

## EXPORT SLIM FLEXIBLE CATHODE LIGHT STRIP

(Models FCLS-Slim-EX & HFCLS-Slim-EX)



Patent 7,293,895  
Patent 6,454,431  
British Patent No.  
GB2431463B



The Slim Flexible Cathode Light Strip (FCLS-Slim-EX) effectively brings cold cathode lighting into the 21st century, and in the smallest package ever available. All the best features of shadowless long-life, cold-cathode fluorescent lighting have been engineered into a simple, self-contained, discreet, flexible fitting which allows lamps to be easily snapped in and out, just like a regular fluorescent batten. The FCLS-Slim-EX combines incredibly low electrical power consumption, high lumens, and long lamp life, offering a far better engineered and contractor-friendly alternative to traditional rubber boot, bare tube and ballast cold cathode systems.

Each beautifully-designed fitting can conform to almost any shape or size (straight, curved or bent) of Cathode Lighting Systems' custom or standardized lamps, in an almost infinite variety of deeply-saturated colors and high color-rendering whites. The Slim Flexible Cathode Light Strip (FCLS-Slim-EX) is completely modular, and is the smallest cold cathode fitting available anywhere (41mm wide and 60mm tall, including the lamp). The FCLS-Slim-EX installs in minutes, and offers the convenience of a simple modular connection method between fittings. Lamps simply snap in and out, and all fittings are provided with integral, inaudible 1% electronic dimming ballasts.

With lamp life as long as 100,000 field-proven hours and watt consumption as low as 14.6 watts per meter, this phenomenal product is perfect for all your indirect cove applications.

**"FLEXIBLE CATHODE LIGHT STRIP...BECAUSE THE WORLD IS ROUND"**

## FEATURES & BENEFITS

- Illumination is seamless from end to end, with no dark spots or socket shadows
- Each fitting can flex and conform to almost any length or shape lamp Cathode Lighting Systems manufactures, up to 2.25 meters in length
- Reliable, ultra long-life, high color-rendering T6 cold cathode lamps (up to 100,000 hours of life)
- Up to 184 meters of fittings on one 20-amp circuit @ 230 volts
- Lamps easily snap in and out of fittings via innovative zero-clearance lamp bases and lampholders and lock securely in place
- Contractor friendly and beautifully engineered, unlike traditional rudimentary cold cathode systems, no twisting of wires, insulating rubber boot installation or lamp stanchion fixing is necessary to install or replace a lamp
- Fittings daisy-chain together utilizing quick-connect wiring cables
- Very small profile - only 41 mm wide and 60 mm tall with lamp installed
- Dimmable 1% integral electronic ballasts offer inaudible operation and a power factor >.95
- Outstanding dimming performance using 2-wire trailing-edge dimmers
- Available in standard output (up to 1614 lumens per meter / FCLS-Slim-EX) or high-efficiency (up to 1050 lumens per meter / HFCLS-Slim-EX)

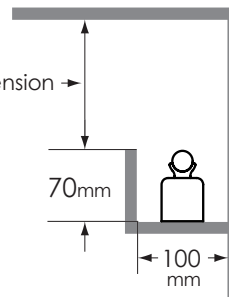


## DIMENSIONS & MOUNTING RECOMMENDATIONS

### Please note:

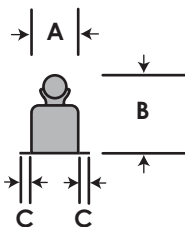
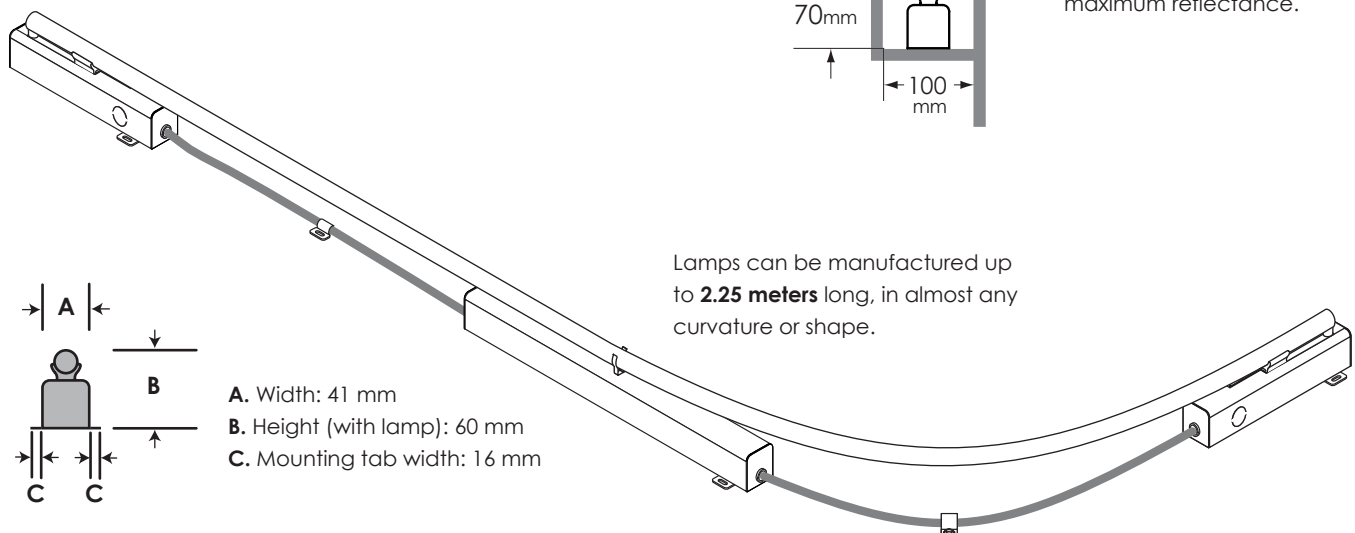
Cove width must be increased if the curvature of the lamps is less than a 1.8 meter radius. Please contact the factory for assistance with this calculation.

Maximize this dimension  
(150 mm minimum recommended)



### Note:

The inside of cove must be finished, and we recommend that it be painted matte white for maximum reflectance.



- A. Width: 41 mm
- B. Height (with lamp): 60 mm
- C. Mounting tab width: 16 mm

LAMP COLORS, LUMENS & EFFICACIES

| <b>WHITE LAMPS:</b> All whites are triphosphor with a CRI of 92 |                       |                                    |                                    |  | <b>Efficacy</b>  |
|---|-----------------------|------------------------------------|------------------------------------|--|------------------|
| <b>Cat. No.</b>   | <b>Description</b>    | <b>FCLS-Slim-EX<br/>Lum./Meter</b> | <b>HCLS-Slim-EX<br/>Lum./Meter</b> |  |                  |
| 19TC  | Candelight - 1900°K   | 941                                | 626                                |  | 77.2 lumens/watt |
| 23TC  | Golden White - 2300°K | 1378                               | 918                                |  | 77.2 lumens/watt |
| 24TC  | Sunrise - 2400°K      | 1528                               | 1020                               |  | 77.2 lumens/watt |
| 25TC  | Incandescent - 2500°K | 1486                               | 991                                |  | 77.2 lumens/watt |
| 27TC  | Warmtone - 2700°K     | 1335                               | 889                                |  | 77.2 lumens/watt |
| 29TC  | Warm White - 2900°K   | 1542                               | 1027                               |  | 77.2 lumens/watt |
| 30TC  | Warmlight - 3000°K    | 1574                               | 1050                               |  | 76.2 lumens/watt |
| 35TC  | Soft white - 3500°K   | 1614                               | 1076                               |  | 78.2 lumens/watt |
| 42TC  | Satin white - 4200°K  | 1561                               | 1040                               |  | 75.3 lumens/watt |
| 63TC  | Ice white - 6300°K    | 1515                               | 1010                               |  | 73.2 lumens/watt |
| 83TC  | Daylight - 8300°K     | 1502                               | 1000                               |  | 75.4 lumens/watt |

**COLORED LAMPS:**

Pink White (PW)  
Deep Blue (DB)  
Sky Blue (SB)  
Aqua (AQ)  
Turquoise (TQ)  
Green (GR)  
Bright Green (BG)  
Gold (GD)  
Yellow (YL)  
Salmon Pink (SP)  
Purple (PR)  
Hot Pink (HP)  
Red (RD)  
Orange (OR)

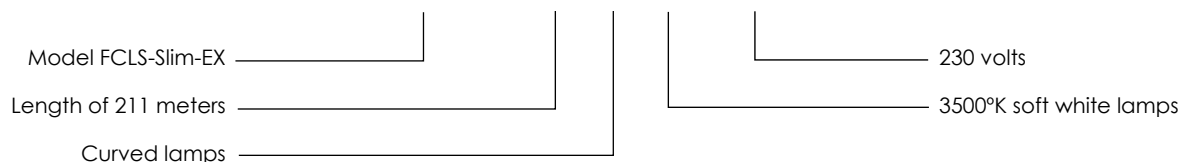
Photometric information: All photometric values provided by LTL (Luminaire Testing Laboratories, Allentown, PA and Cathode Lighting Systems Inc. USA).

ORDERING INFORMATION

|   |   |   |   |   |   |   |   |   |
|---|---|---|---|---|---|---|---|---|
| <div style="border: 1px solid black; width: 100px; height: 30px; margin: 0 auto;"></div> <div style="text-align: center;">↓</div> | - | <div style="border: 1px solid black; width: 100px; height: 30px; margin: 0 auto;"></div> <div style="text-align: center;">↓</div> | - | <div style="border: 1px solid black; width: 100px; height: 30px; margin: 0 auto;"></div> <div style="text-align: center;">↓</div> | - | <div style="border: 1px solid black; width: 100px; height: 30px; margin: 0 auto;"></div> <div style="text-align: center;">↓</div> | - | <div style="border: 1px solid black; width: 100px; height: 30px; margin: 0 auto;"></div> <div style="text-align: center;">↓</div> |
| <b>Model:</b>   |   | <b>Length:</b>  |   | <b>Lamp Type:</b>   |   | <b>Lamp Color:</b>  |   | <b>Voltage:</b>   |
| <b>FCLS-Slim-EX</b><br>Export Slim Flexible<br>Cathode Light Strip<br>(standard light output)                                     |   | Lengths are<br>expressed in<br>meters to the<br>nearest .25 meter   |   | <b>S:</b> Straight<br><b>C:</b> Curved  |   | See color chart<br>above for correct<br>catalog numbers   |   | <b>230 - 230 volts</b>  |
| <b>HFCLS-Slim-EX</b><br>Export High-efficiency<br>Slim Flexible<br>Cathode Light Strip<br>(reduced light output)                  |   |   |   |   |   | If color has not been<br>chosen at time of<br>specification, please<br>write: <b>TBD</b>  |   |   |

Example: One circular light cove, 211 meters in circumference. Lamp color is 3500°K soft white. Fittings will operate at 230 volts.

**FCLS-Slim-EX - 211 - C - 35TC - 230**



## ELECTRICAL INFORMATION

| Model         | Voltage   | Primary Amps Per Fitting | Dimming Method | Watts per Meter      |
|---------------|-----------|--------------------------|----------------|----------------------|
| FCLS-Slim-EX  | 230 volts | .20                      | Trailing-Edge  | 18 watts per meter   |
| HFCLS-Slim-EX | 230 volts | .17                      | Trailing-Edge  | 14.6 watts per meter |

\*Values are based on all fitting lengths at 2.25 meters. FCLS-Slim-EX fittings should be powered by a dedicated circuit only. Circuit shall be provided with over-voltage and surge protection.

**Please note:** The factory supplied fitting interconnection cable contains 1.5 mm conductors. **Do not** exceed the maximum amperage limitation of a 1.5mm conductor when calculating the number of fittings per circuit.

## DIMMING

Fittings are dimmable utilizing 2-wire trailing-edge dimmers.

## SPECIFICATIONS

**Fitting:** Shall be Cathode Lighting Systems model FCLS-Slim-EX (Export Slim Flexible Cathode Light Strip) or HFCLS-Slim-EX (Export High-Efficiency Slim Flexible Cathode Light Strip), and shall provide a continuous, uninterrupted line of light when installed as instructed. Fittings shall be pre-assembled, satin-anodized 1.25 mm aluminum with a snap-fit cover and one (1) integral, dimmable electronic ballast. Fittings shall flex and conform to lamp shapes and lengths required and shall be provided with an interconnection cable for electrical connection to each other and mains power.

**Lamps:** Shall be 100,000-hour (HFCLS-Slim-EX) or 75,000 hour (FCLS-Slim-EX) T6 cold-cathode fluorescent, color as specified. Lamps shall be provided with single-pin bases for zero-clearance snap-in installation and removal from lampholders. Lamps that are hard-wired to the ballast are not acceptable alternatives. Lamps shall be manufactured with butt-sealed ends and in custom lengths/curvatures to follow the architectural details and to provide complete illumination at each lamp end, and shall have provisions to be locked into place, utilizing the fitting's lamp-locking clips. Manufacturer shall provide independent test lab reports to substantiate lumen output.

**Integral Ballasts:** Shall be noiseless electronic 990-volt, high-output, instant-start cold cathode, class P thermally protected, and shall automatically de-energize upon removal of lamps from the fitting. Ballast power factor shall be >.95.


























**Dimming:** Fittings shall be independently dimmable via trailing-edge 2-wire dimmers, and shall dim to 1%.

**Approvals:** Fittings shall be UL and cUL-listed under UL category: *IEUZ Fluorescent surface-mounted luminaires*

**Manufacturer:** Shall be Cathode Lighting Systems Inc., Gaithersburg, MD - USA 001-301-921-4120

Website: [www:CathodeLightingSystems.com](http://www.CathodeLightingSystems.com)

## Lamp Color & Lumen Output Information

|   | Lamp Color   | Kelvin Temperature | Catalog Number | Lumens per Meter |               |
|---|--------------|--------------------|----------------|------------------|---------------|
|   |              |                    |                | FCLS-Slim-EX     | HFCLS-Slim-EX |
|    | Candlelight  | 1900° K            | 19TC           | 941              | 626           |
|    | Golden White | 2300° K            | 23TC           | 1378             | 918           |
|    | Sunrise      | 2400° K            | 24TC           | 1528             | 1020          |
|    | Incandescent | 2500° K            | 25TC           | 1486             | 991           |
|    | Warmtone     | 2700° K            | 27TC           | 1335             | 889           |
|    | Warm White   | 2900° K            | 29TC           | 1542             | 1027          |
|    | Warmlight    | 3000° K            | 30TC           | 1574             | 1050          |
|    | Soft White   | 3500° K            | 35TC           | 1614             | 1076          |
|    | Satin White  | 4200° K            | 42TC           | 1561             | 1040          |
|    | Ice White    | 6300° K            | 63TC           | 1515             | 1010          |
|    | Day Light    | 8300° K            | 83TC           | 1502             | 1000          |
|    | Pink White   | N/A                | PW             | 991              | 659           |
|    | Deep Blue    | N/A                | DB             | 1151             | 768           |
|  | Sky Blue     | N/A                | SB             | 1404             | 935           |
|  | Aqua         | N/A                | AQ             | 1319             | 879           |
|  | Turquoise    | N/A                | TQ             | 1624             | 1082          |
|  | Green        | N/A                | GR             | 1571             | 1046          |
|  | Bright Green | N/A                | BG             | 1650             | 1099          |
|  | Gold         | N/A                | GD             | 833              | 554           |
|  | Yellow       | N/A                | YL             | 895              | 597           |
|  | Salmon Pink  | N/A                | SP             | 915              | 610           |
|  | Purple       | N/A                | PR             | 823              | 548           |
|  | Hot Pink     | N/A                | HP             | 905              | 604           |
|  | Red          | N/A                | RD             | 394              | 262           |
|  | Orange       | N/A                | OR             | 659              | 440           |

Photometric information: All photometric values provided by LTL (Luminaire Testing Laboratories, Allentown, PA) and Cathode Lighting Systems Incorporated, USA.