

Video Edge Detection (VED) Lighting Situations

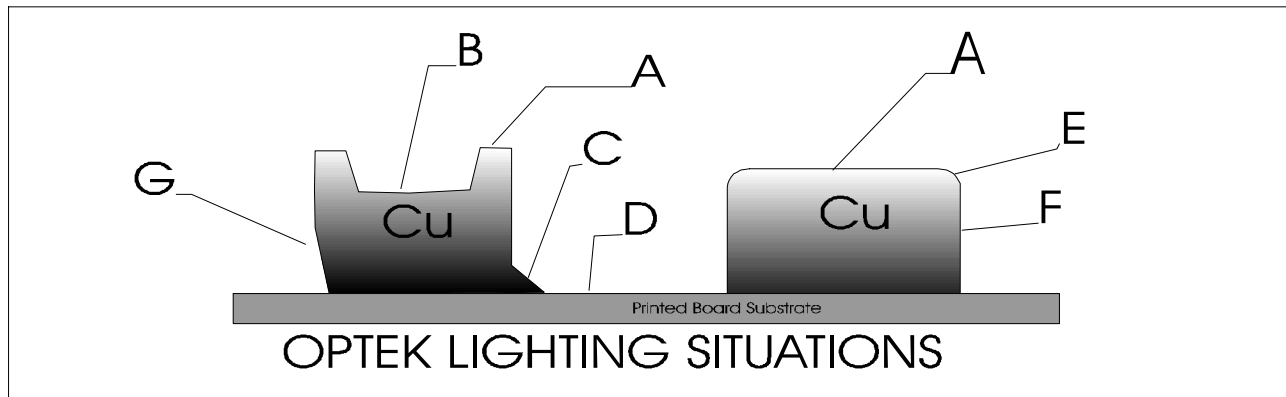
The VideoMic uses Video Edge Detection (VED) to determine where an edge is located.

To do this the computer measures the contrasting light levels to find an edge for measurement. This means that the lighting of the feature is very important in the measurement process.

Common PCB Lighting situations are as follows:

- A. Top of the trace Top light or On Axis light
- B. Hollow area On Axis Light
- C. Angled surface Z Trac Light
- D. Dark Hollow On Axis Light
- E. Tapered Edge Z Trac Light
- F. Vertical edge VED using the contrast between D and E
- G. Under cut area Not visible with Video Camera at 90 degrees (Vertical)

Since the video camera is vertical this limits its capability to features, which have a vertical angle of 90 degrees. Picture 2 Feature C and Picture 5 feature A in your drawings cannot be seen by conventional video equipment. These hidden features are measured by X ray inspection machines, which OPTEK also manufactures.



I hope this information will aid you in explaining the capabilities of the OPTEK VideoMic.

Remember, The system uses massive granite assemblies in the table and cantilever to assure stable accurate measurement in the X, Y, and Z planes.

Heavy trestle design is used for the frame. All components are isolated from vibrations.

Please feel free to contact OPTEK if you have any further questions.

Best regards,

OPTEK

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