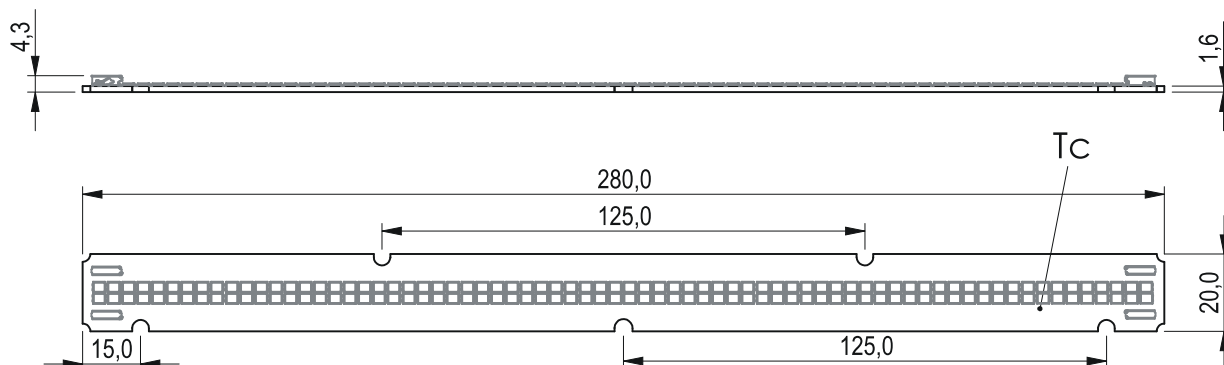


PLIN2 280x20mm CRI80 2000lm 225mA 4C V5

Drawing



Technical data

| | |
|-------------------------------------|----------------|
| Nominal forward current | 225 mA |
| Maximum forward current | 1350 mA |
| Ambient temperature range | -25 ... +45 °C |
| tc | 85 °C |
| tp rated | 45 °C |
| Lumen maintenance L70B50 | >102000h |
| Max. working voltage for insulation | 400 V |
| Insulation test voltage | 1800 V |
| Classification acc. to IEC 62031 | Built-in |
| Risk group (IEC 62471) | RG1 |
| Type of protection | IP00 |
| Beam characteristic | 120 ° |

Product details

- Built-in LED module
- Long life-time
- Ideal for linear luminaires
- Perfectly uniform light
- Aluminium plate
- SELV module
- Dimension according to L28W2
- 5 years guarantee

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| Product code | Photometric code | Useful luminous flux at tp=25 °C | Expected luminous flux at tp rated | Forward current | Min. forward voltage at tp=85 °C | Max. forward voltage at tp=25 °C | Power consumption at tp=25 °C | Efficacy at tp=25 °C | Expected efficacy at tp rated | Energy classification |
|-------------------------|------------------|----------------------------------|------------------------------------|-----------------|----------------------------------|----------------------------------|-------------------------------|----------------------|-------------------------------|-----------------------|
| A2820L144-830-225-4C-V5 | 830/359 | 1890 lm | 1830 lm | 225 mA | 41,0 V | 43,6 V | 9,6 W | 197 lm/W | 192 lm/W | C |
| A2820L144-840-225-4C-V5 | 840/359 | 1990 lm | 1930 lm | 225 mA | 40,9 V | 43,5 V | 9,6 W | 208 lm/W | 203 lm/W | B |

| Temperature multiplier | | |
|----------------------------|------------------------|----------|
| Temperature | Expected luminous flux | Efficacy |
| tp 25 °C | 1 | 1 |
| tp 45 °C | 0,96 | 0,97 |
| tp 65 °C | 0,93 | 0,94 |
| tp 85 °C | 0,89 | 0,91 |
| Nominal current multiplier | | |
| Nominal current | Expected luminous flux | Efficacy |
| 45 mA | 0,19 | 0,99 |
| 90 mA | 0,40 | 1,00 |
| 135 mA | 0,60 | 1,00 |
| 180 mA | 0,80 | 1,00 |
| 225 mA | 1,00 | 1,00 |
| 270 mA | 1,20 | 1,00 |
| 315 mA | 1,39 | 0,99 |
| 360 mA | 1,59 | 0,99 |
| 405 mA | 1,78 | 0,99 |
| 450 mA | 1,97 | 0,98 |
| 495 mA | 2,16 | 0,98 |
| 540 mA | 2,35 | 0,98 |
| 585 mA | 2,54 | 0,97 |

Thermal details

Temperature has a great influence on the lifetime of LED products. Exceeding the permissible temperatures can significantly shorten the life of the module or even lead to its destruction. It is necessary to verify compliance with the maximum allowable temperature at the reference point under stable operating conditions. The maximum value should be determined based on the application-specific worst-case conditions. Both reference point temperatures (tc and tp) are measured at the same location.

Installation

The module are not protected against overvoltages, overcurrents, overloads or short-circuit currents. Wrong polarity can damage the module. The module must be powered by a SELV or non-SELV constant current LED driver. Module can be mounted directly on earthed metal parts of luminaire only when max working voltage for insulation is higher than max. output voltage of LED driver (also against earth). Otherwise additional insulation between LED module and heat sink is required. At voltages > 60 V an additional protection against direct touch (test finger) to the light emitting side of the module has to be guaranteed. This is typically achieved by means of a non removable light distributor over the module or by a suitable luminaire construction.

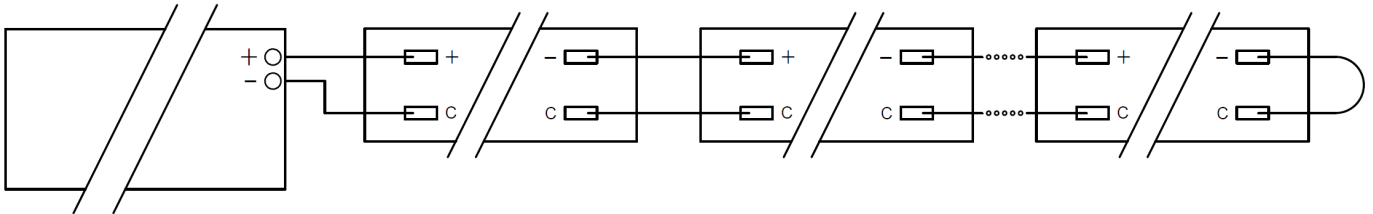


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Risk of sulfurization

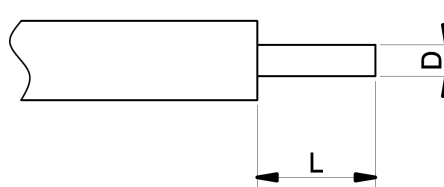
The LED uses a silver-plated lead frame and its surface color may change to black (or dark colored) when it is exposed to sulfur (S), chlorine (Cl) or other halogen compound. Sulfurization of lead frame may cause intensity degradation, change of chromaticity coordinates and, in extreme cases, open circuit. It requires caution. Due to possible sulfurization of lead frame, the LED Modules should not be used and stored together with oxidizing substances made of materials such as rubber, plain paper, lead solder cream, etc.

Wiring example



Wiring type and cross section

The wiring can be in stranded wires or solid with a cross section of 0.2 to 0.75mm².



| | | |
|------------------------|--------------------|--------------------|
| D - wire cross section | Min | Max |
| | 0,2mm ² | 0,5mm ² |
| L - strip length | Min | Max |
| | 7,5mm | 9,5mm |

Photometric code

| 1 digit | 2+3 digit | 4 digit | 5 digit | 6 digit |
|---------|---------------------------------------|-----------------|--------------------------------------------------------|------------------------------------------------------------|
| CRI | Colour temperature in Kelvin x 100 | MacAdam initial | Mac Adam after 25 % of the lifetime (max. 6000 h) | Luminous flux after 25% of the lifetime (max. 6000 h) |
| 7 70-79 | | | | 7 ≥ 70 |
| 8 80-89 | | | | 8 ≥ 80 |
| 9 ≥90 | | | | 9 ≥ 90 |