

COLOR PICTURE TUBE HAVING AN IMPROVED
SHADOW MASK-TO-FRAME CONNECTION

ABSTRACT

An improved color picture tube (8) includes an evacuated glass envelope (10) having a rectangular faceplate panel (12). The panel includes a shadow mask assembly (30) mounted therein.

- 5 The shadow mask assembly includes a shadow mask (24) formed from a first metal having a first coefficient of thermal expansion, and a frame (32) formed from a second metal having a second coefficient of thermal expansion. The first coefficient of thermal expansion is substantially lower than the second coefficient of
- 10 thermal expansion. The improvement comprises the shadow mask being interconnected with the frame by a plurality of bimetallic elements (46), each of the elements having a first end (48) attached to the frame and a second end (50) attached to the mask. Each bimetallic element is formed of materials that cause a
- 15 bending of the element an amount related to the thermal expansion of the frame.

Figure 3