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Usable Screen Dimensions for Monochrome Display Tubes

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(From Standards Proposal No. 3829, formulated under the cognizance of the JT-6 Color Cathode Ray Tubes Committee.)

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USABLE SCREEN DIMENSIONS FOR MONOCHROME DISPLAY TUBES

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Foreword

The JT-6 Committee on Cathode Ray Tubes has revised the document for calculating useable screen dimensions for monochrome display tubes with worked examples to illustrate the computation of display dimensions.

1 Scope

This document describes the calculation of useable screen dimensions for monochrome display tubes. Worked examples are presented to clarify the determination of the display dimensions.

2 Definitions

2.1 Height, width, and diagonal dimensions

The maximum useable screen dimensions to be used for alphanumeric displays shall be obtained from the bulb design print. These design dimensions are the chordal distances between a pair of screen terminal points, where the latter are defined as points where the point of tangency occurs between the inner faceplate and the inner corner radii.

2.2 Screen boundary

The screen boundary shall be determined by passing arcs through the end points of the calculated screen diagonal. The latter arc shall be made concentric with the design outside corner arc of the face panel.

2.3 Screen area

The maximum useable screen area by definition (projected) to be used in alphanumeric displays shall be the calculated area encompassed by the screen boundary (as defined below) but rounded to the next lower integral number of square dimensions.

3 Formulae and sample calculations

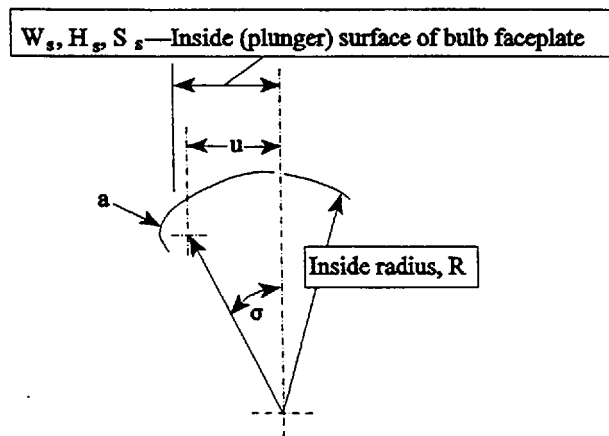


Figure 1—Position definitions

3.1 Height, width, and diagonal dimensions

The design screen dimensions are illustrated in figure 1 and determined by the following equation for the inside (plunger) surface of the bulb faceplate, e.g., height, width, and diagonal.