

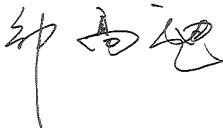
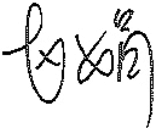


SPECIFICATION

Product Name: Sensor DIM LED Driver

Model No.: MLC40C-P5

Issue Date: May 23, 2018

CUSTOMER APPROVED

PRODUCT DIRECTOR APPROVED	SALES 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



- On-Off / 3-step dimming function for LED ceiling and tri-proof light
- Integration of microwave motion sensor, daylight
- Automatic switching and dimming based on motion and light level
- Output current can be set via DIP switch
- Unique design with mini sensor detector makes the drivers suitable to fix within compact luminaries
- Stand-by power $\leq 1\text{W}$
- Detection area, Stand-by dimming level, time delay and daylight threshold can be precisely set via DIP switch

2. Parameter

Input	Input Voltage	220-240V AC 50Hz/60Hz
	Input Current	$\leq 0.21\text{A}$ @230VAC (Over Load)
	Power Factor	≥ 0.90 @230VAC (Full Load)
	Standby Power	$\leq 1\text{W}$
	Efficiency	85% Max. @230V AC (Full Load)
	Wiring Method	Screw terminal block (0.75-1.5mm ²)
Output	Operating mode	Constant Current
	Load type	LED
	Ripple requirement (Flickering or Flickering Free)	Flickering
	No-load output voltage	68VDC Max.
	Load output voltage range	30-50VDC
	Full load output power	35W Max
	Load output current	400mA/500mA/600mA/700mA
	Constant current/voltage Precision	Constant Current Precision $\pm 5\%$
	Wiring method	Shrapnel Terminal, Wire Diameter: 0.75-1.5mm ²
Sensor Parameters	Operating Frequency	5.8 GHz ± 75 MHz , ISM Band.
	Transmitting power	1mW Max.
	Hold time	5S/90S/ 5min/ 25min
	Stand-by DIM Level	0%/ 10%/ 25%/ 50%
	Stand-by Period	1min/ 5min/ 25min/ $+\infty$
	Detection Area	25%/ 50%/ 75%/ 100%
	Daylight Sensor	10Lux/ 30Lux/ 50Lux/ 100Lux/Disable

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

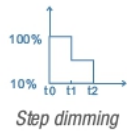
Website: www.merrytek.com

	Detecting Radius	4-6m (mounting height 3m) (see note2)
	Mounting Height	6m Max.
	Detecting Angle	150° (Wall mounted), 360° (Ceiling mounted)
Operating Environment	Operating temperature/ humidity	-25...+50℃ Humidity : 85% (Non-condensing)
	Storage temperature/ humidity	-40...+80℃
	Outer Max. Temp (Tc)	85℃
Safety & EMC	Isolation pressurization	3750V AC 5mA 60S (Input "L N", Output "SEC+ SEC-")
	EMC	EN55015 EN61547 EN61000-3-2 EN61000-3-3
	Safety requirement	EN61347-1 EN61347-2-13
	Certificate requirement	CE(pending)
Others	IP rating	IP20
	Protection level	Class II
	Outer dimension	180L*35W*28.5H mm (Driver) 56L*20W*13H mm (Detachable Sensor)
	Packaging requirement	PE Bag Clapboard Outer Carton (K=A)
	Weight	171g
	Life	3 years warranty@Ta 230V full load

Note

1. "N/A" means not available.
2. Detection area is effected on volume of motion object and motion speed. The detection area is tested by a 165cm height person and walking speed is 0.5m/s.

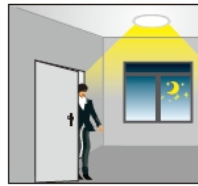
3. Function



3-step dimming function



① With sufficient ambient light, the light will not be switch on.



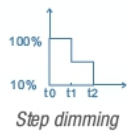
② With insufficient ambient light, the sensor switches on the light when motion is detected.



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



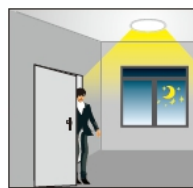
④ After elapse of stand-by period, the sensor switches off the light if no motion is detected in the detection zone.



2-step dimming function



① If there is no motion detected, the light remains at a low light level all the time.

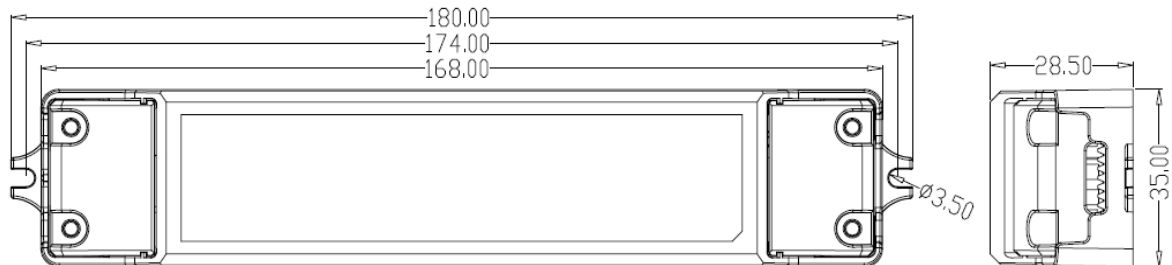


② When motion is detected, the sensor will switch on the light to 100% brightness.

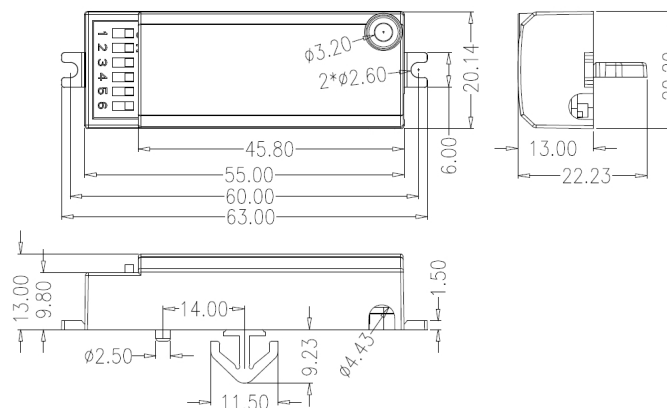


③ After elapse of hold time, the sensor dims the light at the present low light level if no motion is detected.

4. Dimension (mm)



Main Part



Sensor Head

Shenzhen Merrytek Technology Co.,Ltd

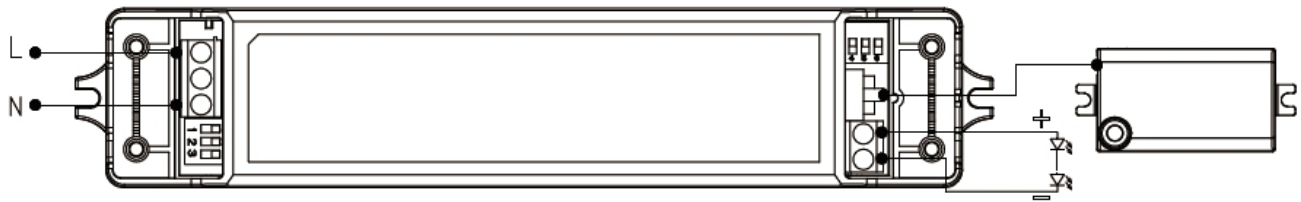
Add: No.17th Building, Dianda Guyuan Industrial Park, Mashantou, Matian, Guangming District, Shenzhen, China, 518106

Tel: +86 (0)755-2305 7253

Fax: +86 (0)755-2786 3012

Website: www.merrytek.com

5. Wiring

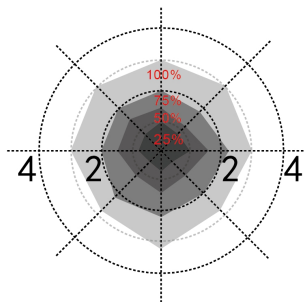


*The sensor is designed for connect one load only. Connect more than one loads may damage the sensor.

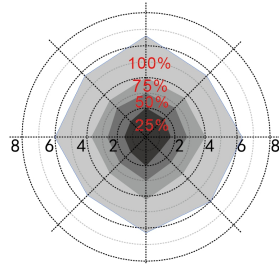
6. Radiation Pattern

Ceiling mounting

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

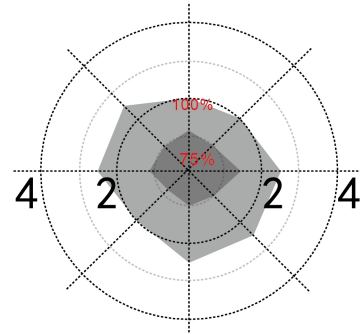


Normal moving (Speed:1m/s)

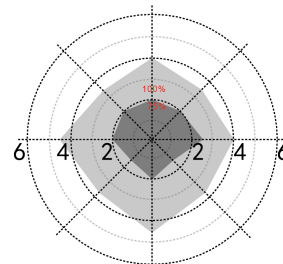


Slow moving (Speed 0.3m/s)

Ceiling mounted height: 6m(*)
Sensitivity:100%/75%



Normal moving (Speed:1m/s)



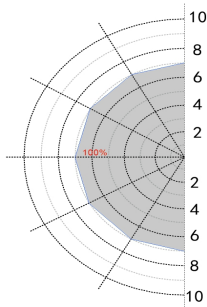
Slow moving (Speed: 0.3m/s)

*Only 100%/75% detection sensitivity is workable when installed at 6m mounting height. 25%/50% sensitivity is not able to detect motion signal.

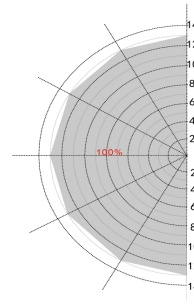
Wall mounting:

Horizon mounted height: 1.5m

Sensitivity: 100%



Normal moving (Speed: 1m/s)




Slow moving (Speed 0.3m/s)

7. Output Current Setting

Output Current	S1	S2	S3
700	ON	ON	ON
600	ON	ON	-
500	ON	-	-
400	-	-	-

8. Sensor Setting

Daylight Sensor


	1	2	3		
ON ↑ 	I	ON	ON	10Lux	
	II	ON	ON	-	30Lux
	III	ON	-	ON	50Lux
	IV	-	ON	ON	100Lux
	V	-	-	-	Disable

The sensor can be set to only allow the lamp to illuminate below a defined ambient brightness threshold.

When set to Disable mode, the daylight sensor will switch on the lamp when motion is detected regardless of ambient d light level.

50Lux, 100Lux: Twilight operation, 10Lux, 30Lux: Darkness

Stand-by Period




	4	5	
I	ON	ON	1min
II	ON	-	5min
III	-	ON	25min
IV	-	-	+∞

Refers to the time period the lamp remains at a low light level before it completely switches off in the long absence of people.

When set to “+∞”, the low light is maintained until motion is detected. operation Only.


Detection Area



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

Detection area can be reduced by selecting the combination on the DIP switches to fit precisely each application.

Hold Time



	3	4	
I	ON	ON	5S
II	ON	-	90S
III	-	ON	5min
IV	-	-	25min

Refers to the time period the lamp remains at 100% illumination after no motion detected.

Dimming Level

		5	6	
ON ↑ ■ -	I	ON	ON	0%
	II	ON	-	10%
	III	-	ON	25%
	IV	-	-	50%

The low light level you would like to have after the hold time in the long absence of people.

9. Label

1) Driver Label

Sensor DIM LED Driver
Model: MLC40C-P5 •tc

Input Voltage(Vac)	220-240	Output Voltage(Vdc)	30-50	Power Factor(λ)	>0.9
Input Frequency(Hz)	50/60	Output Voltage(Vdc)Max.	60	Ta(°C)	-25 to +50
Input Current(mA)	210	Output Power(W)Max.	35	Tc(°C)	85

Daylight Sensor Stand-by Period

1	2	3	4	5
I	ON	ON	ON	ON
II	ON	ON	ON	ON
III	ON	ON	ON	ON
IV	ON	ON	ON	ON
V	-	-	-	-

Wire preparation 0.75-1.5mm

2) DIP Label of the Detachable Sensor

	Detection Area			Hold Time			Dimming Level					
		1	2			3	4			5	6	
ON ↑ <div><div></div><div></div></div>	I	ON	ON	100%	I	ON	ON	5S	I	ON	ON	0%
	II	ON	—	75%	II	ON	—	90S	II	ON	—	10%
	III	—	ON	50%	III	—	ON	5min	III	—	ON	25%
	IV	—	—	25%	IV	—	—	25min	IV	—	—	50%