Overview

The FLEX Front Light Panel optical film is designed to laminate to the front surface of JDI reflective display (LPM027M128B) to provide high quality on-demand display lighting. This thin plastic panel incorporates only a single LED which enables product designers to develop ultra-thin devices and minimize battery use.

- One **low-power** LED (included in Front Light)
- Over **80x less power** compared to traditional backlighting
- 0.06 mm thick FLEX film is over **5x thinner** than alternative lightguides

Mechanical

Flexible film allows for different placement options for the light source (examples below)

All dimensions in mm

12380-03 UNDER DISPLAY

1.00 PITCH 3.32 NEGATIVE CONTACT (-)

.80 2X DETAIL A (TYP)

12380-06 PRELIMINARY
2.7” (Color) Front Light Panel

Electrical

<table>
<thead>
<tr>
<th>Item</th>
<th>Symbol</th>
<th>Typical</th>
<th>Absolute Max</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Forward Current</td>
<td>I_F</td>
<td>5</td>
<td>25</td>
<td>mA</td>
</tr>
<tr>
<td>Pulse Forward Current</td>
<td>I_FP</td>
<td>--</td>
<td>80</td>
<td>mA</td>
</tr>
<tr>
<td>Reverse Voltage</td>
<td>V_R</td>
<td>--</td>
<td>5</td>
<td>V</td>
</tr>
</tbody>
</table>

Optical

Example ZIF Connectors:
- Molex 503480-0400
- Molex 52745-0497
- Molex 54550-0471
- Molex 54548-0471 (bottom)
- Molex 505110-0492

Remark 1: Viewing Angle

Remark 2: Definition of Contrast Ratio

Contrast Ratio (OR) = \[
\frac{\text{Reflection intensity in white display}}{\text{Reflection intensity in black display}}
\]

Measurements taken with a Minolta Chroma Meter CS-100 at a 17” view distance.