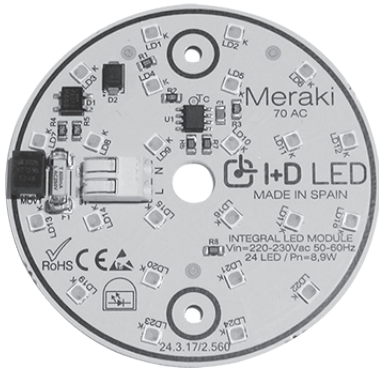
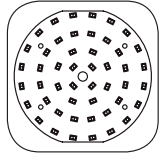


# MERAKI LED MODULES

## AC DIRECT 155/70MM 230 VAC

### ROUND(70-155MM)



MERAKI ROUND 155-70 AC DIRECT are ideal to complete circular or square designed light fixtures that require high flexibility and direct connection electrical network. These LED modules are capable to replace fluorescence downlights of 2x26W with no need to replace the whole fixture, meaning direct cost saving. At nominal power they do not need heatsinks. As a result of its easy installation and performance, MERAKI ROUND 155-70 AC is a perfect partner for professionals in light fixtures production. The modules are excellent items for development of light fixtures and cost saving (vs. former technologies). The module incorporates electronic components to function on direct voltage of 230Vac.



In compliance with:

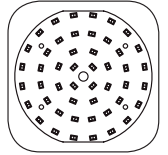
**EN 55015 / EN 62031 / EN 62717 / EN61000**

#### APPLICATION

#### PRODUCT DESCRIPTION



- Available in 2700K-3000K-4000K-5000K
- CRI > 80 (CRI90 available under request)
- Ideal for new or existing luminaires
- Efficiency > 120 lm/W
- Colour tolerance 3 SDCM
- Space-saving design
- Life-time exceeds 40.000 hrs.
- High lm/\$ relation
- Integral solutions, no drivers required
- Direct voltage connection to 230Vac
- Extremely flat profile < 10mm

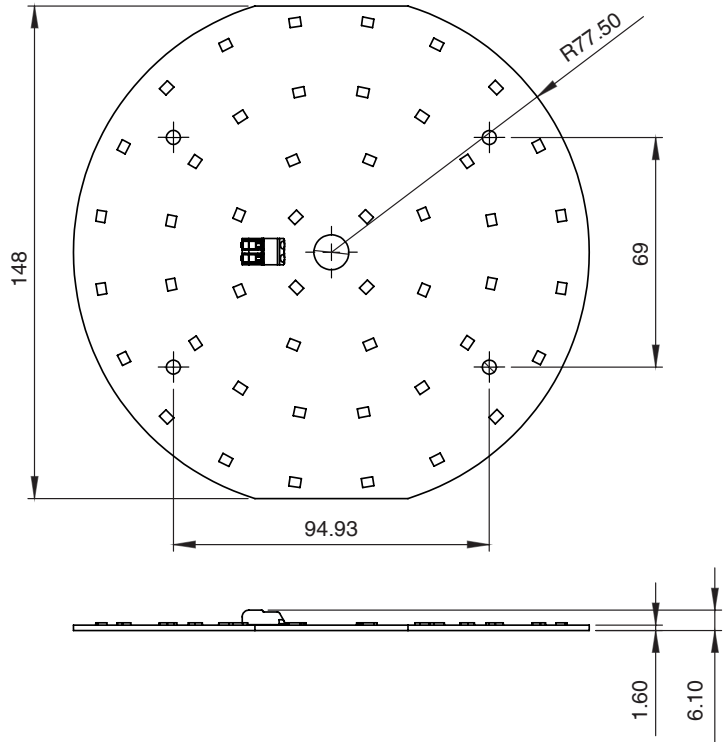


#### TECHNICAL DATA

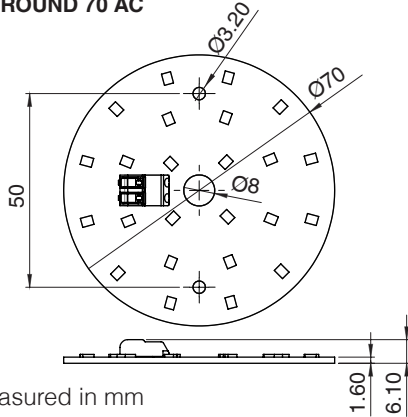
- Voltage 220-240 Vac / 50-60 Hz
- Voltage 210-240 Vac / 50-60 Hz
- THD < 20%
- Power factor > 0.9
- Typical CRI80 (CRI90 available under request)
- Operating temperature between -30°C and 45°C
- EN 61471:2008 group 1
- Standard Tc 65°C
- LED viewing angle 120°
- Weight 100 g
- MOQ 100 units
- Possible to integrate with LOGO Custom

#### DIMENSIONS

#### MERAKI ROUND 155AC



#### MERAKI ROUND 70 AC



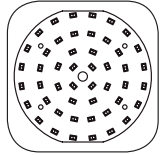
(\* Measured in mm)

#### SPECIFIC TECHNICAL DATA

#### SPECIFIC TECHNICAL DATA MERAKI ROUND AC DIRECT 70

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.AC.40.01	2700K	39,08	220	230	240	8,99	97,97	880,8	827.348
31.13.AC.40.02	3000K	39,08	220	230	240	8,99	102,51	921,6	830.348
31.13.AC.40.03	4000K	39,08	220	230	240	8,99	115,32	1036,8	840.348
31.13.AC.40.04	5000K	39,08	220	230	240	8,99	123,33	1105,8	850.348

Note: Optical and electrical measurements with tolerance +/- 10%.  
 For higher flows (500mA) it is necessary to maintain the Tc <65°C by means of heatsink (not supplied).  
 QTY LED 24 CRI>80 PF >0.9 THD <20%



#### SPECIFIC TECHNICAL DATA

##### SPECIFIC TECHNICAL DATA MERAKI ROUND AC DIRECT 155

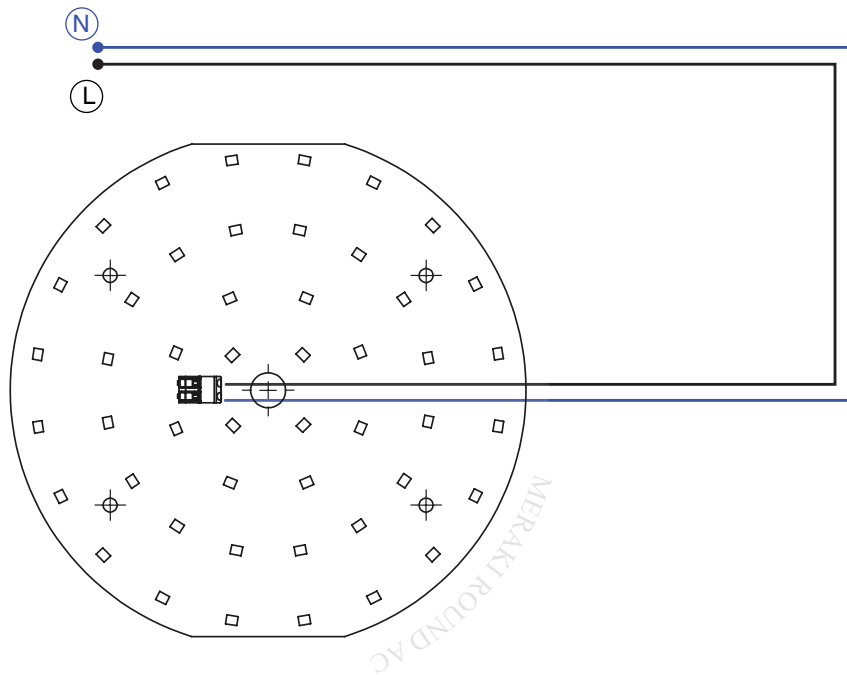
CODE	CCT	RATED CURRENT mA	VOLTAGE Min (V)	VOLTAGE Typ(V)	VOLTAGE Max(V)	NOMINAL POWER (W)	LUMINOUS EFFICACY (lm/W)	TOTAL FLUX (lm)	PHOTO METRIC CODE
31.13.AC.155.01	2700K	400	220	230	240	17,50	100,66	1761,6	827.348
31.13.AC.155.02	3000K	400	220	230	240	17,50	105,32	1843,2	830.348
31.13.AC.155.03	4000K	400	220	230	240	17,5	118,49	2073,6	840.348
31.13.AC.155.04	5000K	400	220	230	240	17,5	126,7	2217,6	850.348

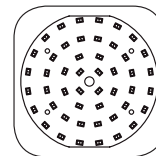
Note: Optical and electrical measurements with tolerance +/- 10%.  
 For higher flows (500mA) it is necessary to maintain the Tc <65°C by means of heatsink (not supplied).  
 QTY LED 48 CRI>80 PF >0.9 THD <20%

#### CONNECTION EXAMPLE


Recommendation for connection on PCB Cable to use:  
 ≤ 0,5 mm<sup>2</sup> (flexible) / ≤ 0,75 mm<sup>2</sup> (rigid)

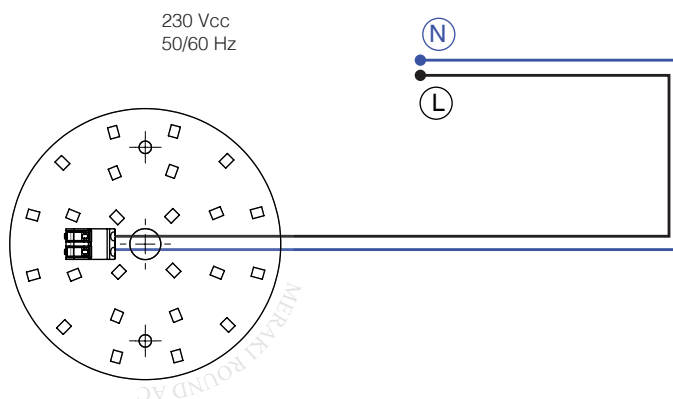
210-240 Vac  
 50/60 Hz



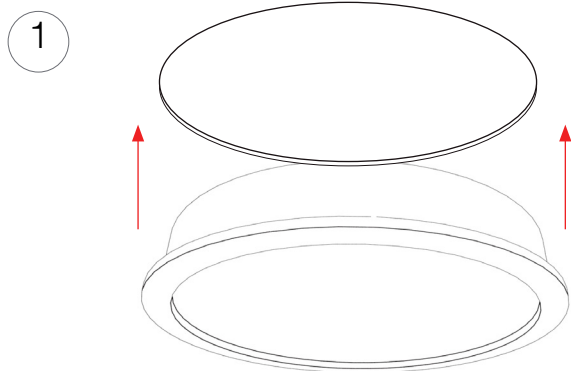


## CONNECTION EXAMPLE

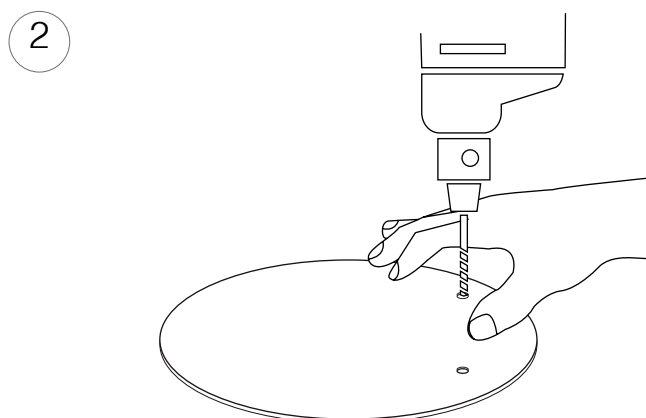
 Recommendation for connection on PCB Cable to use:  
≤ 0,5 mm<sup>2</sup> (flexible) / ≤ 0,75 mm<sup>2</sup> (rigid)



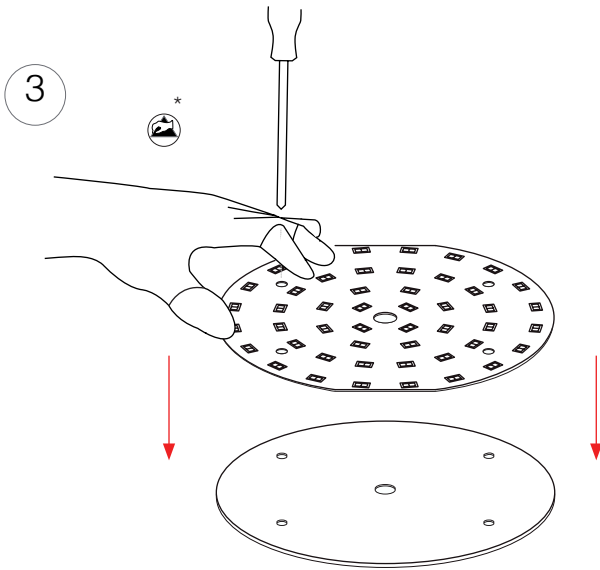
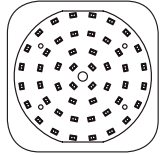
## INSTALLATION AND CONNECTION EXAMPLE



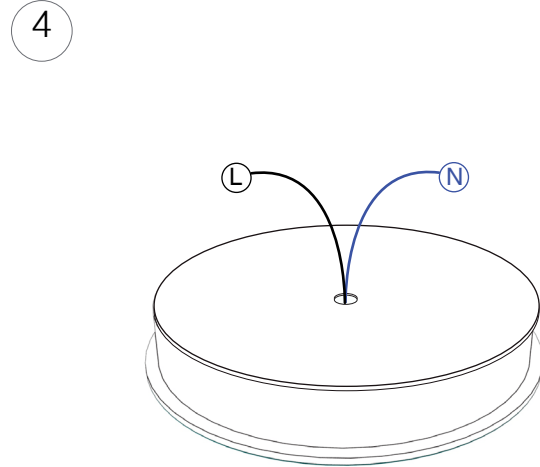
Dismantle profile base.



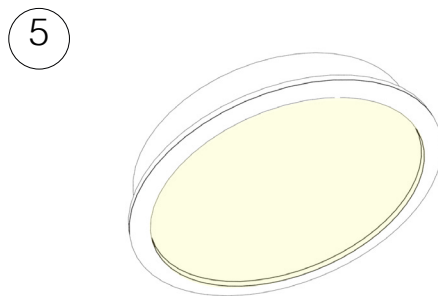
For eventual attachment of the fixture (with no use of double sided adhesive tape) drill a hole in the profile.



Place the PCB and apply pressure. Fix the screws to the fixture base. Note: Accessory M3 screws.  
(\* ) ESD protection.



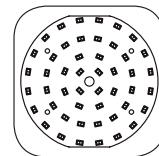
Introduce L and N wires in the pre-made holes, and connect them to appropriate voltage.



Installed PCB



It must be isolated to avoid contact with active parts.



#### SECURITY AND INSTALLATION INFORMATION



##### ELECTRICAL POWER

MERAKI ROUND AC DIRECT 155/70 230 VAC must be feed at constant and steady current of 220-240 Vac and 50-60 Hz. MERAKI AC DIRECT series from MERAKI family do not have polarity, this is due to the nature of its electrical power supply. For this reason all its parameters in this data sheet specified and rated current and nominal power must be respected and taken into account. If that is not the case, the module might be irreversibly damaged. MERAKI ROUND AC DIRECT 155/70 230 VAC require specific protection against voltage picks or electrical network noise.



##### ISOLATION

MERAKI ROUND AC DIRECT 155/70 230 VAC functions with greater voltage than SELV. Hence, it is required isolation with active components. It will be mandatory earth connection on all conductive components of the fixture or light engine.



##### ESD – INFORMACIÓN SOBRE ESTÁTICA

MERAKI ROUND AC DIRECT 155/70 230 VAC 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 ROUND AC DIRECT 155/70 230 VAC must be perfectly placed (and/or stick) on the lighting device, profile or base for a proper connection between modules and power source. 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 and electronic components. The module will be delivered with 5 pre-made fastening holes: 4 through holes of D=4MM and 1 central hole of D=10MM. Maximum torque for fixing recommended 0,4-0,5 Nm to avoid mechanical stress on the PCB. Always avoid mechanical stress, compression stress or superficial voltage stress over the electronic components and/or driver holder. It is recommended to use nylon screws or similar to increase isolation with active components. Ideal wire for this connection type is unipolar solid wire of 0,4-1mm<sup>2</sup>, with a strip wire of 6,5-7MM. To remove wire, push orifice on the connector and pull smoothly.



##### TEMPERATURA

MERAKI ROUND AC DIRECT 155/70 230 VAC life-time depends to a great extent on operating temperature. Under no circumstance temperature should exceed the maximum permissible (T<sub>c</sub>=70°C) limit here indicated. Exposure to higher temperatures might affect its long term proper functioning. Room temperature must be measured under worst-case conditions to ensure life-time and keep product's guarantee. Store modules between -20 °C and +80 °C, and at a maximum humidity level of 65%.



##### OPTICAL CHARACTERISTICS + CCT

Measurement of LED discrete points may have variations in regards on the CCT temperature here described, with a variance of 3SDCM and 2SDCM for white and +/- 5nm for coloured LEDs. CCT shifts +/- 0,001 at 6.000 hrs. 3 SDCM are declared over the complete module. Modules viewing angle is 120°.