SPECIFICATION

Product Name: Sensor DIM LED Driver

Model No.: MLC16C-DP3

Issue Date: 2022-08-01

CUSTOMER APPROVED

PRODUCT DIRECTOR APPROVED	PRODUCT CHECKED	R&D CHECKED	PREPARED

Shenzhen Merrytek Technology Co.,Ltd
Add: No.17th Building, Dianda Guyuan Industrial Park, Mashantou, Matian, Guangming District, Shenzhen, China, 518106
Tel: +86 (0)755-2305 7253 Fax: +86 (0)755-2786 3012 Website: www.merrytek.com

1. Features

1. Conform to ERP standard, micro-power consumption.
2. 5.8GHz ISM brand, can be batch RED certification.
3. Isolated, Flicker-free, Driver+sensor 2 in 1
4. With corridor function , light priority function, suitable for all kinds of use scenes
5. Compact size, easy to install inside the lamps and lanterns.
6. All parameters can be adjusted via DIP switch.

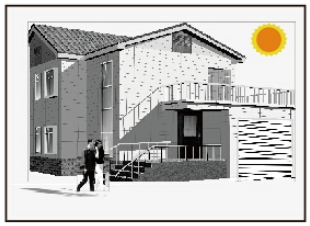
2. 2. Parameter

Input	Voltage rage	220-240V AC，50Hz/60Hz
	Input current	≤0.11A @ 230VAC
	Inrush current	≤15A (100us half-current) @230V AC
	THD	≤20%，230VAC/Max Load
	Power factor	≥0.90，230VAC/Max Load
	Stand-by power	≤0.5W
	Working efficiency	≥83% , @ 230V AC Max Load
	Lightning surge	L/N：1KV
Output	Working model	CC
	Type of load	LED
	Full load power	16W Max
	Flicker ripple	≤2%
	No-load output voltage	60VDC Max
	Load current	350mA/450mA/500mA/600mA/700mA
	Load output voltage range	9-45V(350mA)/9-36V(450mA)/9-32V(500mA)/9-26V(600mA)/9-23V(700mA)
	Constant current accuracy	±5% @230VAC
Parameters	Operating frequency	5.8GHz ±75MHz, ISM band.
	Transmitting power	1mW
	Detection Area	25%/50%/75%/100%
	Hold Time	5S/1min/5min/10min
	Stand-by Period	0S/1min/10min/+∞

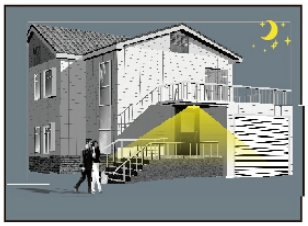
<table>
<tr><td rowspan="8">Parameters</td><td rowspan="5">Daylight Sensor</td><td>Daylight threshold</td><td colspan="2">5Lux/25Lux/50Lux/Disable</td></tr>
<tr><td rowspan="4">Daylight priority open/close</td><td>Open</td><td>Close</td></tr>
<tr><td>5Lux</td><td>50Lux</td></tr>
<tr><td>25Lux</td><td>100Lux</td></tr>
<tr><td>50Lux</td><td>150Lux</td></tr>
<tr><td>Stand-by DIM Level</td><td colspan="3">15%</td></tr>
<tr><td>Detecting radius
(sensitivity: 100%)</td><td colspan="3">Ceiling mounting 3m：0.3m/S ≥4m，1m/S ≥2.5m
Wall mounting 2m：0.3m/S ≥10m，1m/S ≥5m</td></tr>
<tr><td>Mounting Height</td><td colspan="3">3m Typical Value (6m Max)</td></tr>
<tr><td rowspan="2">3db field angle</td><td colspan="3">90°@Xz flat</td></tr>
<tr><td colspan="3">95°@Yz flat</td></tr>
<tr><td rowspan="8">Abnormality Protection Requirements</td><td>Over voltage protection</td><td colspan="3">Yes, self-recovery</td></tr>
<tr><td>No-load protection</td><td colspan="3">Yes, self-recovery</td></tr>
<tr><td>Short-circuit protection</td><td colspan="3">Yes, self-recovery</td></tr>
<tr><td>Operating temperature</td><td colspan="3">-25…+50℃</td></tr>
<tr><td>Maximum temperature(Tc)</td><td colspan="3">75℃</td></tr>
<tr><td>Storage temperature/humidity</td><td colspan="3">-40℃…+80℃ Humidity：85%</td></tr>
<tr><td>Withstand voltage</td><td colspan="3">3750Vac 5mA 60S (input “L N” to output SEC+ SEC-)</td></tr>
<tr><td rowspan="6">Certificate Standards</td><td>Safety standards（LVD)</td><td colspan="3">EN61347-1, EN61347-2-13</td></tr>
<tr><td>EMC standards</td><td colspan="3">EN55015, EN61547, EN61000-3-2, EN61000-3-3</td></tr>
<tr><td>Environmental requirement</td><td colspan="3">Compliant to RoHS</td></tr>
<tr><td>Certificate</td><td colspan="3">CE RED</td></tr>
<tr><td>IP Rating</td><td colspan="3">IP20</td></tr>
<tr><td>Protection class</td><td colspan="3">Class II</td></tr>
<tr><td rowspan="6">Others</td><td>Wiring method</td><td colspan="3">Press terminal, wire diameter: 0.5-1.5mm^2</td></tr>
<tr><td>Installation</td><td colspan="3">Built-in</td></tr>
<tr><td>Installation size</td><td colspan="3">Φ73mm*H23mm</td></tr>
<tr><td>Package</td><td colspan="3">PE bag clapboard, carton（K=A）</td></tr>
<tr><td>Net weight</td><td colspan="3">78±3g</td></tr>
<tr><td>Lifetime</td><td colspan="3">5 years warranty@Ta 230V full load</td></tr>
<tr><td colspan="5">Note:The given values of detecting parameter is typical measured by 165cm high testers in an indoor open environment.</td></tr>
</table>

3. Function

1) On/OFF function (Setting “stand-by period” to “0s”), Setting other parameters according to practical applications.



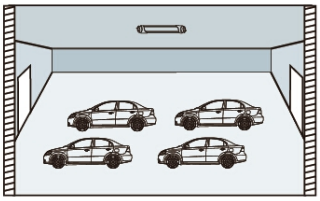
1 With sufficient ambient light, the light will not be switched on even if with motion signal.



2 With insufficient ambient light, the sensor switches on the light when motion is detected.

3 After elapse of hold time, the sensor switches off the light when no motion is detected.

2) 3-step dimming function (Setting stand-by period to “1min/10min”), Setting other parameters according to practical applications.



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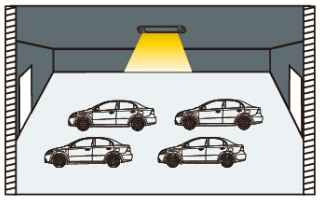
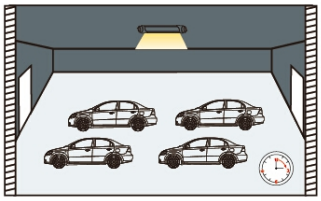


2 With insufficient ambient light, the sensor switches on the light when motion is detected.



3 After elapse of hold time, the sensor dims the light at a low light level if no new motion is detected.

4 After elapse of standby period, the sensor switches off the light if no motion is detected in the detection zone.

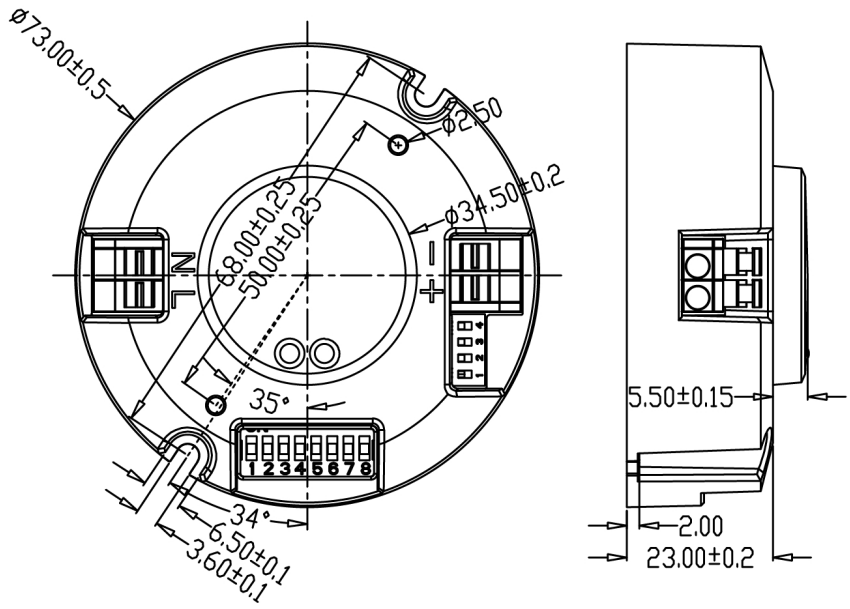
3) Daylight priority function (Setting stand-by period to “+∞”), Setting other parameters according to practical applications.

1 When the ambient light is larger than the present illumination level, the light will not be switched on.

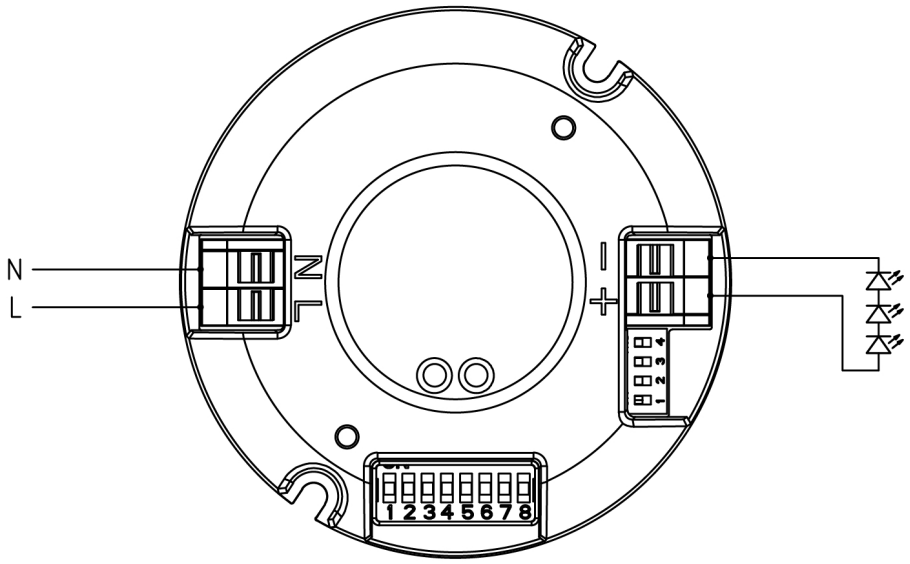
2 When the ambient light is below the present illumination level, the light will be switched on.

3 When there is sufficient ambient light, the light will be switched off even if there is motion detected.

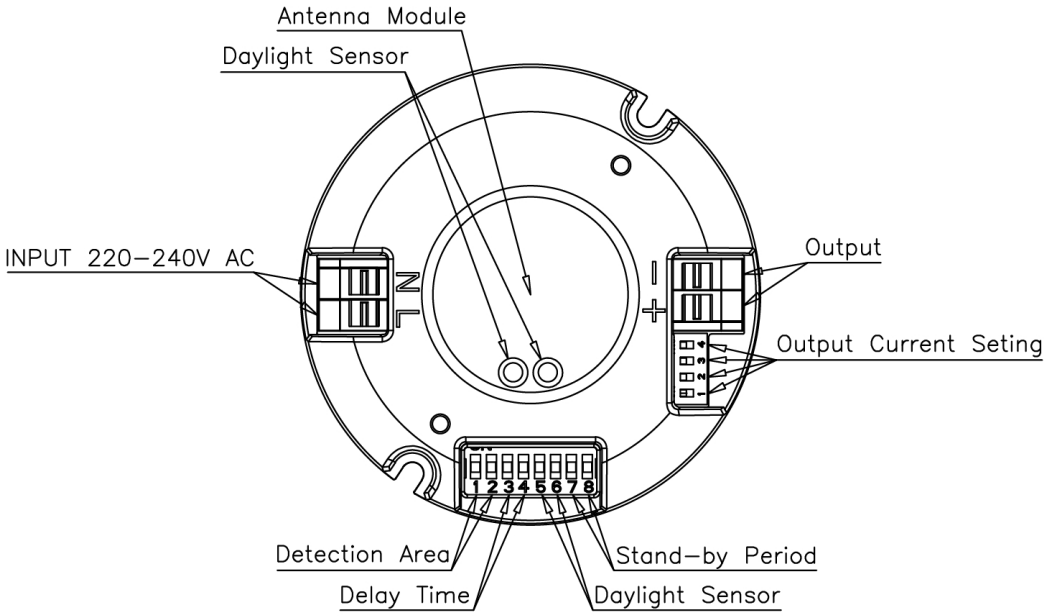
4. Dimension (mm)



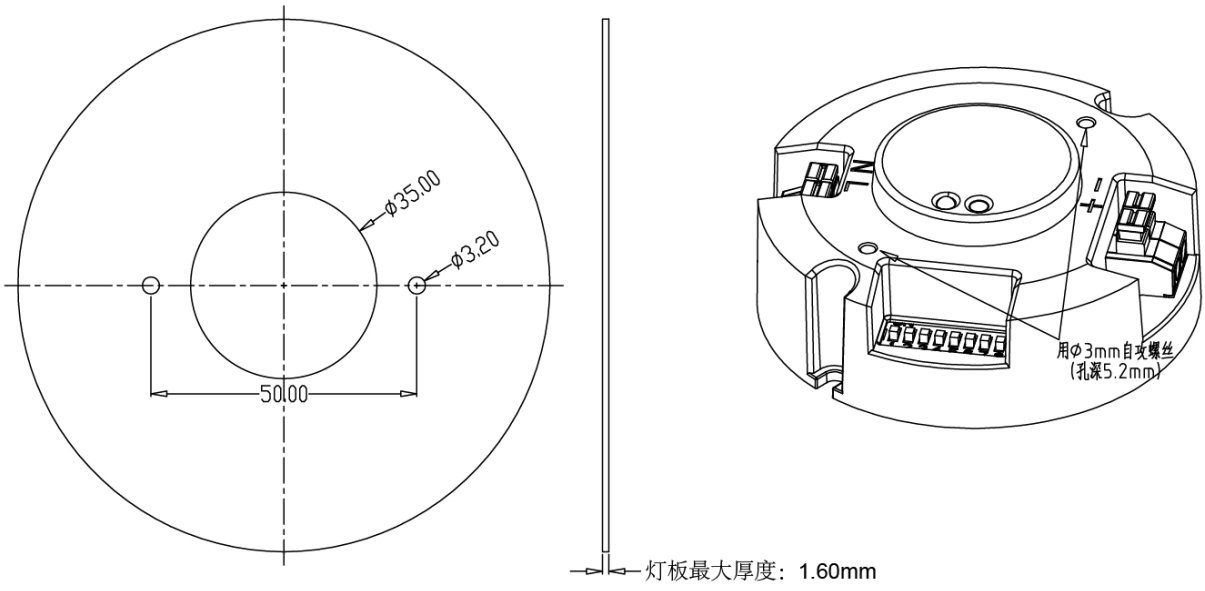
5. Wiring



6. Structures



7. Cut-out size (mm)



8. DIP Switch Settings

1）Detection Area

	1	2	
Ⅰ	ON	ON	100%
Ⅱ	ON	-	75%
Ⅲ	-	ON	50%
Ⅳ	-	-	25%

2）Hold Time

	3	4	
Ⅰ	ON	ON	5S
Ⅱ	ON	-	1min
Ⅲ	-	ON	5min
Ⅳ	-	-	10min

3）Daylight Sensor

	5	6	Daylight threshold	Open/Close
Ⅰ	ON	ON	5Lux	5Lux/50Lux
Ⅱ	ON	-	25Lux	25Lux/100Lux
Ⅲ	-	ON	50Lux	50Lux/150Lux
Ⅳ	-	-	Disable	Disable

Note: Realizing daylight priority function when setting “stand-by period” to “+∞”

4）Stand-by period

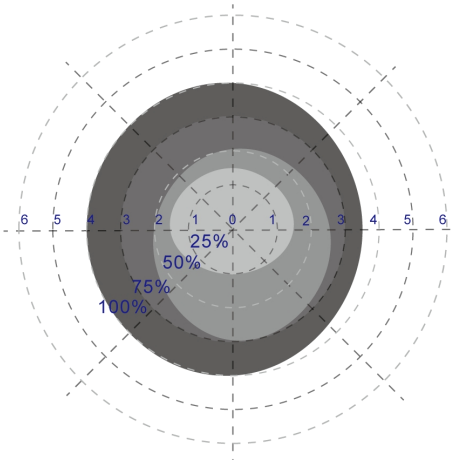
	7	8	
Ⅰ	ON	ON	0S
Ⅱ	ON	-	1min
Ⅲ	-	ON	10min
Ⅳ	-	-	+∞

5）Output current

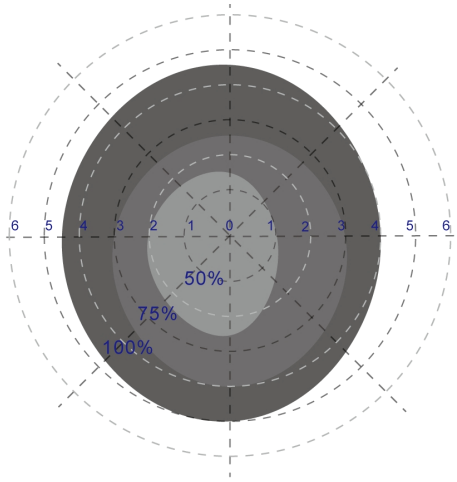
Output current	Output voltage	1	2	3	4
350mA	9-45V	-	-	-	-
450mA	9-36V	-	-	ON	-
500mA	9-32V	-	-	ON	ON
600mA	9-26V	-	ON	ON	ON
700mA	9-23V	ON	ON	ON	ON

9. Radiation Pattern

Ceiling mounted height: 3m
Sensitivity: 100%/75%/50%/25%



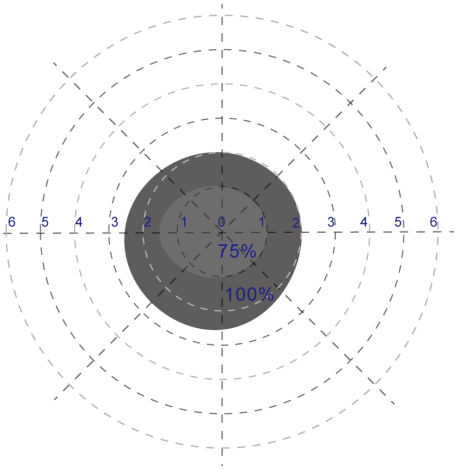
Normal moving (Speed:1m/s)



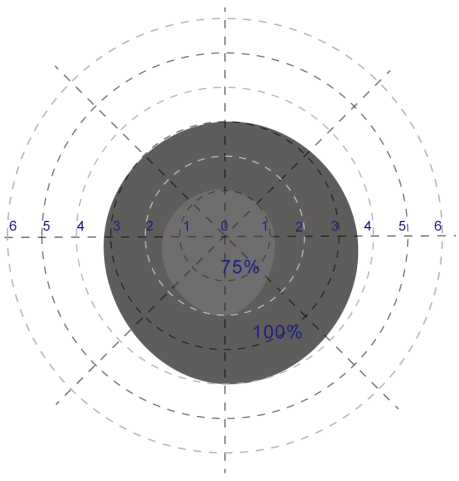
Slow moving (Speed 0.3m/s)

Note: There is no detection data at 25% sensitivity, 3m mounted height.

Ceiling mounted height: 6m
Sensitivity: 100%/75%



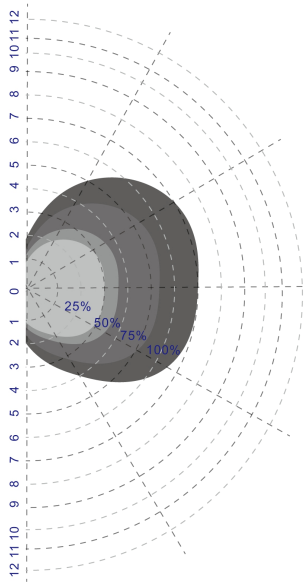
Normal moving (Speed:1m/s)



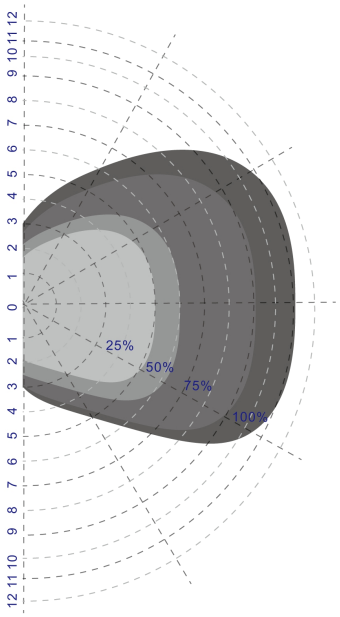
Slow moving (Speed 0.3m/s)

Note: There is no detection data at 50%/25% sensitivity, 6m mounted height.

Wall mounted height: 2m
Sensitivity: 100%/75%/50%/25%



Normal moving (Speed:1m/s)



Slow moving (Speed 0.3m/s)

10. Initialization

When power on, the product automatically turns on light at 100% brightness. After 10sec, it turns off the light. During the initialization, the product is not able to detect moving signals.

11. Factory Setting

Sensitivity: 100%; Hold Time: 5S; Stand-by period: 0S; Daylight Sensor: Disable.

12. Application Notice

1. The product should be installed by a professional electrician. Please turn off the power before installing, wiring, changing the setting of the DIP switches.
2. The microwave sensor has good penetration ability to plastic and wooden objects, but the front and near the microwave antenna can not be equipped with metal accessories, metal shell and glass shell, otherwise it will affect the transmission and reception of the microwave antenna.
3. It is recommended that microwave sensors be installed at a distance of more than 2m, and that they be installed at a distance of more than 2m away from switches, routers and other wireless devices to avoid radio interference, for 5G WIFI is greater than 2 m.
4. The antenna surface of the microwave sensor is far away from the input AC and output DC to avoid low/high frequency signals interfering with the normal operation of the microwave antenna.
5. Should avoid long-term vibration equipment or moving objects around the microwave sensor, the vibration signal generated will be regarded as mobile signal trigger induction, so the installation position should be far away from large metal equipment, ventilation pipes, air conditioning outlets, exhaust vents, smoke exhaust machine and other scenes; If a pet passes through the detection area, the sensor may be triggered.
6. This product is suitable for indoor installation, when semi-outdoor or outdoor installation, wind, rain may be regarded as moving signal trigger induction; When the sensor is installed in metal lamps, metal reflective surface or narrow closed environment, the microwave will be reflected many times and trigger by mistake. Please reduce the sensitivity of the sensor or contact the manufacturer for technical support.
7. If wall mounting, the detection distance of microwave sensor will be greatly increased, please reduce the sensitivity or contact the manufacturer for technical support.
8. Due to continuous improvement, the contents of this instruction could be changed without prior notice.
9. Sensitivity area is related to moving speed of objects, size of moving objects, mounting height, mounting angle, working environment, reflecting materials and etc.
10. The value of daylight sensor is in a sunny environment with no shadows and ambient light diffuse reflection conditions. The illuminance values detected by the product may different in different environment, at different

times, in different seasons, and in different climates.