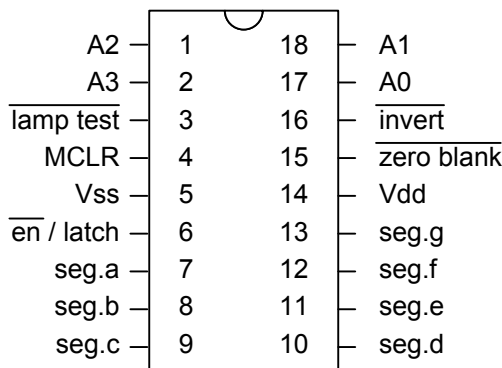
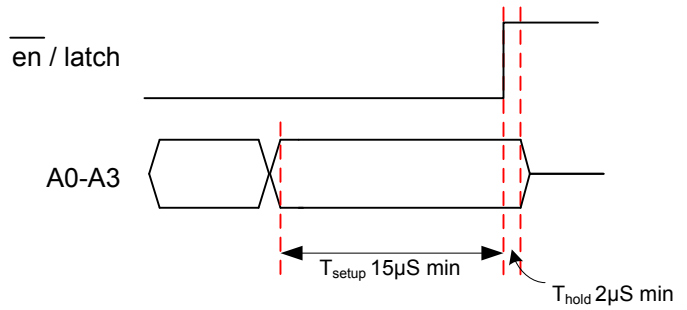


4-bit Gray Code to 7 segment decoder Using PIC16F627A / 16F628A



*Pull-up resistors required on inputs unless driven.
MCLR must be pulled up always*

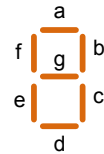


Propagation delay, A0-A3 to segment outputs: 15µS maximum

$\overline{\text{en}} / \text{latch}$ input is high, A0-A3 input data is latched
 $\overline{\text{en}} / \text{latch}$ input low, outputs follow A0-A3 input data



Input number and corresponding 7 segment output



Decimal or Function	Inputs						Outputs						
	$\overline{\text{LT}}$	$\overline{\text{ZB}}$	A3	A2	A1	A0	a	b	c	d	e	f	g
0	H	H	L	L	L	L	On	On	On	On	On	On	Off
1	H	X	L	L	L	H	Off	On	On	Off	Off	Off	Off
2	H	X	L	L	H	H	On	On	Off	On	On	Off	On
3	H	X	L	L	H	L	On	On	On	On	Off	Off	On
4	H	X	L	H	H	L	Off	On	On	Off	Off	On	On
5	H	X	L	H	H	H	On	Off	On	On	Off	On	On
6	H	X	L	H	L	H	On	Off	On	On	On	On	On
7	H	X	L	H	L	L	On	On	On	Off	Off	Off	Off
8	H	X	H	H	L	L	On	On	On	On	On	On	On
9	H	X	H	H	L	H	On	On	On	On	Off	On	On
10	H	X	H	H	H	H	On	On	On	Off	On	On	On
11	H	X	H	H	H	L	Off	Off	On	On	On	On	On
12	H	X	H	L	H	L	Off	Off	Off	On	On	Off	On
13	H	X	H	L	H	H	Off	On	On	On	On	Off	On
14	H	X	H	L	L	H	On	Off	Off	On	On	On	On
15	H	X	H	L	L	L	On	Off	Off	Off	On	On	On
ZB	H	L	L	L	L	L	Off	Off	Off	Off	Off	Off	Off
LT	L	X	X	X	X	X	On	On	On	On	On	On	On

H = high, L = low, X = don't care

Invert input = high , on = high, off = low
Invert input = low , on = low, off = high