JKL COMPONENTS CORPORATION

TECH BRIEF

THRU-BOARD/SURFACE MOUNT LAMPS

The CTB1, DTB1 and ETB1 are designed for Thru-PC-Board or top of a PC-Board placement, Figure #1.

These lamps are intended for automotive interior component lighting applications. The lamps, depending on the size and rating, are well suited for a variety of applications from air controls and instrument clusters requiring a high level of light output to small control switches requiring a small compact light source. A high temperature silicone filter and plastic base are used to withstand the temperatures encountered in the re-flow soldering process.

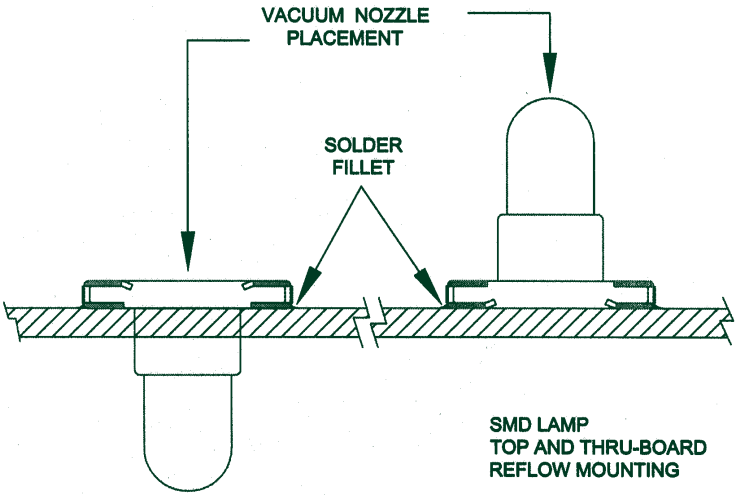

Figure #1

Figure #2, illustrates a typical application of a small T-1 size lamp in a Thru-Board configuaration. The lamp is used in a small automotive interior control switch along with a molded silicone rubber tactile dome switch pad. The filter on the lamp provides the specific color coordinates. For placement in the Thru-Board configuration, the lamps is provided in a carrier tape with the filter section down, Figure #3.

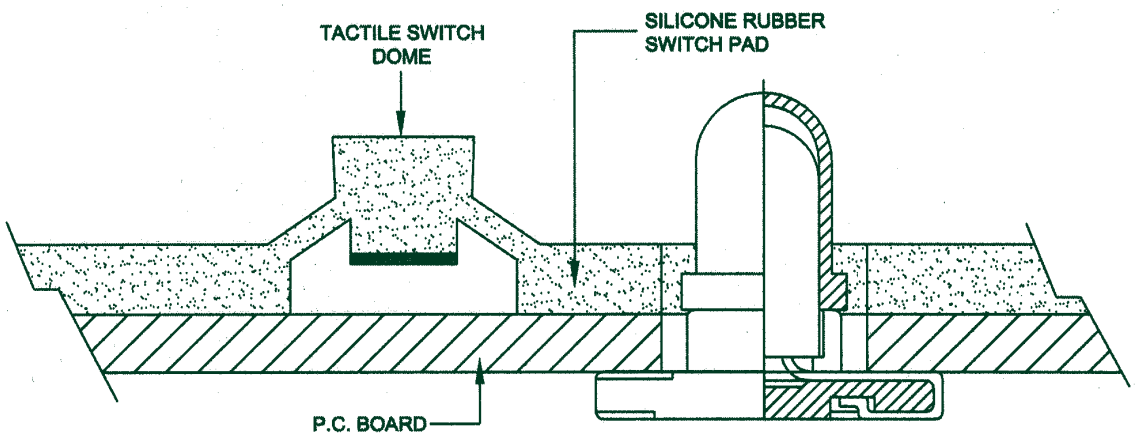

Figure #2

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Innovative Solutions To High Volume Lamp Applications

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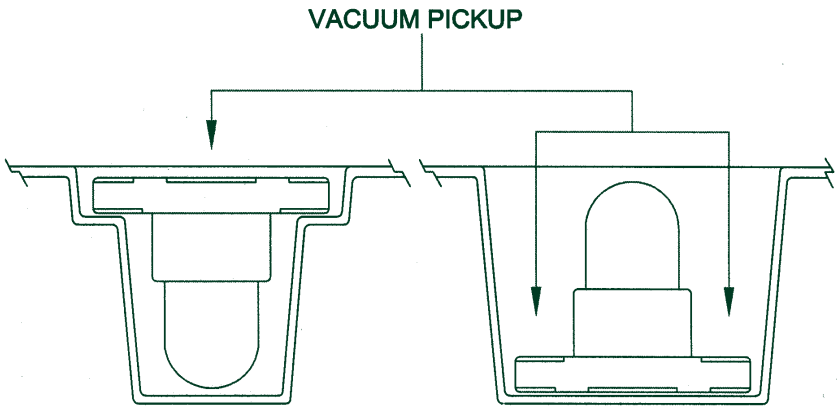

Figure #3

Figure #4, illustrates the lamp in a top of board mounting application. This type of application is typical of a vehicle air control or instrument cluster utilizing a light pipe and requiring a high level of light output. Top mounting of the lamp allows the light output from the filament to clear larger components on the circuit board. The diffused output from the silicone filter provides even uniform light transmission to a light pipe. For top of board placement, the lamp is provided in a carrier tape with the filter section up, Figure#3.

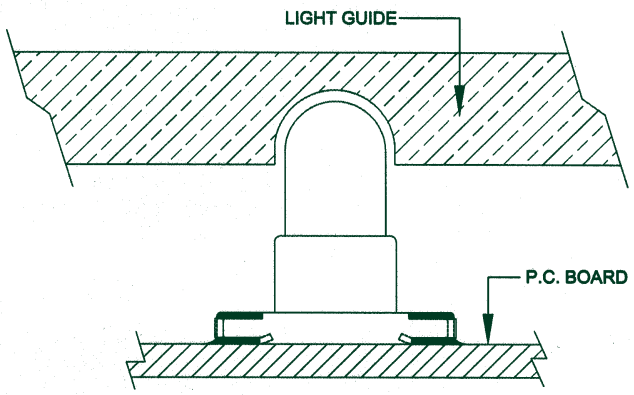

Figure #4

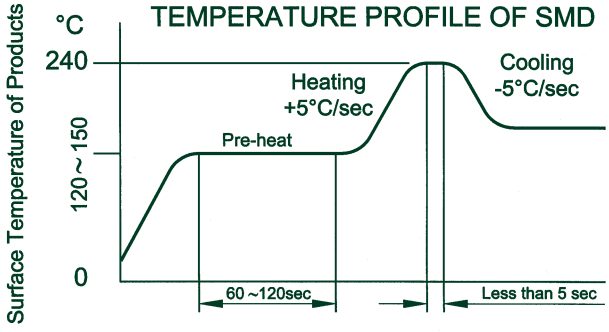

Figure #5

The typical re-flow soldering profile to be used with the parts is seen in Figure #5. Solder paste thickness needs to be in the .18-.20mm range. Typical maximum lamp output ratings are .200 MSCP for T-1, .500 MSCP for T-1 1/4, and .95 MSCP for T-1 1/2 size lamps

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