIAL	EMITTING COLOR	SURFACE	SEGMENT		MIN.	TYP.
ID30-056SR-AEW	GaP	RED	GREY	WHITE	700	0.5	0.8
ID30-056SG-AEW	GaP	GREEN	GREY	WHITE	567	1.7	2.9
ID30-056SY-AEW	GaAsP ON GaP	YELLOW	GREY	WHITE	585	1.4	2.3
ID30-056SO-AEW	GaAsP ON GaP	ORANGE	GREY	WHITE	635	2.0	3.3
ID30-056SH-ARR	GaAsP ON GaP	Hi-EFF RED	RED	RED	635	2.0	3.3

Electrical characteristics For Operating at T_A=25℃

PARAMETER	TEST CONDITION	MIN.	TYP.	MAX.	UNIT.
SUPPLY VOLTAGE (V_{DD})		4.75		5.25	V
SUPPLY CURRENT	EXCLUDING OUTPUT LOADS			7.0	mA
INPUT CLOCK FREQUENCY				500	KHz
INPUT VOLTAGE LOGICAL "0" LEVEL LOGICAL "1" LEVEL	±10 μA INPUT BIAS 4.75 ≦ V_{DD} ≦ 5.25V V_{DD} >5.25V	-0.3 2.2 V_{DD}-2		0.8 V_{DD} V_{DD}	V
OUTPUT SINK CURRENT SEGMENT OFF SEGMENT ON	BRIGHTNESS INPUT(I_B)=0 μA BRIGHTNESS INPUT(I_B)=240 μA	0	10.0	10.0	μA mA
* LED SUPPLY VOLTAGE (V_{LED})		2.5		3.5	V

Functional Description

THE BLOCK DIAGRAM IS SHOWN IN FIGURE 1.BRIGHTNESS OF DISPLAYS ARE DETERMINED BY THE OUTPUT SINK CURRENT. TO PREVENT OSCILLATIONS, A lnF CAPACITOR SHOULD BE CONNECTED TO THE PIN OF BRIGHTNESS CONTROL.

FIGURE 2 SHOWS THE INPUT DATA FORMAT.

FIGURE 3 SHOWS THE TIMING RELATIONSHIPS BETWEEN DATA, CLOCK AND DATA ENABLE.

0.56" INTELLIGENT LED DISPLAY

FEMA P/N: ID30-056SX-AXX

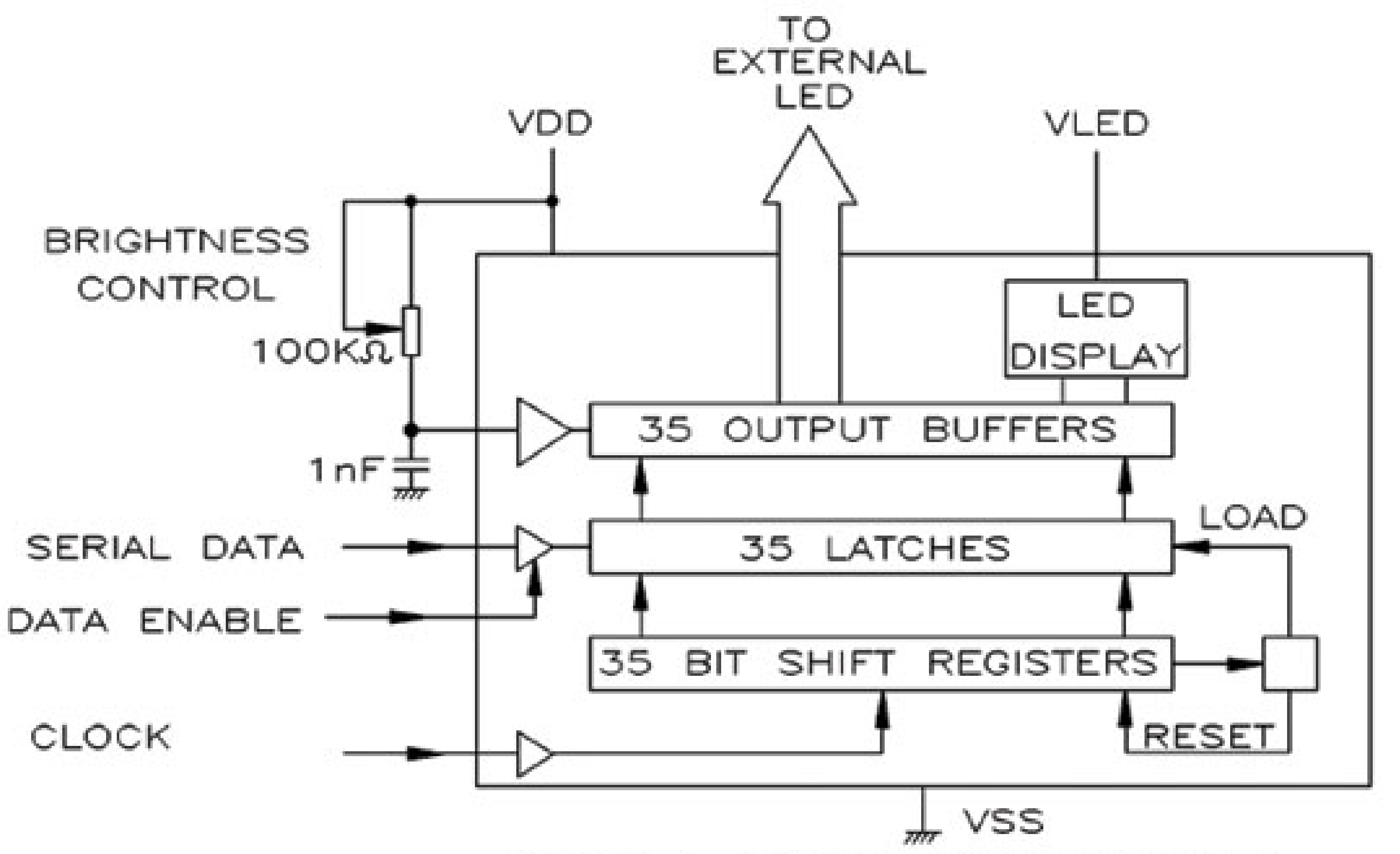


FIGURE 1. Internal Block Diagram

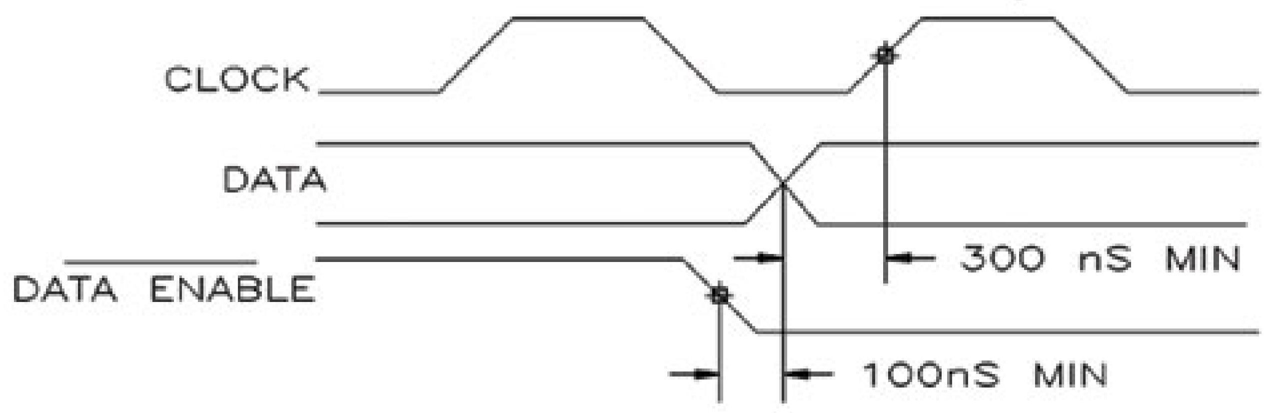


FIGURE 2. Input Data Format

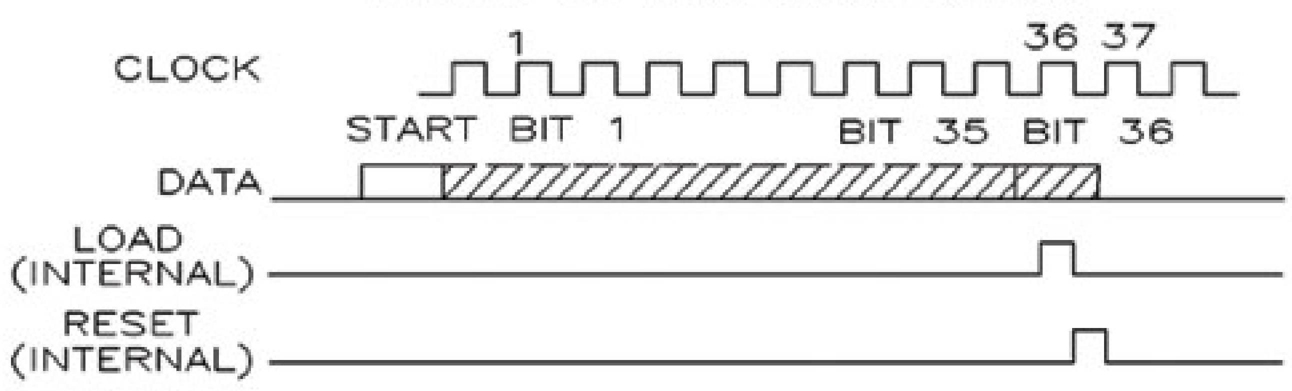
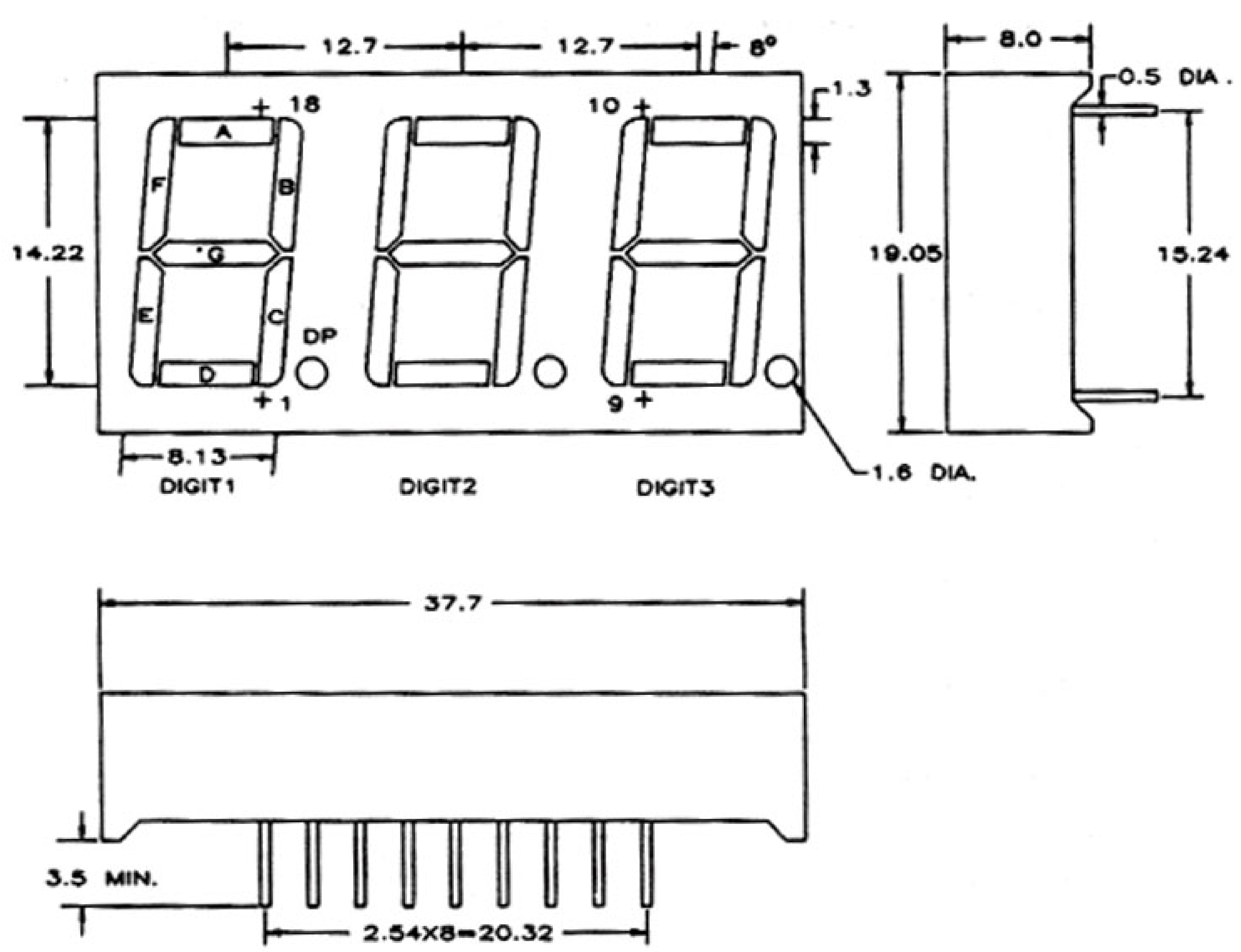


FIGURE 3. Timing Relationship

Serial Data Input Squence

BIT NO.	DIGIT/ SEGMENT	BIT NO.	DIGIT/ SEGMENT
1	1/A	18	3/B
2	1/B	19	3/C
3	1/C	20	3/D
4	1/D	21	3/E
5	1/E	22	3/F
6	1/F	23	3/G
7	1/G	24	3/DP
8	1/DP	25	PIN.4
9	2/A	26	PIN.5
10	2/B	27	PIN.6
11	2/C	28	PIN.7
12	2/D	29	PIN.8
13	2/E	30	PIN.9
14	2/F	31	PIN.10
15	2/G	32	PIN.11
16	2/DP	33	PIN.12
17	3/A	34	PIN.13

Package Dimensions And Pin Function



PIN NO. FUNCTION
1. VSS
2. VLED
3. VLED
4. BIT 25 OUTPUT
5. BIT 26 OUTPUT
6. BIT 27 OUTPUT
7. BIT 28 OUTPUT
8. BIT 29 OUTPUT
9. BIT 30 OUTPUT
10. BIT 31 OUTPUT
11. BIT 32 OUTPUT
12. BIT 33 OUTPUT
13. BIT 34 OUTPUT
14. DATA ENABLE
15. DATA INPUT
16. CLOCK INPUT
17. VDD
18. BRT.CONTROL

1. ALL DIMENSIONS ARE IN mm, TOLERANCE IS ±0.25mm UNLESS OTHERWISE NOTED.

2. THE SLOPE ANGLE OF ANY PIN MAY BE ±5.0°MAX.