# 2.7” Front Light Panel

11103-xx | Product Data Sheet | 2020


**For more information:**

WEB flexlighting.com

CONTACT flexlighting.com/contact

PHONE 773-295-0305

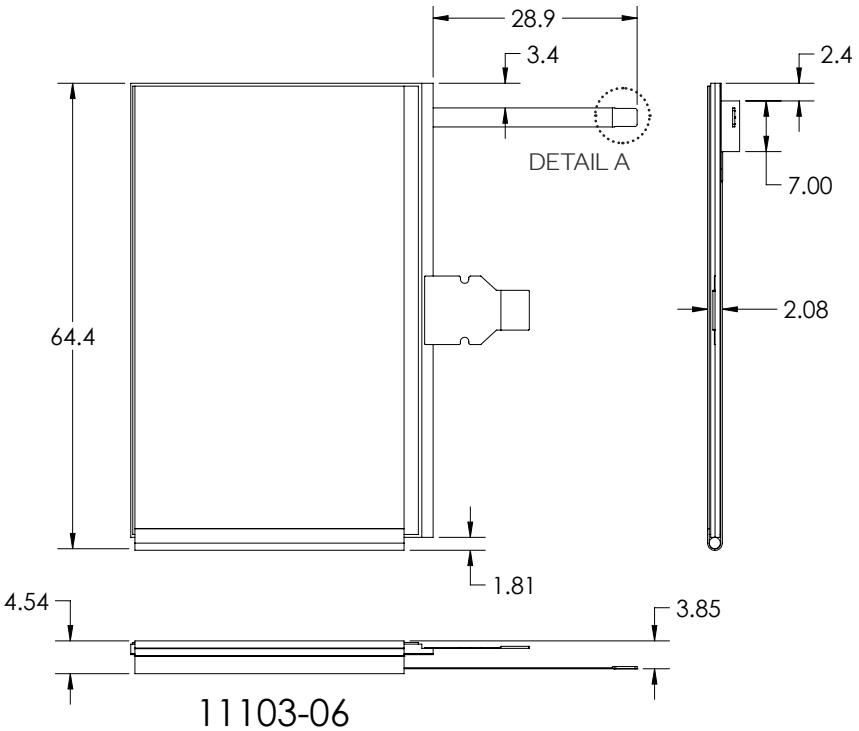

## Overview

The **FLEx Front Light Panel** optical film is designed to laminate to the front surface of Sharp reflective display (LS027B7DH01) 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.

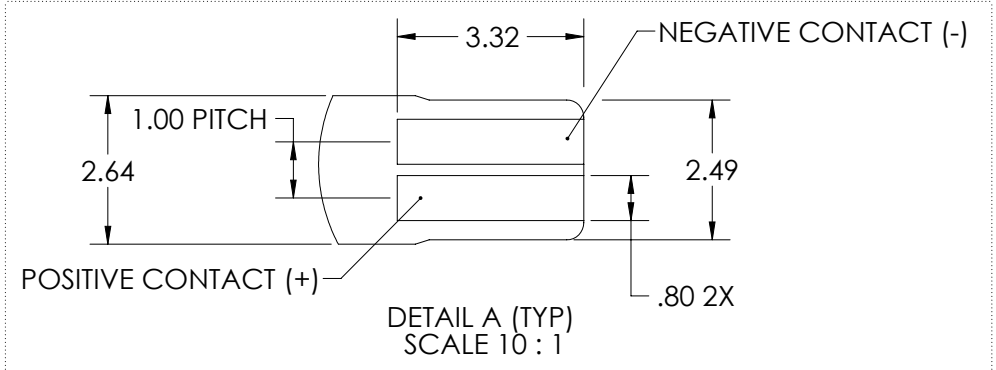
- One **low-power** LED (included in Front Light)
- Over **80x less power** compared to traditional backlighting
- 0.05 mm thick FLEx film is over **5x thinner** than alternative lightguides
- **Simple I/F** and **Connectivity** to System Board

SHARP
*Approved*
*Value-Added Partner*

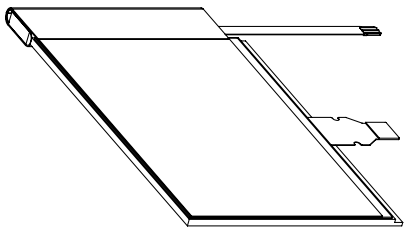
## Mechanical



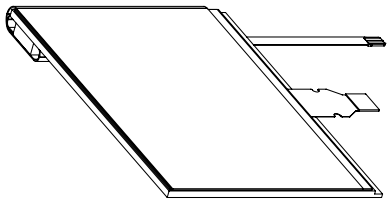

11103-06
FLAT ROLL
PRELIMINARY



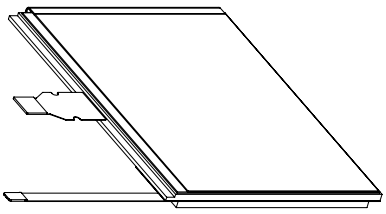

Flexible film allows for different placement options for the light source (examples below)



11103-01



11103-03



11103-06
PRELIMINARY

All dimensions in mm




Document Number: 12369-01_T4

# 2.7” Front Light Panel

11103-xx | Product Data Sheet | 2020


**For more information:**

WEB flexlighting.com

CONTACT flexlighting.com/contact

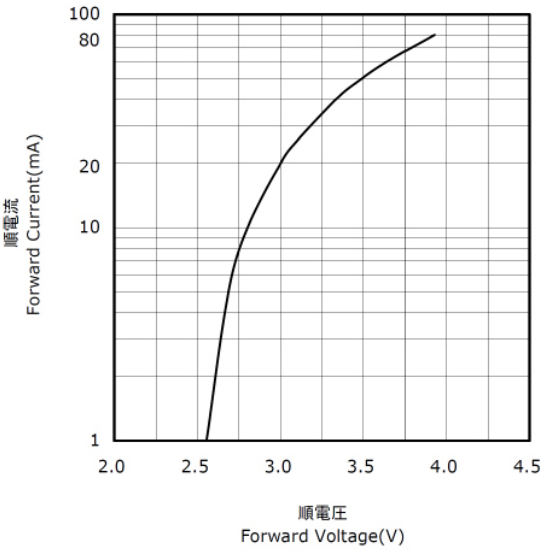
PHONE 773-295-0305

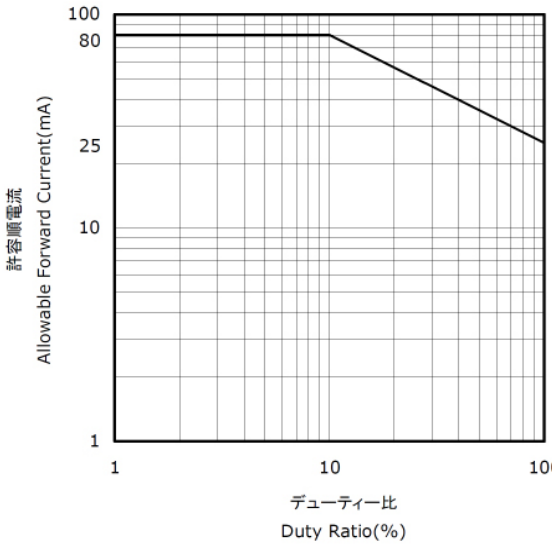

## Electrical

| Item | Symbol | Typical | Absolute Max | Unit |
|---|---|---|---|---|
| Forward Current | $I_F$ | 10 | 25 | mA |
| Pulse Forward Current | $I_{FP}$ | -- | 80 | mA |
| Reverse Voltage | $V_R$ | -- | 5 | V |

**Example ZIF Connectors:**

- Molex 503480-0400
- Molex 52745-0497
- Molex 54550-0471
- Molex 54548-0471 (bottom)
- Molex 505110-0492

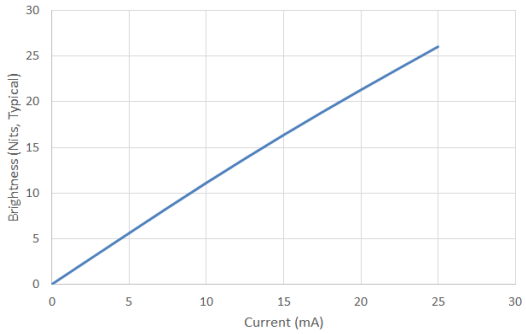


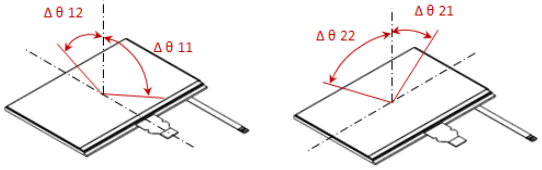

## Optical

| 2.7” Sharp + Front Light (11103-xx) | | | | | |
|---|---|---|---|---|---|
| **Item** | | **Symbol** | **TYP.** | **Unit** | **Remark** |
| Viewing Angle CR >2 | V | Θ 11<br>Θ 12 | 65<br>65 | ° (Degree) | [Remark 1] |
| | H | Θ 21<br>Θ 22 | 30<br>40 | ° (Degree) | |
| Contrast Ratio | Front light ON | CR | 10 | -- | [Remark 2] |

**Brightness vs. Power**




Remark 1: Viewing Angle




Remark 2: Definition of Contrast Ratio

$$\text{Contrast Ratio (CR)} = \frac{\text{Reflection intensity in white display}}{\text{Reflection intensity in black display}}$$

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




Document Number: 12369-01_T4