

Backlighting Review Checklist

A review worksheet for LED, light guide, dead-front and illuminated membrane switch designs.

Use this for backlit membrane switches, lighted icons, display windows and night-use control panels.

Lighting target

Project/model

Lighting method

LED color(s)

Operating voltage

Viewing environment

Brightness target or reference

Lighting design inputs

- Lighting type is selected or open for recommendation: discrete LED, light guide, EL or hybrid.
- Icon/window size, position and required brightness are marked.
- LED color, color temperature or wavelength is specified.
- Power supply, current limit, driver method and duty cycle are known.
- Uniformity requirement and acceptable light spots are discussed early.
- Night use, daylight readability, dimming or indicator-only function is defined.

Overlay and optical details

- Dead-front icons and light-blocking layers are identified.
- Transparent, translucent and opaque areas are separated in artwork.
- Window color, haze, diffusion and surface finish are reviewed.
- Light leakage around keys, edges, connector and tail is checked.
- Embossing near illuminated areas is reviewed for shadows or distortion.
- Color matching is checked with real LEDs and printed layers, not screen color only.

Assembly and reliability

- [] LED placement does not interfere with dome, spacer, tail bend or adhesive frame.
- [] Heat, current and long-term brightness decay are considered.
- [] Backlight layer thickness fits the housing stack-up.
- [] Circuit testing includes LED polarity and brightness check.
- [] Samples are reviewed in the real enclosure and actual viewing angle.
- [] Environmental tests include temperature, humidity and cleaning exposure when relevant.

Files and samples to provide

- Artwork with all lit and non-lit areas separated.
- Circuit drawing or schematic with LED/power details.
- Target brightness photo, old sample or reference panel.
- Housing drawing and display/window alignment requirement.
- Operating environment and power limitation.
- Acceptance notes for uniformity, color and light leakage.

Lighting approval notes

Approved lighting method

Approved LED color

Light leakage result

Uniformity result

Open engineering items

Owner/date

Send drawings and requirements to JASPER engineering

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