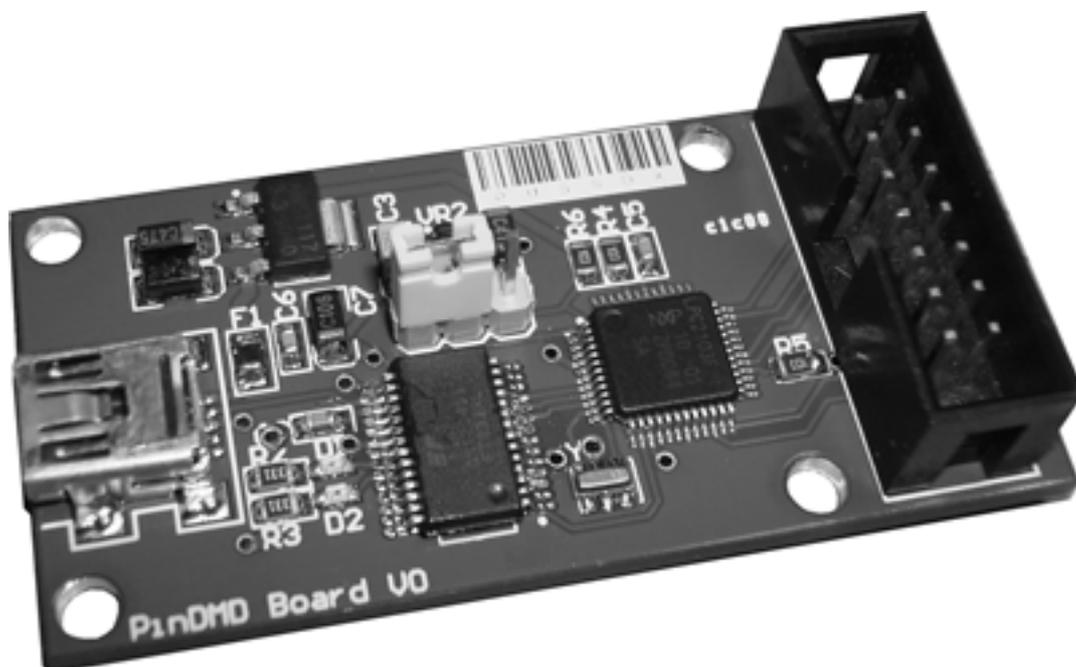


pinDMD Application Note AN002



INTRODUCTION

There are quite a few different types of pinball Dot Matrix Displays on the market. The aim of this application note is to help you choose the correct one.

COMPATIBLE PINBALL DOT MATRIX DISPLAYS

Vishay Plasma Range

APD-128G032

APD-128G032A

APD-192G064-1

Vishay LED Range

LEE-128G032

LEE-128G032-1

LEE-128G032A

LEE-128G032B

PIN-LED

20002

Displays Overview

Display	Type	Size	Voltages	Layout	Data sheet
APD-128G032	Plasma	128x32	+75,-110,+12V,-98	Plasma	
APD-128G032A	Plasma	128x32	+12v	Plasma	
APD-192G064-1	Plasma	192x64	+12v	Plasma	
LEE-128G032	LED	128x32	+5v	0603 LED	
LEE-128G032-1	LED	128x32	+5v	0603 LED	
LEE-128G032A	LED	128x32	+5v	8x8 Matrix	
LEE-128G032B	LED	128x32	+5v	8x8 Matrix	
20002	LED	128x32	+12v	8x8 Matrix	

VISHAY DISPLAYS

Plasma

These are the original Dot Matrix Displays used on pinball machines. They come in two different varieties.

Standard (APD-128G032)

This type of display is most commonly used on real pinball machines. It requires many high voltages that are usually supplied by the pinball machines main transformer. This display is not recommend unless you can supply all the high voltages.

Built in DC power supply (APD-128G032A, APD-192G064-1)

This is the exact same display as above the only difference is it has a built in dc power supply. This means the display can just be powered from +12v. This display is recommended if you want to use a true original plasma Dot Matrix Display. The only downside is that it is very expensive.

LED

These are the new replacement LED Dot Matrix Displays. They come in two different varieties.

Single 0603 LED (LEE-128G032, LEE-128G032-1)

These are the more expensive versions. The display is constructed using 4096 perfectly spaced separate 0603 **orange** SMD LED's. This display is an almost perfect imitation of the original plasma display.

8x8 Matrix (LEE-128G032A, LEE-128G032B)

These are the cheaper versions. The display is constructed using an array of 8x8 **red** LED modules. Occasionally some of the modules are not perfectly aligned and so the display can look a bit misaligned and does not give a 100% true plasma effect, but it is a very good imitation.