# 1.28" (Color) Front Light Panel

12378-xx | Product Data Sheet | 2020

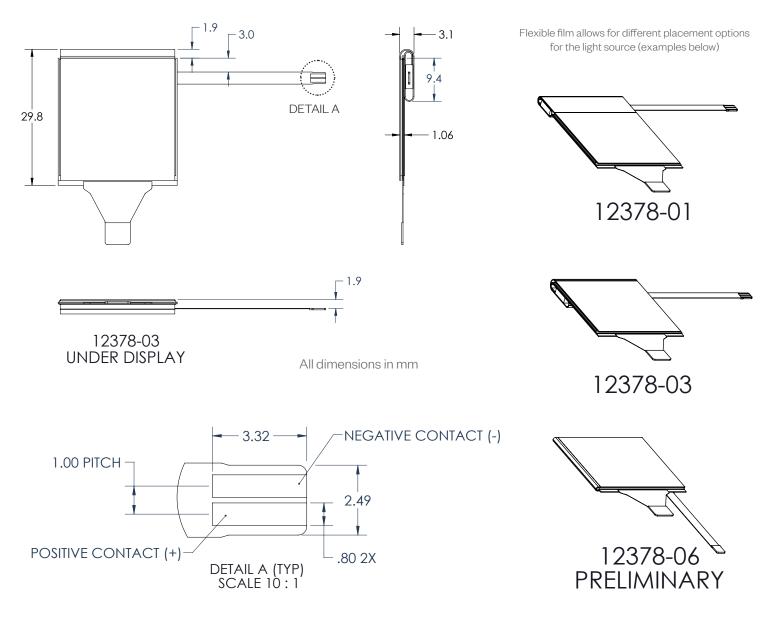
### Overview

The **FLEx Front Light Panel** optical film is designed to laminate to the front surface of **JDI reflective display (LPM013M126C)** 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

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

#### Mechanical



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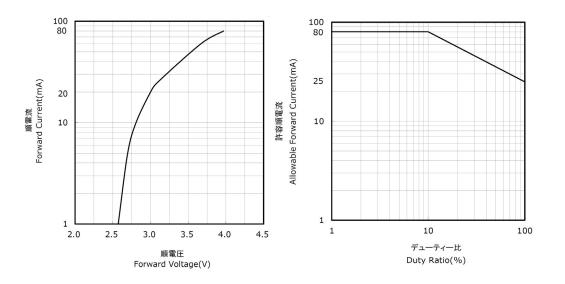


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## Electrical

ltem	Symbol	Typical	Absolute Max	Unit
Forward Current	I <sub>F</sub>	5	25	mA
Pulse Forward Current	l <sub>FP</sub>		80	mA
Reverse Voltage	V <sub>R</sub>		5	V



#### For more information: web <u>flexlighting.com</u>

FLEx

CONTACT <u>flexlighting.com/contact</u> PHONE **773-295-0305** 

#### Example ZIF Connectors:

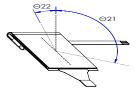
- Molex 503480-0400
- Molex 52745-0497
- Molex 54550-0471
- Molex 54548-0471 (bottom)
- Molex 505110-0492

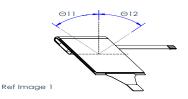
### Optical

1.28" JDI + Front Light (12378-xx)								
ltem		Symbol	TYP.	Unit	Remark			
Viewing Angle CR >2	V	Θ 11 Θ 12	60 30	° (Degree)	[Remark 1]			
	Н	Θ 21 Θ 22	65 65	° (Degree)				
Contrast Ratio	Front light ON	CR	14		[Remark 2]			

#### **Brightness vs. Power** 60 Low power breakout 50 12 11 (pical) 10 9 0 (lypical) SI 30 E 20 0 1.5 2 2.5 3 3.5 4 4.5 Current (mA) 10 15 20 25 Current (mA)

Remark 1: Viewing Angle





Remark 2: Definition of Contrast Ratio

Contrast Ratio (CR) =

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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