3.2" Front Light Panel

12222-xx | Product Data Sheet | 2018

Overview

Mechanical

The FLEx Front Light Panel optical film is designed to laminate to the front surface of Sharp reflective display (LS032B7DD02) 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

29.4

For more information: WEB flexlighting.com CONTACT flexlighting.com/contact PHONE 773-295-0305

FLEx



1.5 5.4 2.04 Flexible film allows for different placement options for the light source (examples below) 13.6 Ţ DETAIL A 77.5 .92 All dimensions in mm 12222-03 **UNDER DISPLAY** NEGATIVE CONTACT (-) 3.32 1.00 PITCH

2.49

.80 2X

DETAIL A (TYP)

3.77

12222-06 PRELIMINARY

12222-01

12222-03

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POSITIVE CONTACT (+)

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Electrical

| ltem | 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 |





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FLEx

Example ZIF Connectors:

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

Optical (PRELIMINARY)

| 3.2" Sharp + Front Light (12222-06) | | | | | | | | |
|-------------------------------------|-------------------|--------------|------|------------|------------|--|--|--|
| ltem | | Symbol | TYP. | Unit | Remark | | | |
| Viewing Angle CR >2 | V | Θ 11 Θ 12 | | ° (Degree) | [Remark 1] | | | |
| | Н | Θ 21 Θ 22 | | ° (Degree) | | | | |
| Contrast Ratio | Front light ON | CR | 9 | | [Remark 2] | | | |



Remark 1: Viewing Angle





Remark 2: Definition of Contrast Ratio

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

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

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