

# LUXFLEX™

## STANDARD



## RE-ENGINEERED FOR HIGHER EFFICACY & CRI

Our **Re-Engineered LUXFLEX™ LED Flexible Sheets** provides higher efficacy, 90+ CRI, and smoother dimming reaching dimming levels as low as 1% or lower. These sheets are great for indoor backlighting projects where a lighting solution that is both thin and bendable may be needed to fit into soft, curving surfaces and spaces. Great for projects of many sizes, LUXFLEX may be tiled for grand format illumination or cut into pieces as small as 2" x 4" to meet the needs of your specific application.

3 Wattage packages available to accommodate various lighting power allowances.



### KEY FEATURES



**STRONG COLOR RENDERING**



**HIGH EFFICACY**



**DIMMABLE TO 1%**



**EVEN ILLUMINATION**



**FLEXIBLE PCB BOARD**



**TILE SHEETS FOR GREATER COVERAGE**



**CUTTABLE**



**LONG LED LIFESPAN**



**LIGHTWEIGHT**



**WIDE BEAM ANGLE**



**CROSSWIRED CUT SECTIONS ILLUMINATE**



**EASY CONNECTIVITY**

### ASSURED QUALITY



**E477011**



**100% QC**



**LIMITED WARRANTY**



**QUICK REFERENCE DATA TABLE**  
FLIP TO PAGE 3 FOR COMPLETE TABLE

| SHEET TYPE                | CCT   | LUMINOUS FLUX | POWER     |
|---------------------------|-------|---------------|-----------|
|                           |       | lm/sq. ft.    | W/sq. ft. |
| HIGH POWER<br>19W SHEET   | 3000K | 1298.5        | 9.5       |
|                           | 4100K | 1350.5        |           |
|                           | 5300K | 1404.5        |           |
|                           | 6500K | 1460.5        |           |
| MEDIUM POWER<br>12W SHEET | 3000K | 817.5         | 6         |
|                           | 4100K | 866.5         |           |
|                           | 5300K | 886.5         |           |
|                           | 6500K | 921.5         |           |
| LOW POWER<br>6W SHEET     | 3000K | 408.6         | 3         |
|                           | 4100K | 426.0         |           |
|                           | 5300K | 443.4         |           |
|                           | 6500K | 460.8         |           |

|                  |             |
|------------------|-------------|
| PROJECT NAME/NO. | PART NUMBER |
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## MECHANICAL

### PARAMETERS

**LED Type** EPISTAR 2835

**LED Count** 288 LEDs/sheet • 8 LEDs/cut 2" x 4" piece

**LED Sheet Dimensions** 12" x 24" (609.6mm x 304.8mm).

Full sheets and cut pieces may be tiled together for maximum backlighting coverage.

**LED Pitch** 1" (25.5mm)

**LED Sheet Thickness**

- Sheet only: 0.02" (0.51mm)
- LED height: 0.04" (1mm)
- Connector height: 0.31" (8mm)

**LED Node Size** 2835

**Sheet Weight** 6.4 oz (0.18 kg)

### CONSTRUCTION & BASE MATERIAL

**Substrate Material** Flexible PET

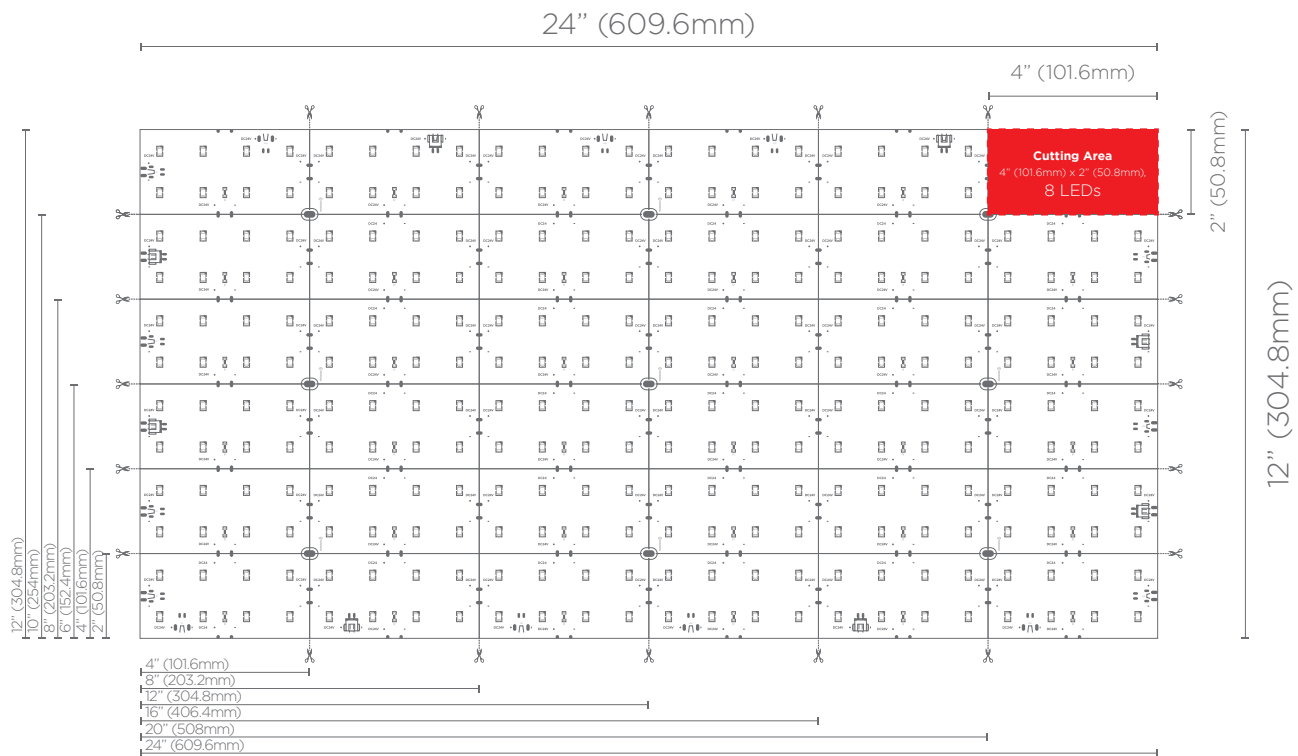
**Flammability Rated** UL 94 V-0

**Metal Material** Rolled copper for PCB flexibility

### COMPLIANCE & REGULATORY APPROVAL

UL E477011 • cUL E477011 • RoHs • CE • Lead Free • Warranty 5 years

### SHEET CUTTING DIAGRAM



| LED SIZE | OPERATING VOLTAGE | PITCH<br>center-to-center | DIMENSIONS<br>cut grid                         | CONNECTOR<br>HEIGHT | # LEDs<br>per cut section |
|----------|-------------------|---------------------------|------------------------------------------------|---------------------|---------------------------|
| 2835     | 24V               | 1"<br>(25.5mm)            | 2" x 4" x 0.02"<br>(50.8mm x 101.6mm x 0.51mm) | 0.31"<br>(8mm)      | 8                         |

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## ELECTRICAL

### SAFETY DISCLOSURES

**Electric Code Compliance** Please make sure to install LUXFLEX in accordance with standard national and local electrical codes.

**Outdoor Usage** LUXFLEX is designed for indoor use only and is not suitable for outdoor applications.

**Electrical Connectors** LUXFLEX allows for up to 8 connections on a single uncut sheet.<sup>1</sup> Please pay close attention to the polarity (+/-) of the Molex® connectors to successfully illuminate LUXFLEX.

**Actual Product Color May Vary** Please note that the product color as seen in this specification sheet, photography, and related marketing material for this product may vary slightly from your actual customized product due to photographic and design limitations.

**Specifications are Subject to Change Without Notice** While we try to make every effort to inform customers of updates to our products, we reserve the right to make modifications and improvements to our fixture specifications and designs without advance notice.

<sup>1</sup> Outdoor treatment available, contact customer success team for additional information.

### Manufacturer is Not Liable for Matching Fixtures to Pre-Existing

**Fixture Installations** We cannot guarantee matching the CCT appearance, product design, or lumen output for pre-installed fixtures or reorders.

### PHOTOMETRICS

**Wide Beam Angle** 120°

**Lamp Life** 54,000+ hours

**Color Rendering Index** 90+ across all color temperatures • 90+ available upon request

**Standard Color Temperatures** 3000K • 4100K • 5300K • 6500K

**Custom Color Temperatures Available** Please inquire for more information

**Lumen Output** 408.6-2921.0 lumens per sheet based on the power type. Features high brightness with unmatched superior light consistency and quality.

### PHOTOMETRIC DATA TABLES

| SHEET TYPE                | CCT                    | EFFICACY |            | LUMINOUS FLUX |                    | POWER    |         |                   |
|---------------------------|------------------------|----------|------------|---------------|--------------------|----------|---------|-------------------|
|                           |                        | lm/W     | lm/sq. ft. | lm/sheet      | lm/2" x 4" section | W/sq. ft | W/sheet | W/2" x 4" section |
| HIGH POWER<br>19W SHEET   | 3000K<br>Warm White    | 141      | 1298.5     | 2597          | 72.1               | 9.5      | 19      | 0.53              |
|                           | 4100K<br>Neutral White | 147      | 1350.5     | 2701          | 75.0               |          |         |                   |
|                           | 5300K<br>Daylight      | 153      | 1404.5     | 2809          | 78.0               |          |         |                   |
|                           | 6500K<br>Cool White    | 159      | 1460.5     | 2921          | 81.1               |          |         |                   |
| MEDIUM POWER<br>12W SHEET | 3000K<br>Warm White    | 141      | 817.5      | 1635          | 45.4               | 6        | 12      | 0.33              |
|                           | 4100K<br>Neutral White | 147      | 866.5      | 1733          | 48.1               |          |         |                   |
|                           | 5300K<br>Daylight      | 153      | 886.5      | 1773          | 49.3               |          |         |                   |
|                           | 6500K<br>Cool White    | 159      | 921.5      | 1843          | 51.2               |          |         |                   |
| LOW POWER<br>6W SHEET     | 3000K<br>Warm White    | 141      | 408.6      | 817           | 22.7               | 3        | 6       | 0.17              |
|                           | 4100K<br>Neutral White | 147      | 426.0      | 852           | 23.7               |          |         |                   |
|                           | 5300K<br>Daylight      | 153      | 443.4      | 887           | 24.6               |          |         |                   |
|                           | 6500K<br>Cool White    | 159      | 460.8      | 922           | 25.6               |          |         |                   |

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## ELECTRICAL

### DIMMING

- Pulse-width modulation dimming (PWM)
- 0-10V dimming
- Magnetic low voltage (MLV)

### POWER SUPPLY

**Input Voltage** 24VDC constant voltage

**Input Current** 0.39A/ft<sup>2</sup> (High Power), 0.25A/ft<sup>2</sup> (Medium Power), 0.12A/ft<sup>2</sup> (Low Power)

**Power Consumption** Power Consumption 6-19 W/sheet (3-9.5 W/sq ft) based on the power type.

**Wire Size** 20 AWG 2 Wire

**Please Use Only with Class 2 Power Supply**

**No. of Standard Connectors** 8

**Connector Type** Molex®

**Current**  Compatible



- Energy Savings
- Versatile
- Scalable
- Outdoor Rated
- Wired, Wireless or Hybrid

Contact us to inquire about other compatible controls

### DMX DECODER + NICOLAUDIE ESA

| BRIGHTNESS LEVEL (%) | DMX STEP | VOLTAGE (V) | LUX (X10) |
|----------------------|----------|-------------|-----------|
| 100%                 | 255      | 24.1        | 1315      |
| 90%                  | 236      | 23.7        | 1190      |
| 80%                  | 211      | 23.1        | 1052      |
| 70%                  | 180      | 22.4        | 920       |
| 60%                  | 147      | 21.6        | 789       |
| 50%                  | 122      | 21.1        | 657.5     |
| 40%                  | 100      | 20.5        | 526       |
| 30%                  | 79       | 20.1        | 394.5     |
| 20%                  | 53       | 19.4        | 263       |
| 10%                  | 25       | 18.8        | 131.5     |
| 1%                   | 1        | 18.2        | 12        |

**Magnitude (0-10V)**  
**Minimum Voltage Before Turning Off**

18.6V

**Amperor (0-10V) Minimum Voltage**  
**(10% Brightness)**

19.2V

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## INSTALLATION

**Field Cuttable** LUXFLEX is fully field cuttable and may be cut horizontally or vertically along the designated cutting lines. The smallest piece that may be cut measures 2" x 4" or 50.8mm x 101.6mm. LUXFLEX is fully adaptable for backlighting applications of many sizes and shapes.

**Environment** Indoor location safe only. For best performance, avoid mounting LUXFLEX LED sheets in direct sunlight, near direct water contact, or by surfaces subject to puddling caused by rainfall or sprinkler sprays.

**Customizable Wattage Available** Please reach out to our team for applications requiring specific wattage requests.

**Operating Temperature** -13°F - +140°F (-25°C - +60°C)

**Ambient Temperature** -13°F - +158°F (-25°C - +70°C)

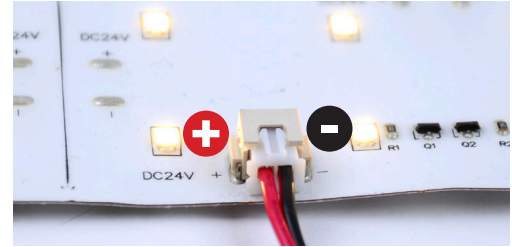
**Mounting** May be mounted with 3M adhesives or with standard screws. All LUXFLEX sheets feature 3M adhesive on the reverse side of the sheet and 9 holes per sheet for mounting with screws.

**Heat Sink** Not required for installation. LUXFLEX illuminates spaces with reduced thermal consumption and output, which makes it perfect for placement behind a diffuser in a compact space.

**Tiling Multiple Sheets** Each LUXFLEX sheet is designed for tiling multiple full and partial sheets in a series and connecting them to one another. To tile LUXFLEX identify the female Molex® connector and match the polarity of the connecting wire according to the polarity indicated next to the connector. Red wire is positive. Black wire is negative. The front of the male Molex connector, indicated in the images below, must always be facing up when inserting the wire into the connector. LEDs will immediately light up if the wiring is correct.

**Curved Applications** LUXFLEX may be flexed for curved or radius applications to best fit your environment.

### WIRING THE MOLEX® CONNECTOR

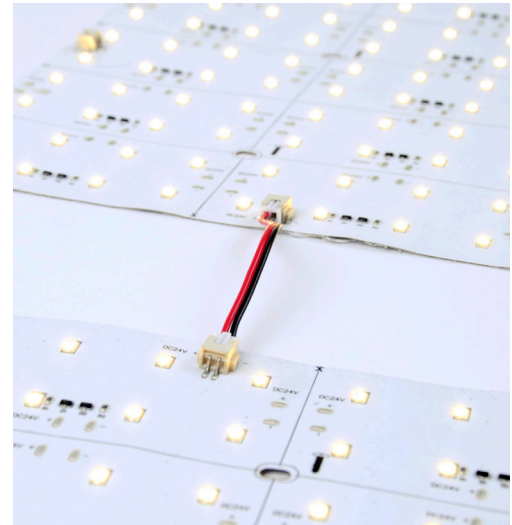


Red wiring should always be aligned to the positive charge. Black wiring should always be aligned to the negative charge.



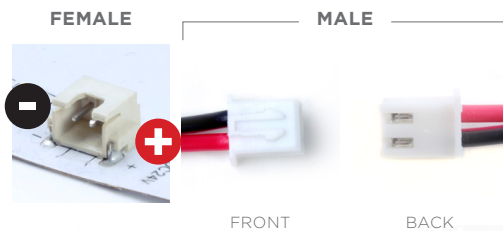
RED WIRE IS POSITIVE.  
BLACK WIRE IS NEGATIVE.

### TILING LUXFLEX SHEETS OR PIECES



LIMITLESS TILING = ENDLESS CREATIVITY

### MOLEX® CONNECTOR



### TILING CONNECTOR



### DC CONNECTOR



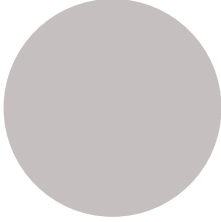
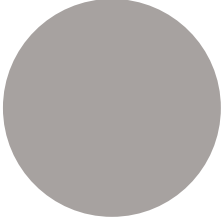
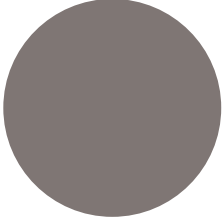
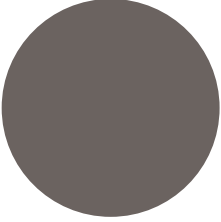
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**To Avoid Hotspots, Plan Your Setoff (Airgap) Depth** To prevent hotspots, we recommend installing LUXFLEX with a setoff or airgap anywhere from 1-4" away from your diffuser or face material. This setoff or airgap depth will vary depending on the nature of your diffuser or illuminated surface. Review the table below for general guidelines to follow during installation.

| OPACITY               |              |  |  |                                                                                               |
|-----------------------|-----------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| OPACITY PERCENTAGE    | <12%                                                                                          | 15% - 20%                                                                         | 20% - 35%                                                                          | >35%                                                                                                                                                                             |
| MINIMUM SET OFF DEPTH | 4"                                                                                            | 2.5"                                                                              | 1.5"                                                                               | 1"                                                                                                                                                                               |
| EXAMPLE MATERIALS     | <ul style="list-style-type: none"> <li>• 1/16" PC diffuser</li> <li>• White fabric</li> </ul> |                                                                                   |                                                                                    | <ul style="list-style-type: none"> <li>• 1/16" Acrylic diffuser</li> <li>• 1/8" Acrylic diffuser</li> <li>• Dark/color print on vinyl/fabric</li> <li>• Mosaic, stone</li> </ul> |

\*Please notice that **face material testing** is necessary to give final air gap confirmation and the chart above is for reference only but applicable for most applications.

## APPLICATIONS

- Architectural Indoor & Outdoor Entrance Facade
- Luminous Ceilings & Walls
- Indoor Ad Signage
- Outdoor Ad Signage
- Backlighting
- Architectural Lighting
- Curved Applications
- Compact, Space-Sensitive Applications
- Retail Applications
- ...And Many More!



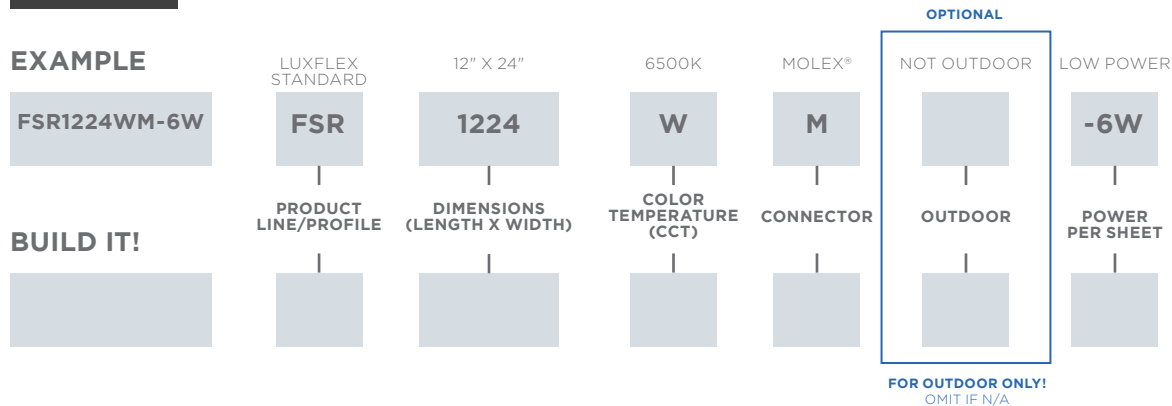
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## LUXFLEX™ STANDARD PART NUMBER



\*Custom lumen outputs and wattages are available for this product. Please contact us for more information.

| PRODUCT LINE                  |                   | COLOR TEMPERATURE (CCT) |                | OUTDOOR (OPTIONAL)     |                       |
|-------------------------------|-------------------|-------------------------|----------------|------------------------|-----------------------|
| <b>FSR</b>                    | LUXFLEX™ STANDARD | <b>W</b>                | 6500K          | <b>O</b>               | OUTDOOR (OMIT IF N/A) |
| <b>DIMENSIONS (IN INCHES)</b> |                   | <b>V</b>                | 5300K          | <b>POWER PER SHEET</b> |                       |
| <b>LLWW</b>                   | LENGTH (VARIES)   | <b>Y</b>                | 4100K          | <b>-6W</b>             | LOW POWER             |
|                               |                   | <b>Z</b>                | 3000K          | <b>-12W</b>            | MEDIUM POWER          |
|                               |                   | <b>C</b>                | CUSTOM CCT     | <b>-19W</b>            | HIGH POWER            |
|                               |                   | <b>CONNECTOR</b>        |                | <b>-XXW</b>            | CUSTOM WATTAGE        |
|                               |                   | <b>B</b>                | DC BARREL JACK |                        |                       |
|                               |                   | <b>M</b>                | MOLEX®         |                        |                       |
|                               |                   | <b>H</b>                | HARDWIRE       |                        |                       |

|                  |             |
|------------------|-------------|
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| SPECIFIED BY     | NOTE        |