



# DURIS® E2835 28 LED Linear for Daisy-Mini Tunable White

ILS-E228-xxxx-0279-SC201.

At the heart of each Daisy-Mini linear strip are 28 DURIS® E2835 LEDs. The DURIS® E2835 combines good efficacy and a wide beam angle into a compact format (2.8 mm x 3.5 mm). This is key to homogeneous illumination applications where the DURIS® E2835 never fails to impress with its performance on a system level. The linear strips has been designed and developed around the Daisy-Mini from LEDiL. The strip is split into 2 chains of 14 to allow for ultimate colour control. A low thermal resistance of 9.8K/W ensures cool running and a highly efficient product. Tunable white light is a technology that enables users to adjust the colour temperature of a lamp in real time. For LEDs, users modify the correlated colour temperature (CCT) and intensity. Daisy-Mini linears are compact, powerful LED light sources built on FR4 substrates for optimal thermal management. Available with push-in connectors for quick installation.



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## APPLICATIONS

- » General lighting
- » Decorative lighting
- » Task lighting
- » Spotlighting
- » Downlighters
- » Retail lighting
- » Entertainment lighting

## TECHNICAL FEATURES

<b>LED Family</b>	DURIS® E2835
<b>Lifetime</b>	Up to 100,000 hours lifetime to 70% of original brightness
<b>Mounting</b>	Mounting holes using M3 screws allows easy installation
<b>Dimensions</b>	(L x W x H) 279 x 20 x 2.3mm
<b>Connection</b>	Available with push-in connectors
<b>Secondary Optics</b>	A secondary optic can be fitted. Suitable options on <a href="#">page 6</a> or visit <a href="#">our website</a> for a full range
<b>Heatsinks</b>	Required over 200mA. Suitable options on <a href="#">page 6</a> or visit <a href="#">our website</a> for a full range
<b>Power Supply</b>	4-75W dimming and non-dimming. Suitable options on <a href="#">page 7</a> or visit <a href="#">our website</a> for a full range
<b>Chain</b>	Daisy-Mini Linears can be linked together to produce longer chains
<b>Current Range</b>	10 to 250mA per channel
<b>Thermal Resistance</b>	9.8K/W

## PRODUCT OPTIONS

ILS Part Number	Colour	Colour Temp (Degrees Kelvin)	Typical Power W § At 150mA per channel	Forward Voltage per channel	Flux † at 150mA	Radiance Angle	Relevant OSRAM LED Data
ILS-E228-HWUW-0279-SC201.	Hot White & Ultra White	2700 & 6500K	5.9W	39.9V	2700K 840lm 6500K 952lm	120° (±60°)	GW JTLPS1.xM
ILS-E228-FWHW-0279-SC201.	Flame White & Hot White	2200 & 2700K	5.9W	39.9V	2200K =728lm 2700K 840lm	120° (±60°)	GW JTLPS1.xM
ILS-E228-HWNW-0279-SC201.	Hot White & Neutral White	2700K & 4000K	5.9W	39.9V	2700K 840lm 4000K 1008lm	120° (±60°)	GW JTLPS1.xM

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

§ Tolerance +/- 10%

† Measured with 20mS 150mA pulse at 25 °C

## MINIMUM AND MAXIMUM RATINGS

ILS Part Number	Operating Temperature at Tc-Point [ ° C ]	Storage Temperature [ ° C ]	Forward Current per Chip [ mA ]	Reverse Voltage [ Vdc ]
ILS-E228-HWUW-0279-SC201.	-40 °C ~ 100 °C	-40 °C ~ 100 °C	10-250mA	Not designed for reverse operation
ILS-E228-FWHW-0279-SC201.	-40 °C ~ 100 °C	-40 °C ~ 100 °C	10-250mA	Not designed for reverse operation
ILS-E228-HWNW-0279-SC201.	-40 °C ~ 100 °C	-40 °C ~ 100 °C	10-250mA	Not designed for reverse operation

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.

# ACCESSORIES

## Secondary Optics



LEDiL precision-engineered lenses and reflectors allow for rapid deployment of all types of light fixtures, including street lights, wall-wash, high-bay, sconces, emergency beacons, parking garage/low-bay, MR and AR downlights, and dock lights. Precision-engineered for maximum efficiency and durability, LEDiL lenses and reflectors are released alongside the latest products from our LED suppliers. Suitable options on [page 6](#) or visit [our website](#) for a full range.

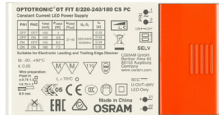
## Heatsinks



ILS has a series of aluminium alloy heatsinks to be used with our standard range of PowerStars and PowerClusters. These heatsinks are supplied with fixing screws for the light engine and for fixing to a base plate. They also come with thermal interface material (TIM) attached to the top surface. Suitable options on [page 6](#) or visit [our website](#) for a full range.

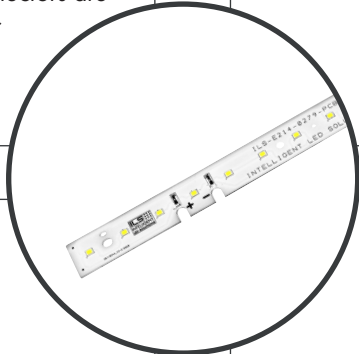
## Power Supplies

ILS has a comprehensive range of standard power supplies. The table below shows the total number of ILS products each power supply can drive. Additional power supplies are being introduced so please call us or [check our website](#) for the latest offering. Suitable options on [page 7](#)

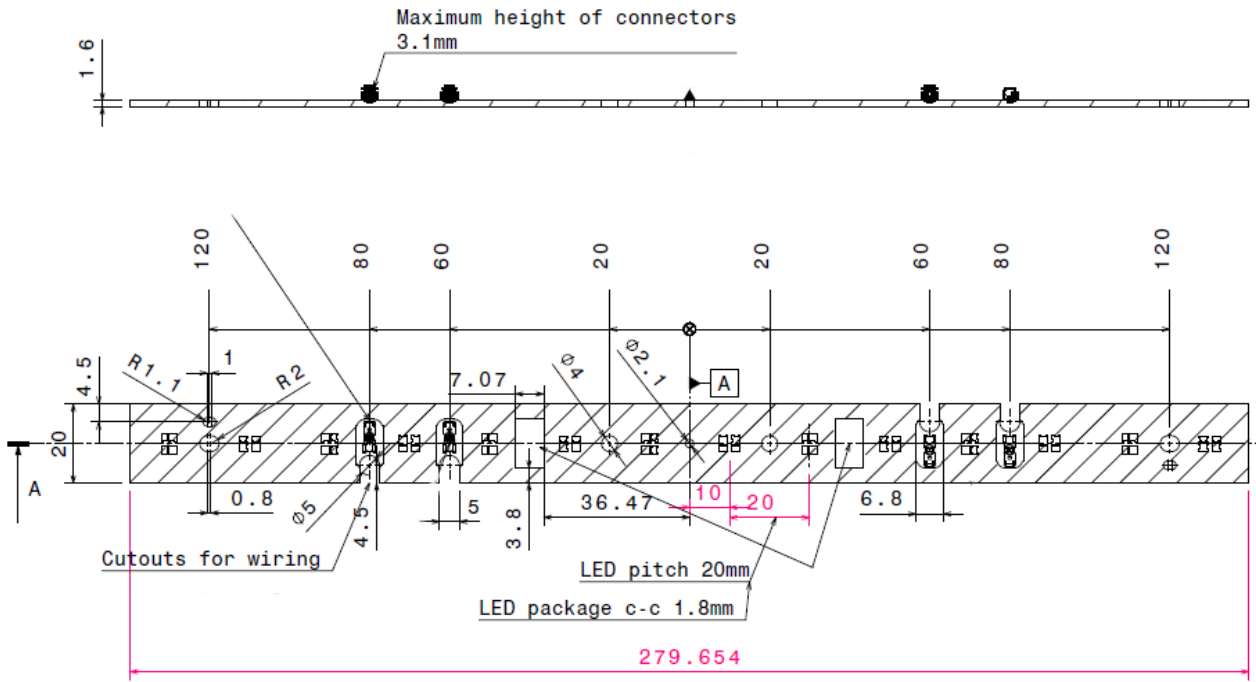


## Thermal Interface Material (TIM)

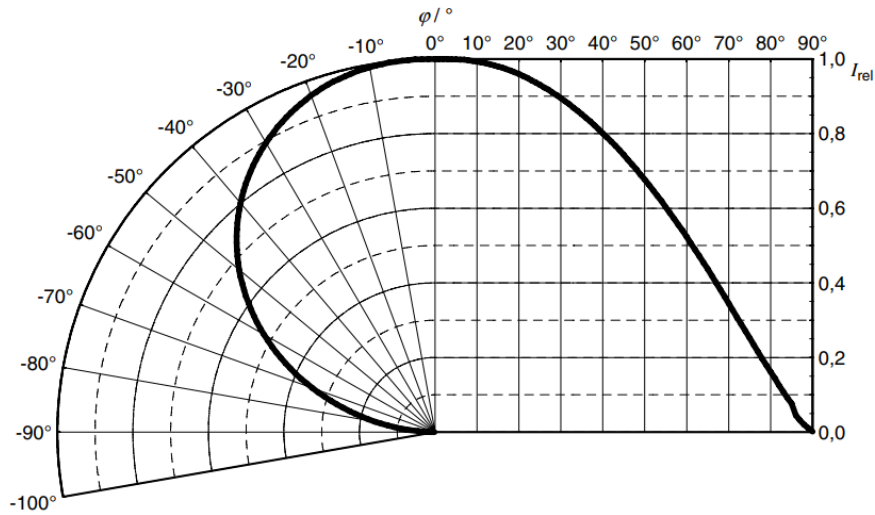
ILS has produced a range of high-performance, cost effective thermal interface materials to perfectly match their standard products. The product fills the air pockets between the two surfaces, forming a continuous layer to conduct heat away from the LED to the heatsink. ILS offers TIM in three options – double sided adhesive, single sided adhesive and non adhesive. Suitable options on [page 7](#) or visit [our website](#) for a full range.



# TECHNICAL DRAWINGS (MM)



## RADIATION OF SINGLE LED



## SECONDARY OPTICS OPTIONS


Part Number	Beam	Size	Height	Family	FWHM	Material	Colour	Fastening
F17030_DAISSY-MINI-W	Wide	280x21mm	13.3mm	Daisy-Mini	+/-27.5°	PMMA	Clear	Pin, Screw, Snaps
F17031_DAISSY-MINI-WW	Wide	280x21mm	13.3mm	Daisy-Mini	+/-27.5°	PMMA	Clear	Pin, Screw, Snaps
F17462_DAISSY-MINI-W-D	Wide (Diffused)	280x21mm	13.3mm	Daisy-Mini	+/-27.5°	PMMA	Milky	Pin, Screw, Snaps
F17463_DAISSY-MINI-WW-D	Wide (Diffused)	280x21mm	13.3mm	Daisy-Mini	+/-27.5°	PMMA	Milky	Pin, Screw, Snaps

## SHADE OPTIONS

Part Number	Material	Colour
F17034_DAISSY-MINI-SHD-MATT	PC	Black/ Matt
F17465_DAISSY-MINI-SHD-WHT-MATT	PC	White/ Matt
F17666_DAISSY-MINI-SHD-MET	PC	Metal/ Gloss
F17667_DAISSY-MINI-SHD-MET-MATT	PC	Metal/ Matt
F17028_DAISSY-MINI-SHD	PC	Black/ Gloss
F17033_DAISSY-MINI-SHD-WHT	PC	White/ Gloss

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## HEATSINK OPTIONS







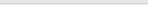

ILS Product		100mA	300mA	500mA
No Heatsink, in free air				
ILA-HSINK-300X29X21MM				

### KEY

	Operates under the recommended ILS junction temperature
	Operates under the recommended LED maximum junction temperature
	Not suitable for use
	Heatsink not designed for use with this product

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## POWER SUPPLY OPTIONS

	Driver Part Number	Rating	Current	Output Volts	Dimming
	OTi DALI 35/220...240/1A0 NFC TW	35W	350-1050mA	15-54V	DALI
	OTi DALI 35/220...240/700 NFC TW L	35W	200-700mA	15-54V	DALI
	OTi DALI 35/220...240/400 D NFC TW L	35W	75-400mA	45-240V	DALI
	OTi DALI 50/220...240/1A4 NFC TW	50W	600-1400mA	15-54V	DALI
	OTi DALI 75/220...240/1A4 NFC TW L	75W	400-1400mA	15-54V	DALI
	OTi DALI 75/220...240/700 D NFC TW L	75W	150-700mA	50-240V	DALI
	OT-FIT-75/220-240/550-D-LT2-L	75W	125-55mA	54-216V	No
	OT-FIT-100/220-240/700-D-NFC-IND-L	100W	200-700mA	64-300V	No

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## THERMAL INTERFACE MATERIAL OPTIONS

Non Adhesive	Single Sided Adhesive	Double Sided Adhesive
ILA-TIM-STRIP-279X20-0A	ILA-TIM-STRIP-279X20-1A	ILA-TIM-STRIP-279X20-2A
Other sizes are available, including customised parts		

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## ASSEMBLY INFORMATION

- » The mounting of the LED module has to be on a metal heatsink.
- » 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.

## IMPORTANT INFORMATION AND PRECAUTIONS



The LED module's LED, when powered up, is very bright. Thus it is advised that you do not look directly at it. Turn the PowerStar away from you and do not shine into the eyes of others.



LED module's, when operated, can reach high temperatures thus there is risk of injury if they are touched.



LED module's will overheat in operation if not attached to a suitable heatsink. Overheating can cause failure or irreparable damage.



DO NOT HOT PLUG ON LED SIDE OF POWER SUPPLY.



Do not operate LED module with a power supply with unlimited current. Connection to constant voltage power supplies that are not current limited may cause the LED module to consume current above the specified maximum and cause failure or irreparable damage.



DO NOT TOUCH or PUSH on the LED as this can cause irreparable damage.



## SAFETY INFORMATION



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 Strips.



The LED module, 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.



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 datasheet 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.

## FURTHER INFORMATION

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

If you require further assistance or have a specific or custom enquiry, please contact the ILS team via email or phone. Alternatively please visit our website for more product information and to see our full ranges.



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## ABOUT ILS

ILS offers a high level of technical skill, professionalism and commercial understanding to companies requiring market-leading optoelectronics solutions. Offering conceptual advice, electronics design and manufacturing capability, we use high quality production resources both in-house and in Asia, providing project support from prototyping to mass production. We also understand the need to provide cost-effective solutions and we do so using high quality components to ensure that the end product's reliability and quality is uncompromised. Apart from LEDs in the visible spectrum, we have a wide range of Infrared, UV LEDs, UV tubes, and lasers.

ILS is a division of Intelligent Group Solutions Ltd (IGS) a well-established respected industry leading optoelectronics solutions provider. Much of IGS' business comes from providing semi-custom or custom products both in component and sub-assembly form, and from providing design support and prototyping within the European market place. We can deliver production displays to wherever in the world that the customer's manufacturing or assembly is being undertaken.

## INTELLIGENT GROUP SOLUTIONS DIVISIONS

