

This module of 20MM diameter and 1-3W LED from MERAKI ECO family is ideal for applications such as spotlights, reading lights, courtesy light or signage. MERAKI CIRCULAR CC D=20MM 3W 3535 are designed to be feed at constant current. The module is an attractive item, due to its small size and low unit price. The product holds soldered wires used for connection. Efficiencies are determined by the chosen operating current. This module works perfectly together with the Drivers Dynamic STEP DOWN in CC, as BUCK DRIVERS..



In compliance with:

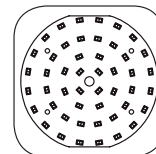
**IEC 62031 / IEC 62471 / IEC 62717**

### APPLICATION

### PRODUCT DESCRIPTION



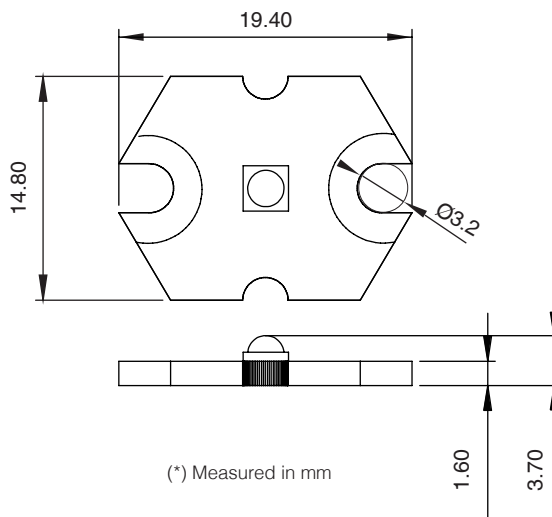
- ECO module 1-3W in CC.
- Efficiency > 120 lm/W
- Connection through welded wires in module
- Available with 250 mm wire
- CCT tolerance -3 SDCM
- Available in 2700-3000-4000-5000K
- Compact design
- SELV voltage
- 5 years guarantee
- Ideal for reading lights, courtesy lights, etc.



### TECHNICAL DATA

- SELV voltage  $V_{in}=2,94 - 3,1V$
- Operating temperature between  $-5^{\circ}C$  and  $+50^{\circ}C$
- Weight 5 grs
- MOQ: 108 units
- Dimensions: 19,4x14,8x4mm
- $I_{max}=1,4 A // T_c=75^{\circ}C$  (heatsink required)
- Excluding reverse polarity protection
- Max. driver length 5 m.
- For fixtures integration, CE directives compliance.
- IEC 62471 risk group: 0
- ESD 5 KV protection
- Maximum of 5 units per serie

### DIMENSIONS



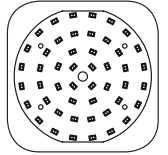
### SPECIFIC TECHNICAL DATA

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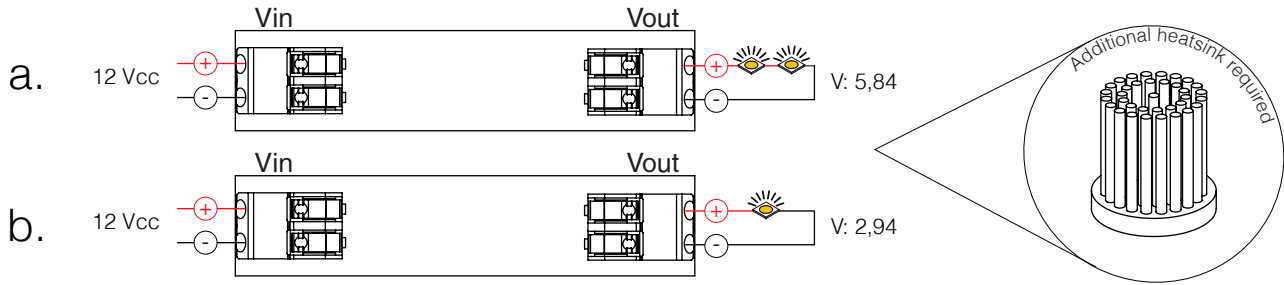
CODE	CCT	RATED CURRENT mA	VOLTAGE Min (V)	VOLTAGE Typ(V)	VOLTAGE Max(V)	NOMINAL POWER (W)	LUMINOUS EFFICACY (lm/W)	TOTAL FLUX (lm)	PHOTO METRIC CODE
31.13.0075	2700K	350	2,94	2,94	2,94	1,035	108,071	111,84	827.348
31.13.0075	2700K	500	2,94	2,94	2,94	1,035	109,017	11,82	827.348
31.13.0075	2700K	700	2,94	2,94	2,94	1,035	116,989	121,07	827.348
31.13.0075	2700K	1000	2,94	2,94	2,94	1,035	122,004	126,26	827.348
31.13.0076	3000K	350	2,98	2,98	2,98	1,496	103,512	154,85	830.348
31.13.0076	3000K	500	2,98	2,98	2,98	1,496	100,120	149,78	830.348
31.13.0076	3000K	700	2,98	2,98	2,98	1,496	111,664	167,05	830.348
31.13.0076	3000K	1000	2,98	2,98	2,98	1,496	117,015	175,05	830.348
31.13.0077	4000K	350	3,01	3,01	3,01	2,113	97,006	204,98	840.348
31.13.0077	4000K	500	3,01	3,01	3,01	2,113	98,591	208,33	840.348
31.13.0077	4000K	700	3,01	3,01	3,01	2,113	104,649	221,13	840.348
31.13.0077	4000K	1000	3,01	3,01	3,01	2,120	108,253	229,50	840.348
31.13.0078	5000K	350	3,07	3,07	3,07	3,073	86,762	266,63	850.348
31.13.0078	5000K	500	3,07	3,07	3,07	3,073	91,264	280,46	850.348
31.13.0078	5000K	700	3,07	3,07	3,07	3,073	94,677	290,95	850.348
31.13.0078	5000K	1000	3,07	3,07	3,07	3,073	97,964	301,05	850.348

Note: It is required to keep  $T_c < 65^{\circ}C$ .

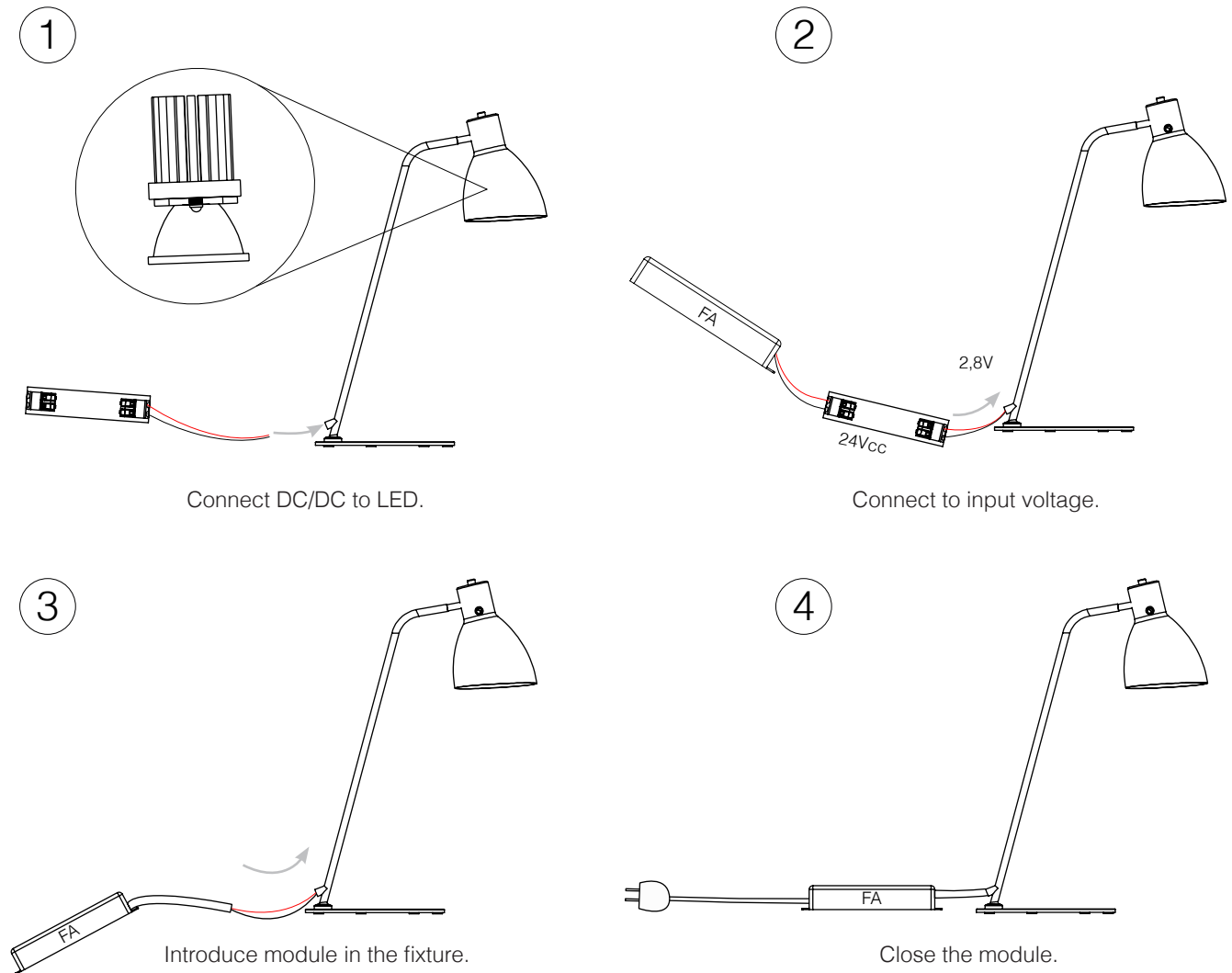
For PCB supply including high adhesion thermal tape, please add the letter "C" behind the product code. Example: 31.13.0075C.

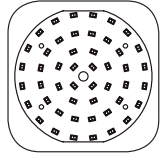


### CONNECTION EXAMPLE

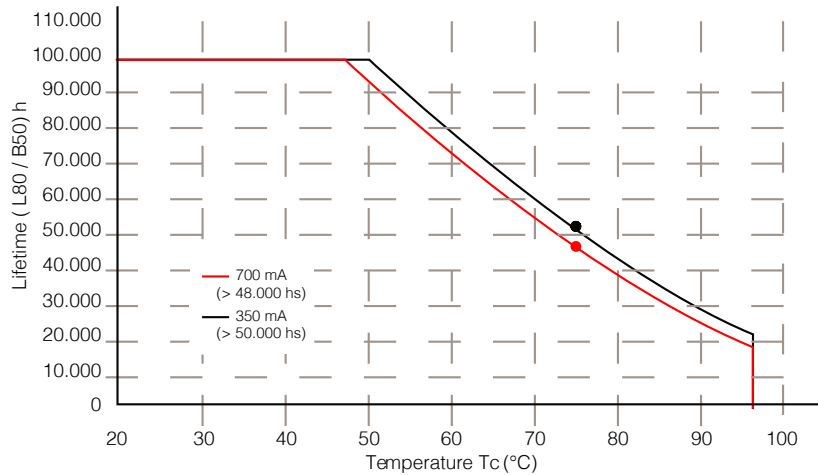


### INSTALLATION AND CONNECTION EXAMPLE





Lifetime Derating for MERAKI CIRCULAR CC D20MM



### SECURITY AND INSTALLATION INFORMATION



#### ELECTRICAL POWER

MERAKI CIRCULAR CC D=20MM 3W 3535 must be feed at constant current; the energy source power must be in accordance with the quantity of connected modules for proper functioning of the module (or group of modules). Family MERAKI LED MODULES have polarity, for this reason rated current, nominal power and polarity must be taken into account. If that is not the case, the module might be irreversibly damaged. MERAKI LED MODULES require specific driver protection against short-circuit currents, temperature raise and overloads.



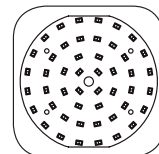
#### ISOLATION

MERAKI CIRCULAR CC D=20MM 3W 3535 functions with SELV voltage, does not require active isolation of the component as long as maximum reference SELV voltage is not exceeded. In other case, it will be mandatory earth connection on all conductive components of the fixture or light engine when the number of modules in the series exceeds SELV voltage. The driver must be in compliance with CE, UL or valid analogous regulation.



#### ESD – STATIC ELECTRICITY INFORMATION

MERAKI CIRCULAR CC D=20MM 3W 3535 contains electronic components which are very sensible to static electricity. In this respect is it highly recommendable to always manipulate the items with appropriate ESD protection, and take adequate measures for safety matters. If you need further information please refer to our webpage [www.idled.eu](http://www.idled.eu).



#### MOUNTING AND INSTALLATION

I+D LED S.L. is not responsible for the installation of the product. MERAKI CIRCULAR CC D=20MM 3W 3535 must be perfectly placed (and/or stick) on the lighting device, profile or base for a proper connection between modules and power source. Thermal transference between PCB and luminaire body must be at its highest, in order to ensure that fixture temperature does not exceed  $T_c$  in any case.

If any type of chemical substance is used during the assembly of the luminaire or light engine, it must not have any type of curing by means of gas condensation; as these chemical substances may damage the LEDs.

The module will be delivered with 2 pre-made holes of  $D=3,2$  mm, according to dimensions drawing. Maximum torque for fixing recommended 0,4-0,5 Nm to avoid mechanical stress. The module includes connection wire(s).



#### TEMPERATURE

To ensure MERAKI CIRCULAR CC D=20MM 3W 3535 life-time and guarantee, room temperature must be checked under worst-case conditions. Its mechanical and electrical optimal properties depend on temperature. Under no circumstance temperature should exceed the maximum permissible ( $T_c=75^\circ\text{C}$ ) limit here indicated. Exposure to higher temperatures might affect its long term proper functioning. Store modules in between  $-20^\circ\text{C}$  and  $+80^\circ\text{C}$  and maximum humidity level of 65%.



#### OPTICAL CHARACTERISTICS + CCT

Discrete measurement of LED, may vary in regards on the CCT temperature here described, with a variance of 3SDCM for white and  $\pm 5\text{nm}$  for coloured LEDs. CCT shifts  $\pm 0,001$  at 6.000 hrs. 3 SDCM are declared over the complete module. Modules viewing angle is  $120^\circ$ .