

INTRODUCTION

Vishay Dale displays are screened image DC plasma (gas discharge) displays. The neon-orange color and screened image construction combine to produce a man-machine interface that has superior ergonomics, with wide viewing angles, and high contrast over a broad range of lighting conditions.

Vishay Dale displays have a versatile range of applications including point-of-sale devices, avionics, gasoline pumps, industrial controls and measurement systems, audio equipment, medical instrumentation, programmable controllers, pinball/redemption games.

To meet these needs, Vishay Dale provides a variety of models including numeric and alphanumeric segmented displays, linear bar graphs and segmented and dot matrix modules.

Vishay Dale continually adds new products to the display line as well as enhancing the existing models.

It would be our pleasure to assist you with any special requirements your company might have.

ENGINEERING ASSISTANCE

If you would like to discuss the various design parameters and display technologies in order to choose the right display for your application, call our engineering department. They will give you an objective analysis of your options.

Consideration will be given to the amount and type of information to be displayed, viewing distance, ambient lighting conditions, operating environment, power, mounting dimensions and cost. Our goal is to help you select the best display - the first time.

CUSTOM DISPLAYS

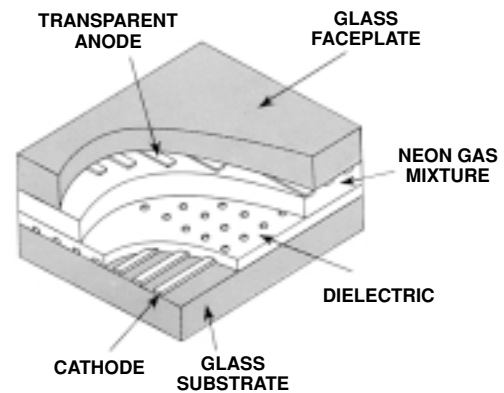
Vishay Dale takes pride in our continuing ability to design and build displays that enable our customers to personalize their products. Our screened image technology allows maximum freedom to display symbols, messages and characters unique to your application - at a price you can afford. Just send us a sketch of your idea, and we'll prepare a counter drawing and a budgetary quotation.



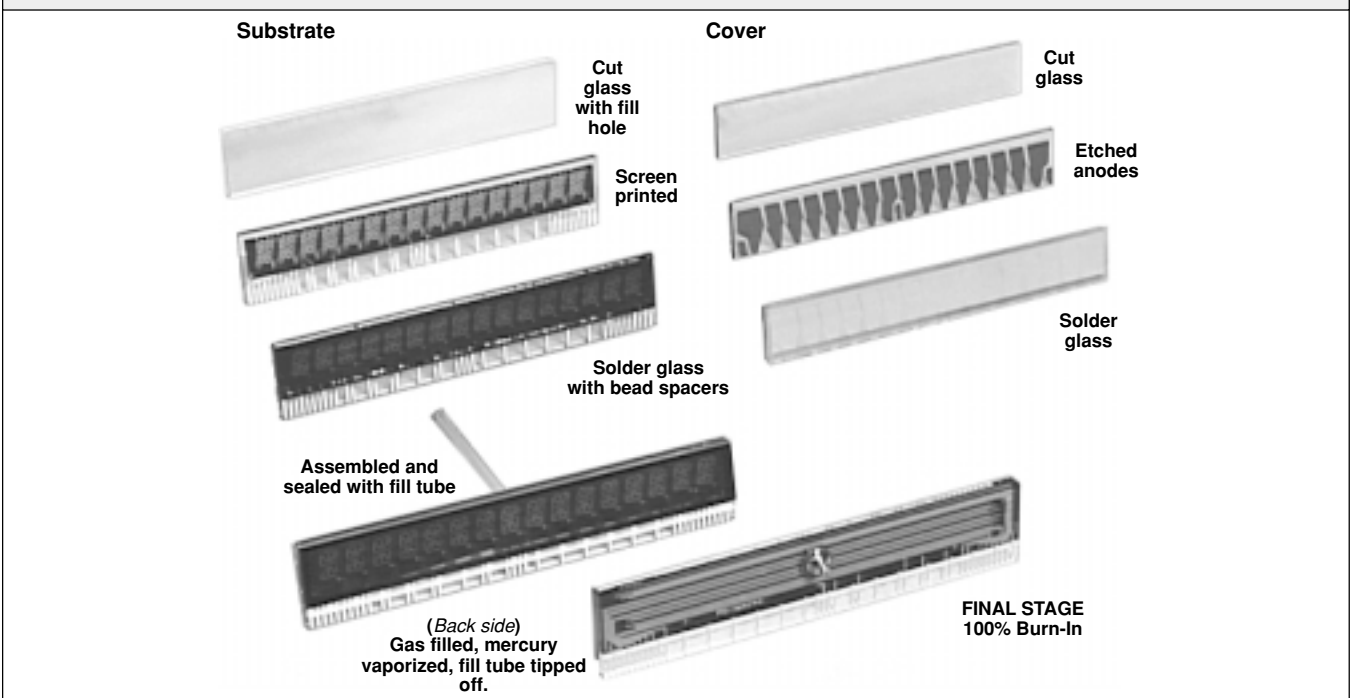
CONSTRUCTION AND OPERATION

Vishay Dale plasma displays share a common construction method. Cathodes are screen printed and fired on a glass substrate and then outlined with a dielectric to precisely determine the geometry of the display element. Some models have an additional circuit underneath the cathodes to allow for crossovers. The transparent tin oxide anodes on the front substrate are defined by a screen printing and etching process. The two glass substrates are placed together, but separated by a small gap, sealed and filled with a neon-based gas mixture. When an appropriate voltage and current is applied between the anode and cathode electrodes, the gas will ionize, creating an image of the cathode. All Vishay Dale displays are designed to be multiplexed to reduce the number of display connections and drivers. Several "keep-alives" are used to supply a low level ion source to ensure rapid ionization and to provide stable operation under a variety of operating conditions. Integrated circuit drivers and DC-DC high voltage converter modules are readily available to facilitate your circuit design.

DOT MATRIX INTERNAL CONSTRUCTION



SEGMENTED DISPLAY CONSTRUCTION STAGES



TYPICAL ANODE AND CATHODE WAVE FORMS

