

Introduce for LGF(Light Guide Film) membrane switch

What is the LGF

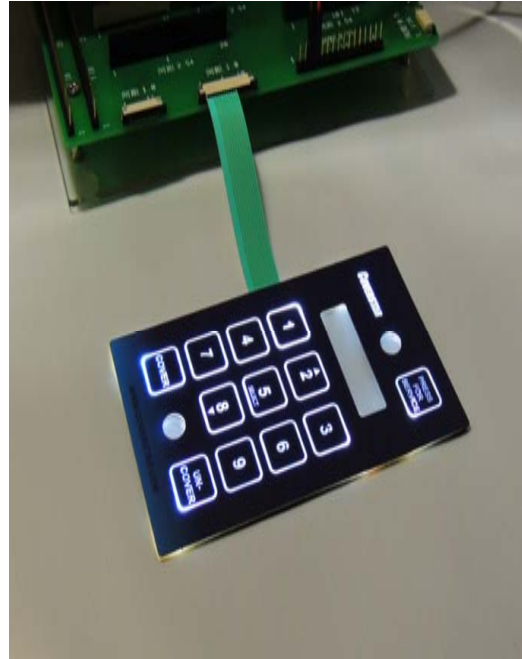
LGF Membrane Switches mean that there is light source from the side LEDs to light the graphic overlay and provide the indication information to users or when the product is used in the night or dark environment .Normally,LGF membrane switches we could make them with 4 different technology(Light Emitting Diodes (LEDs), Electroluminescent (EL) Lighting, Fiber Optic Lighting and Light Guide Film),but the Light Guide Film is the most cost-effective

The advantages of LGF membrane switch

- Long life (more than 100,000 hours), making it a reliable light source
- Cost-effective
- Efficient low voltage power consumption ($\geq 3V$)
- Available in a wide variety of colors and intensities
- Manufactured in almost any shape
- Very thin for smaller, lighter devices
- Minimal impact on the tactility of the membrane switch buttons
- Uniform backlighting across all areas
- The price is lower than the Optical fibers membrane switch

The disadvantages of LGF membrane switch

The fee of tooling and products is high than normal membrane switch
Shipdate is long(4-5week,the normal membrane switch is 15-21days)



Critical Pre-Design Considerations:

Constraints of implementing LGF into your switch design include:
 Allowing enough space for the right-angle LEDs.
 Not allowing enough space between the light source and the backlit areas.
 Distances from LED to backlit area, # LEDs/area backlit, distances between backlit areas (see back side for distances chart)

Foundation Design Process & Support:

Step 1 (Technology Fit Assessment)

Determine if membrane switch is the right technology for your human/machine interface.
 Compile application information (operating environment, function/use, etc.); drawings if you have them.

Step 2 (Application Specification)

Request information about various switch types/materials – schedule a phone consultation or technical sales call.

Considerations:

1. Operating conditions (indoor/outdoor, chemicals, etc.)
2. Mechanical requirements (tactile feedback, actuations, etc.)
3. Electrical requirements (layout, resistance, etc.)
4. Appearance (color, texture, etc.)
5. Certifications (ISO, UL, etc.)

Step 3 (Design)

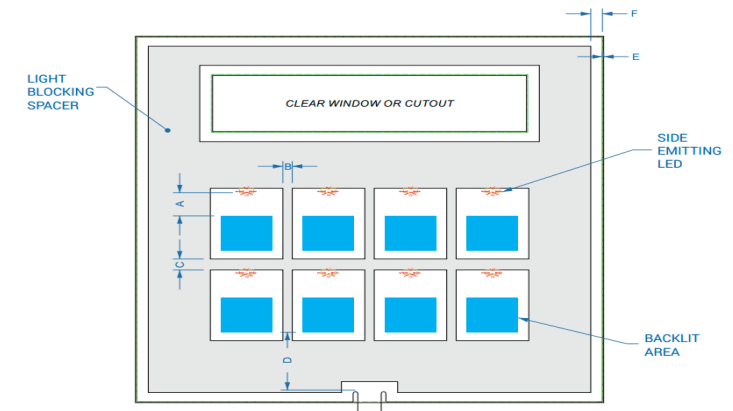
Submit quote request.

Step 4 (Quotation)

Receive quotation / re-design & re-quote if required.

Step 5 (Production)

Approve quotation and begin production. Shipment.



LTR

- A ≥ 5
- B ≥ 5
- C ≥ 5
- D ≥ 5
- E ≥ 0.5
- F ≥ 5

DIM (mm)

DESCRIPTION

- Distance between led and illuminated area.
- Distance between discrete illuminated areas perpendicular to light path.
- Distance between discrete illuminated areas parallel to light path.
- Distance between illuminated area and termination location.
- Distance between edge of circuit layers and edge of overlay.
- Distance between light blocking spacer & part edge.