

Duris E5 PowerFlex LED Strips 15mm LED Pitch

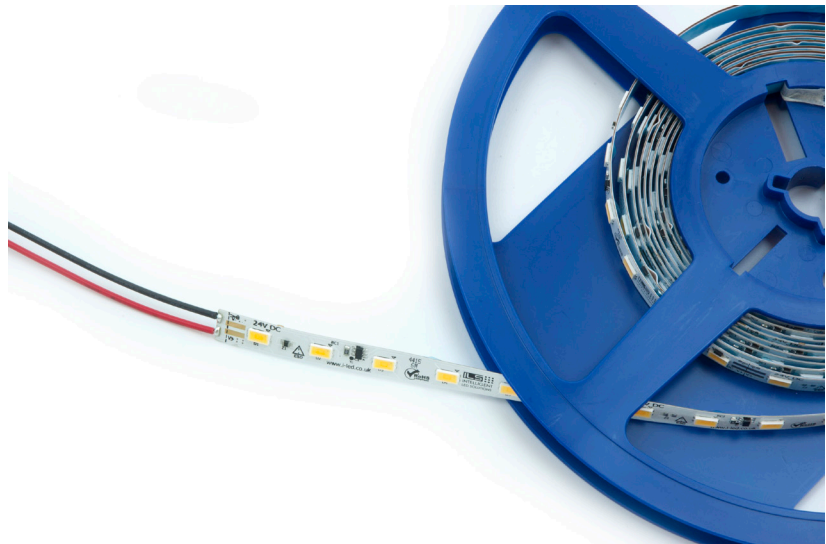
ILX-E515-xx08-3240-SD2xx

Product Overview

The PowerFlex range are densely populated, high bright, flexible LED strips using the Osram Duris E5 LED at its heart. Unlike standard flexible LED strips, the ILX range of strips from ILS incorporate constant current drivers, protection diodes and the latest 3M thermal tape. This combination gives unparalleled performance with brightness's in excess of 3000 lumens per metre whilst still achieving 50000 hours working life. Combined with a full range of accessories including extrusions and connectors, the ILX family of flexible LED reels finally offers a solution for the industrial as well as consumer markets.

Applications

- Task Lighting
- Backlighting
- Desk Lighting
- Garage Lighting
- Accent Lighting
- Under Cabinet Lighting
- Bar Lighting
- Refrigeration
- Industrial Applications
- Photography



Technical Features

- Reel Length - 3240mm
- LED Pitch - 15mm
- Lumen (Brightness) - 4960 Lumen per reel / 1528 lumens per metre
- Working Voltage - 24V DC constant voltage
- Strip Width 8mm
- Fully dimmable with external controller
- Beam Angle - 120 Degrees
- Able to be cut using cut lines every 90mm
- Mounting - 3M double sided thermal tape
- Precise LED binning selection enables 100% consistent colour temperature from batch to batch

Important Information and Precautions

- The PowerFlex LEDs, when powered up, are very bright. Thus it is advised that you do not look directly at it. Turn the PowerFlex away from you and do not shine into the eyes of others.
- Do not operate PowerFlex with a Power Supply with unlimited current. Connection to constant voltage Power
- Supplies that are not current limited may cause the PowerFlex to consume current above the specified maximum and cause failure or irreparable damage. PowerFlex, when operated, can reach high temperatures thus there is risk of injury if they are touched.
- DO NOT HOT PLUG ON LED SIDE OF POWER SUPPLY.
- DO NOT TOUCH or PUSH on the LED as this can cause irreparable damage.

Product Options

ILS PART NUMBER	Colour	Typical Wattage §		Drive Voltage	Flux † per 3240mm reel	Radiance Angle	Relevant OSRAM LED Data
		per 3240mm	per 90mm cut				
ILX-E515-WM08-3240-SD201.	Warm White (3000K)	35.00W	0.96W	24V	4032lm	120° (±60°)	GWJDSH
ILX-E515-NW08-3240-SD201.	Neutral White (4000K)	35.00W	0.96W	24V	4032lm	120° (±60°)	GWJDSH
ILX-E515-WM08-3240-SD211.	Warm White (3000K)	52.00W	1.44W	24V	4960lm	120° (±60°)	GWJDSH
ILX-E515-NW08-3240-SD211.	Neutral White (4000K)	52.00W	1.44W	24V	4960lm	120° (±60°)	GWJDSH

* Due to the special conditions of the manufacturing processes of LEDs, the typical data of technical parameters can only reflect statistical figures and do not necessarily correspond to the actual parameters of each single product which could differ from the typical data.

§ Tolerance +/- 10%

† LED Measured with 20mS 350mA pulse at 25°c

Minimum and Maximum Ratings

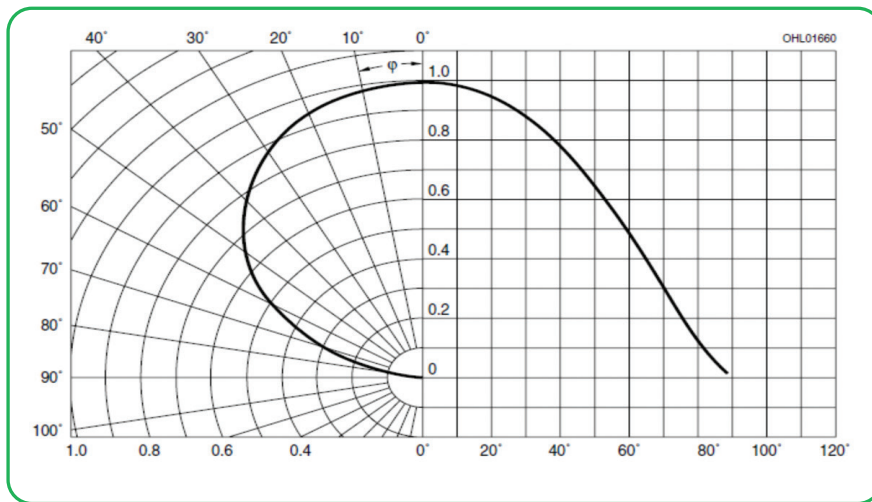
ILS PART NUMBER	Operating Temperature at Tc-Point [°C]*	Storage Temperature [°C]*	Voltage (Vdc)	Reverse Voltage [Vdc]*
ILX-E515-WM08-3240-SD201.	70°C max	- 40 to 110°C	24V max	not designed for reverse voltage
ILX-E515-NW08-3240-SD201.	70°C max	- 40 to 110°C	24V max	not designed for reverse voltage
ILX-E515-WM08-3240-SD211.	70°C max	- 40 to 110°C	24V max	not designed for reverse voltage
ILX-E515-NW08-3240-SD211.	70°C max	- 40 to 110°C	24V max	not designed for reverse voltage

* Exceeding maximum ratings for operating and storage temperature will reduce expected life time or destroy the LED module.

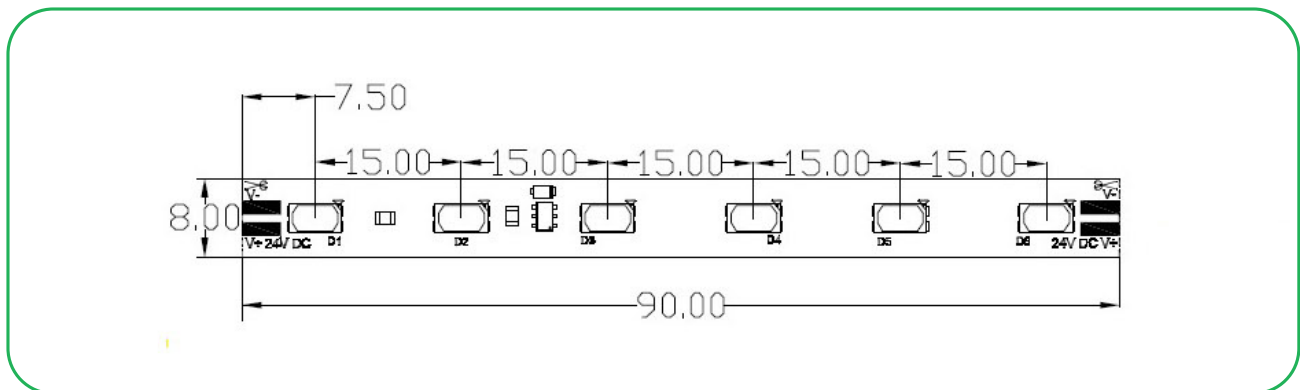
Exceeding maximum ratings for operating voltage will cause hazardous overload and will likely destroy the LED module.

The temperature of the LED module must be measured at the Tc-Point according to EN60598-1 in a thermally constant status with a temperature sensor or a temperature sensitive label.

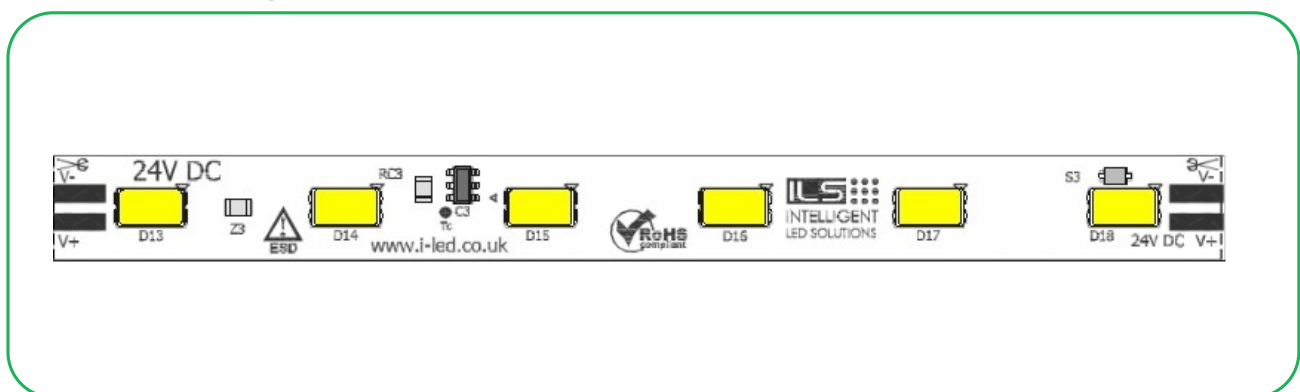
Radiation of single LED



Technical Drawing



Technical Drawing with cables (mm)



PowerFlex Duris E5 Flexible Heat Sink Options

ILS has recently introduced a series of Aluminium Alloy Heat Sinks to be used with our standard range of PowerFlex. These Heat Sinks are supplied with end caps, mounting brackets and 2 diffusers - clear or diffused. More versions will be introduced over the coming months and we are also happy to manufacture custom Heat Sinks to your request.

ILS Product	
ILK-FLEXEXT-0310-001.	310mm Accessory Kit including Square Extrusion, End Caps, 2 Diffusers and Mounting Clips
ILK-FLEXEXT-1000-001.	1000mm Accessory Kit including Square Extrusion, End Caps, 2 Diffusers and Mounting Clips
ILK-FLEXEXT-1500-001.	1500mm Accessory Kit including Square Extrusion, End Caps, 2 Diffusers and Mounting Clips
ILK-FLEXEXT-0310-002.	310mm Accessory Kit including Corner Extrusion, End Caps, 2 Diffusers and Mounting Clips
ILK-FLEXEXT-1000-002.	1000mm Accessory Kit including Corner Extrusion, End Caps, 2 Diffusers and Mounting Clips
ILK-FLEXEXT-1500-002.	1500mm Accessory Kit including Corner Extrusion, End Caps, 2 Diffusers and Mounting Clips



PowerFlex Duris E5 Flexible Power Supply Options

ILS PART NUMBER	Cut point / number per reel	IZV024-040M-9767C-SAL		IZV024-060M-9767C-SAL		IZV024-090M-9767C-SAL		IZV024-120M-9767C-SAL	
		number of reels	number of cuts	number of reels	number of cuts	number of reels	number of cuts	number of reels	number of cuts
ILX-E507-WM10-3240-SD201.	45mm / 72	0	41	0	62	1	93	1	125
ILX-E507-NW10-3240-SD201.	45mm / 72	0	41	0	62	1	93	1	125
ILX-E507-WM10-3240-SD211.	45mm / 72	0	27	0	41	0	62	1	83
ILX-E507-NW10-3240-SD211.	45mm / 72	0	27	0	41	0	62	1	83
ILX-E515-WM08-3240-SD201.	90mm / 36	1	41	1	62	2	93	3	125
ILX-E515-NW08-3240-SD201.	90mm / 36	1	41	1	62	2	93	3	125
ILX-E515-WM08-3240-SD211.	90mm / 36	0	27	1	41	1	62	2	83
ILX-E515-NW08-3240-SD211.	90mm / 36	0	27	1	41	1	62	2	83
ILX-E525-WM08-6000-SD201.	150mm / 40	1	41	1	62	2	93	3	125
ILX-E525-NW08-6000-SD201.	150mm / 40	1	41	1	62	2	93	3	125
ILX-E525-WM08-6000-SD211.	150mm / 40	0	13	0	20	0	31	1	41
ILX-E525-NW08-6000-SD211.	150mm / 40	0	13	0	20	0	31	1	41

Thermal Interface Material Options

These strips have 3M thermal tape already attached for perfect thermal bonding.

Assembly Information

- The mounting of the PowerFlex Duris E5 flexible has to be on a metal Heat Sink.
- In order to optimise the thermal management, the metal surface needs to be clean (dirt and oil free) and planar for the best contact with the LED module. A thermal grease or heat transfer material is highly recommended.

Safety Information

- The evaluation of eye safety occurs according to the standard IEC 62471:2006 ("photobiological safety of lamps and lamp systems"). Within the risk grouping system of this CIE standard, the LED specified in this data sheet falls into the class "moderate risk" (exposure time 0.25s). Under real circumstances (for exposure time, eye pupils, observation distance), it is assumed that no endangerment to the eye exists from these devices. As a matter of principle, however, it should be mentioned that intense light sources have a high secondary exposure potential due to their blinding effect. As is also true when viewing other bright light sources (e.g. headlights), temporary reduction in visual acuity and afterimages can occur, leading to irritation, annoyance, visual impairment and even accidents, depending on the situation.
- The LED module itself and all its components must not be mechanically stressed.
- Assembly must not damage or destroy conducting paths on the circuit board.
- The mounting of the module is carried out by attaching it at the mounting holes. Metal mounting screws must be insulated with synthetic washers to prevent circuit board damage and possible short circuiting.
- To avoid mechanical damage to the connecting cables, the boards should be attached securely to the intended substrate. Heavy vibration should be avoided.
- Observe correct polarity!
- Depending on the product, incorrect polarity will lead to emission of red or no light. The module can be destroyed!
- Pay attention to standard ESD precautions when installing the PowerFlex Duris E5 flexible.
- The PowerFlex Duris E5 flexible, as manufactured, have no conformal coating and therefore offer no inherent protection against corrosion.
- Damage by corrosion will not be accepted as a materials defect claim. It is the user's responsibility to provide suitable protection against corrosive agents such as moisture and condensation and other harmful elements.
- For outdoor usage, a housing is definitely required to protect the board against environmental influences. The design of the housing must correspond to the IP standards in the application. It is also the responsibility of the user to ensure any housings or modifications keep the Tc junction temperature to within stated ranges.
- To also ease the luminaire/installation approval, electronic control gear for LED or LED modules should carry the CE mark and be ENEC certified. In Europe the declarations of conformity must include the following standards: CE: EC 61374-2-13, EN 55015, IEC 61547 and IEC 61000-3-2 - ENEC: 61374-2-13 and IEC/EN 62384.

For further information please contact ILS

The values contained in this data sheet can change due to technical innovations. Any such changes will be made without separate notification.