



LED Ceiling Light

AL99C/D Series





Introduction

AL99 ceiling light is a big size with up & down lighting design. It's adopted high lumen SMD LED light source, larger lighting area and low glare design make a softer and uniform light output: AL6063 aluminum housing provides an excellent thermal management. Size options: 400mm, 600mm, 800mm, 1000mm. It can do CCT adjustable, multiple installation ways available which meets more application demands.

Features

- Interchangeable CCT (3000K+4000K+5700K) with slide switch.
- DALI dimmable available.
- Multiple installation ways: Recessed/Surface mounted/Pendant(With pendant rod suspension, with steel wire suspension, with wire harness suspension.)
- Two lighting design: 100% direct lighting, up & down lighting (Not for recessed installation).
- Up & down lighting version: 10% up and 90% down lighting ratio.
- Multiple functions : Adjustable sensor, Emergency.

Application Areas

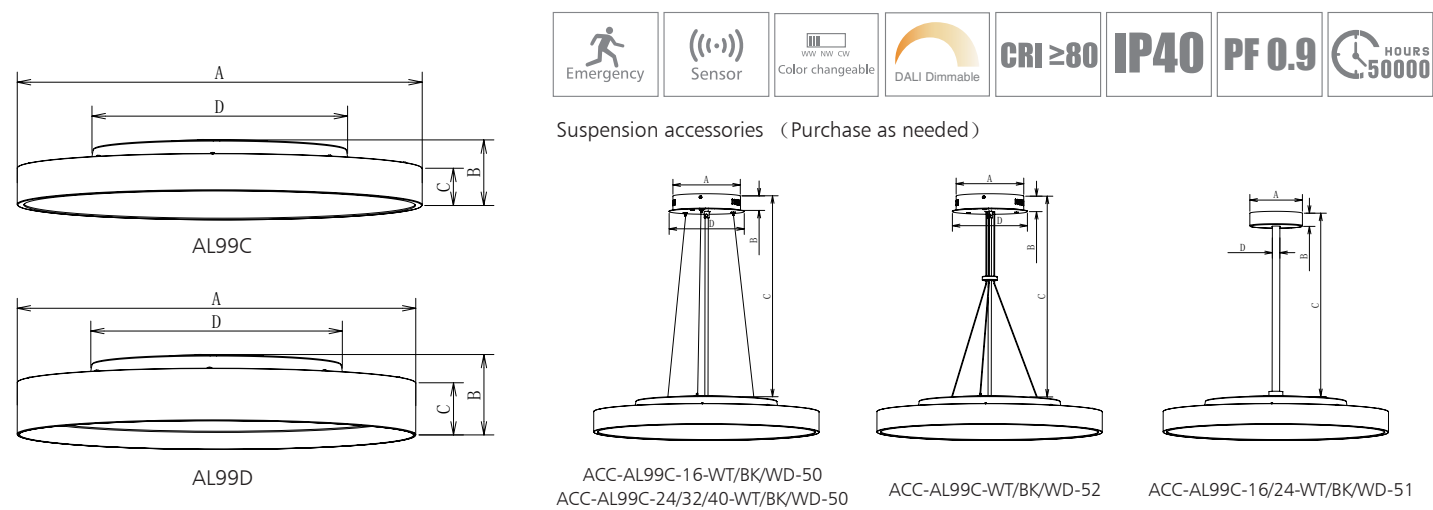
It is designed for general lighting applications in office, supermarket, shop, school, hotel, etc.





Technical Data Sheet

Code No.			AL99C-16-40W AL99D-16-40W	AL99C-24-60W AL99D-24-60W	AL99C-32-75W AL99D-32-75W	AL99C-40-100W AL99D-40-100W
Dimension(mm)			Ø400*86	Ø600*86	Ø800*86	Ø1000*86
Cutout (mm)			Ø220~250	Ø385~415		
Watt(W)			40W	60W	75W	100W
Rated Input Voltage(V)			220-240Vac			
Input Voltage(V)			198-264Vac			
LED Module Input			-			
Light Source			SMD			
SDCM			<6@ (3000K 4000K 5000K)			
CCT(K)			1-CCT: 3000K/4000K/5000K/5700K 3-CCT: 3000K + 4000K + 5700K			
CCT Selection DIP Switch			YES			
Luminous Flux (lm) ±5% CRI80 (Standard diffuser)	1-CCT	Non-DIM	3800-4430	5370-6870	7425-9030	9520-11900
		DIM	3750-4200	5320-6850	7375-9020	9500-11080
	3-CCT	Non-DIM	3800-4450	5370-6920	7425-9100	9520-11920
		DIM	3750-4400	5320-6870	7375-9050	9500-11900
Luminous Flux (lm) ±5% CRI80 (Prismatic diffuser)	1-CCT	Non-DIM	3040-3550	4300-5500	5940-7230	7620-9520
		DIM	3000-3360	4260-5480	5900-7220	7600-8870
	3-CCT	Non-DIM	3040-3560	4300-5540	5940-7280	7620-9540
		DIM	3000-3520	4260-5500	5900-7240	7600-9520
CRI			≥80			
Beam Angle (°)			120°@Standard diffuser / 85°@Prismatic diffuser			
UGR			-			
LED Driver			Built-in			
Dimming Option			DALI			
Sensor			Yes			
Emergency Kits			Yes			
Electrical Class			Class I			
Ingress Protection (IP Rating)			IP40			
Impact Resistance (IK Rating)			-			
Product Finishing(Base)			White RAL 9016 / Black RAL 9005 / Wood grain			
Materials of Optics			PS			
Materials of Housing			Aluminium			
Lifetime (hr)			50,000h			
Glow wire test (°C)			650°C			
Operating Temp. (°C)			-20°C~40°C			
Storage Temp. (°C)			-20°C~65°C			
Installation			Surface mount / Pendant / Recessed			



Measurement

Code	Dimension(mm)				Size(mm)	Product Weight (Kg)		Package weight (Kg)		Carton Size(cm)	Qty/ CTN	20GP (pcs)	40HQ (pcs)
	A	B	C	D		N.W/PC	G.W/PC	N.W/CTN	G.W/CTN				
AL99C-16-40W	400	86	55	219	Ø400*86	2.61	3.07	15.66	19.78	64.5*46.5*47.5	6PCS	1008	2580
AL99C-24-60W	600	86	55	383	Ø600*86	5.96	6.79	11.92	14.72	68.5*23.5*68.5	2PCS	486	996
AL99C-32-80W	800	86	55	383	Ø800*86	7.17	9.85	7.17	10.13	85.5*14*89	1PCS	256	584
AL99C-40-100W	1000	86	55	383	Ø1000*86	10.83	13.82	10.83	14.195	111.5*14*112	1PCS	164	392
AL99D-16-40W	400	102	71	219	Ø400*102	2.85	3.31	11.4	14.84	49*45.5*46.5	4PCS	1120	2340
AL99D-24-60W	600	110	79	383	Ø600*110	6.51	7.34	13.02	16.38	66.5*27*67	2PCS	426	876
AL99D-32-80W	800	110	79	383	Ø800*110	7.91	10.59	7.91	10.94	88.5*16.5*89	1PCS	208	484
AL99D-40-100W	1000	110	79	383	Ø1000*110	11.76	14.75	11.76	15.15	111.5*16.5*112	1PCS	140	324
ACC-AL99C-16-WT/BK/WD-50 ACC-AL99C-24/32/40-WT/BK/WD-50	180	41	800	200	Ø200*41	0.86	0.9	5.16	6.4	26.5*23*23	4PCS	8520	18876
ACC-AL99C-WT/BK/WD-52	180	41	800	200	Ø200*41	0.86	0.9	5.16	6.4	26.5*23*23	4PCS	8520	18876
ACC-AL99C-16/24-WT/BK/WD-51	140	35	500	10	Ø140*35	0.78	0.9	4.68	6.4	55.5*41.5*44.5	18PCS	5040	11970

Driver Datasheet (Non-dimmable)

Total load wattage		40W	60W	75W	100W
Output	Rated output current	1000mA	400mA	500mA	650mA
	Output Voltage range	DC28-42V	DC100-150V	DC110-160V	DC50-153V
	Line Regulation	±5%			
	Setup, Rise Time	<0.5S @230Vac			≤ 0.5S @230Vac
	Flickering Index	<0.3% NO Risk			<3% NO Risk
Input	Rated Input Voltage	220-240Vac			
	Input Voltage	198-264Vac			
	Frequency	50/60HZ			
	Rated Input Current	≤0.21A	≤0.29A	≤0.37A	≤0.51A
	Input Current	≤0.23A	≤0.36A	≤0.47A	≤0.57A
	Power Factor	0.9			
	THD	<20% @230V			<20% @220-240V
	Efficiency	87%	90%	90%	≥92%
	No load wattage	<0.5W @230V	<0.9W @230V	<0.9W @230V	<0.5W
Protection	Short circuit protection	PASS			
	Over voltage protection	PASS			
	Over temperature protection	PASS			
Safety &EMC	Withstand voltage	I/P-O/P:3.75KVac,<5mA 60S; I/P-FG:1.6KVac,<5mA 60S; O/P-FG:0.5KVac,<5mA 60S		I/P-FG:1.6KVac,<5mA 60S; O/P-FG:0.5KVac,<5mA 60S	
	Isolation Resistance	I/P-O/P: 500VDC, ≥2M Ω			500VDC, ≥2M Ω
	Surge	IEC/EN61000-4-5 (P≥25w L-N:1KV, L/N-PE:2KV)			
	EMC Emission	EN55015, EN61000-3-2			
	EMC Immunity	EN61000-4-2,3,4,5,6,8,11; EN61547			

Driver Datasheet (DALI Dimmable)

Total load wattage		40W	60W	75W	95W
Output	Rated output current	1050mA	400mA	500mA	650mA
	Output Voltage range	DC9-38V	DC54-240V		
	Line Regulation	±5%			
	Setup, Rise Time	<1.5S@230Vac			
	Flickering Index	<1% NO Risk			
Input	Rated Input Voltage	220-240Vac			
	Input Voltage(V)	198-264Vac			
	Frequency	50/60HZ			
	Rated Input Current	≤0.21A	≤0.31A	≤0.38A	≤0.48A
	Input Current	≤0.23A	≤0.34A	≤0.43A	≤0.54A
	Power Factor	0.9			
	THD	<15% @230Vac	<10% @230Vac		
	Efficiency	≥88%	≥92%		
	No load wattage	≤ 0.5W			
Protection	Short circuit protection	PASS			
	Over voltage protection	PASS			
	Over temperature protection	PASS			
Safety & EMC	Withstand voltage	I/P-O/P:3.75kVac, <5mA 60S	I/P-FG:1.5kVac, <5mA 60S		
	Isolation Resistance	I/P-O/P: 500VDC, ≥4M Ω	500VDC, ≥2M Ω		
	Surge	IEC/EN61000-4-5 (P≥25w L-N:1kV)	IEC/EN61000-4-5 (P≥25W L-N:1kV, L/N-PE:2kV)		
	EMC Emission	EN55015, EN61000-3-2			
	EMC Immunity	EN61000-4-2,3,4,5,6,8,11; EN61547			

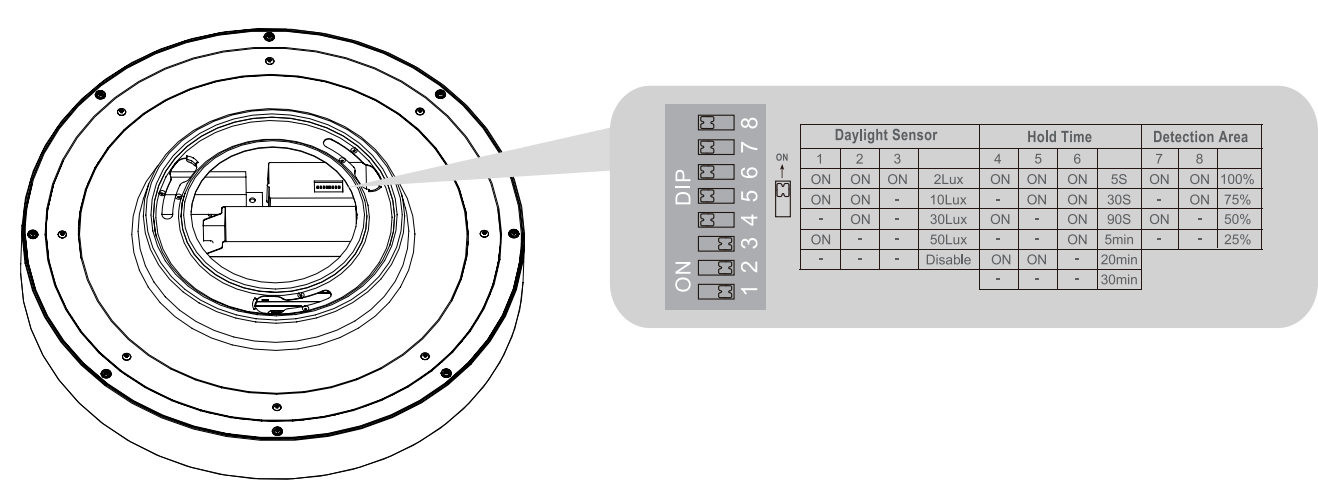
Datasheet (Emergency)

Input power	3W(AL99C/AL99D-16")	5W(AL99C/AL99D-24"/32"/40")
Discharge power	2W	5W
Rated Input Voltage(V)	AC230V	
Frequency	50/60Hz	
Input Voltage	AC200-240V	
Rated Input Current	≤0.03A	≤0.04A
Battery	6.4V 1500mAh (LifepO4)	6.4V 4000mAh (LifepO4)
Lifetime	Over 2000 cycles	
Battery duration	≥3hrs	
Charge Period	≤24hrs	
Emergency switching time	≤1S	
Emergency Operating Temp. (°C)	0°C-25°C	

Datasheet (Sensor)

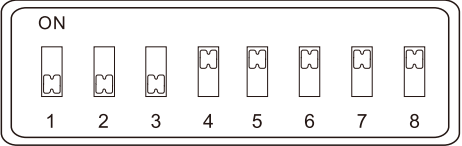
Sensor datasheet	
Operating voltage	220-240VAC 50/60Hz
Power consumption	1.5W±0.5W
Microwave frequency	5.8GHz±75MHz, ISM wave band
Transmission power	<0.5mW
Detection angle	140°
Detection Area	4-6M 100%/75%/50%/25% Adjustable
Hold time	5S/30S/90S/5Min/20Min/30Min Adjustable
Daylight sensor	2lux/10lux/30lux/50lux/Disable Adjustable
Stand-by DIM Level	-
Stand-by Period	-
Dimming Range	-
Microwave ON/OFF function	-
Installation Height	Recommended Installation Height: Wall mounted height 1.8m. Ceiling mounted height 3m.
Minimum mounting distance	recommended mounting distance should be more than 3m
Operating temperature(°C)	-20°C~60°C

Daylight & Microwave Sensor



Factory setting

Factory settings		
Daylight Sensor	Hold Time	Detection Area
Disable	5S	100%



Sensor Setting

Daylight Sensor				
	1	2	3	
I	ON	ON	ON	2Lux
II	ON	ON	-	10Lux
III	-	ON	-	30Lux
IV	ON	-	-	50Lux
V	-	-	-	Disable*

Hold Time				
	4	5	6	
I	ON	ON	ON	5S
II	-	ON	ON	30S
III	ON	-	ON	90S
IV	-	-	ON	5min
V	ON	ON	-	20min
VI	-	-	-	30min

Detection Area			
	7	8	
I	ON	ON	100%
II	-	ON	75%
III	ON	-	50%
IV	-	-	25%

Daylight sensor:

Notice 1: The light threshold can be selected through the slide switch, it may cause a large deviation in different lamps.

Hold time:

Notice 1: The hold time can be selected by the slide switch. The hold time counting should be started after the sensor is powered on and initialized.

Detection area:

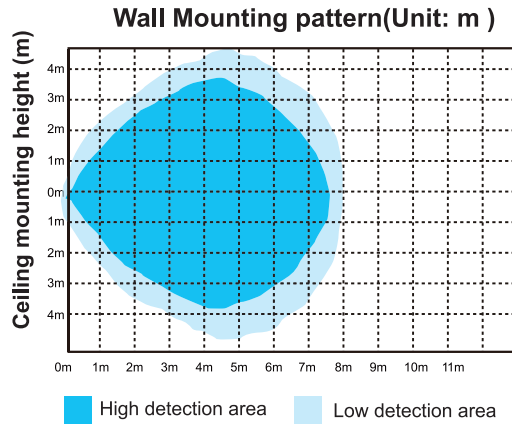
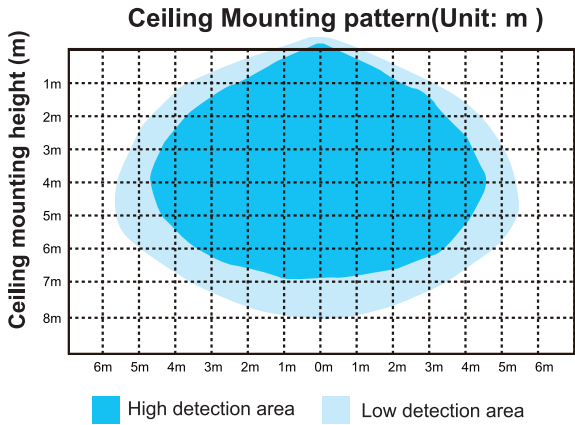
Sensor test condition: The test is based on 3m height, the detect distance radius is based on ground, the detect distance can be adjusted through the slide switch.

Sensor test environment and reference: The detective range is measured by human body whose stature is around 1.6-1.7M with medium size and traveling speed is around 1.0-1.5M per second. If the stature, bodily form and traveling speed are changed,then the detective range will be changed accordingly.

Sensor lamp's reaction under open/narrow environment: Test result will be highly influenced by test environment, the more open environment, the closer detect distance; the narrower environment, the longer detect distance. The detector may do self-excitation in a narrow environment.

Sensor Setting based on environmental disturbance: Some environmental disturbances will cause abnormal induction, such as the lamp can not automatically turn off for a long time or the sensor function is invalid, then users can adjust sensor distance to reach the ideal effect. It is recommended to adjust the sensing distance to 50% for the environment where near the heavy equipment, metal sheets and metal pipes, concretewall(<30cm thickness)etc.Recommend to keep 100%sensordistance in open environment. For environment where near the routers, telecommunications base stations, electrical machinery etc, it is recommended to keep the installation distance of more than 5 meters and adjust to 50% sensor distance.

Induction Range



Function Table

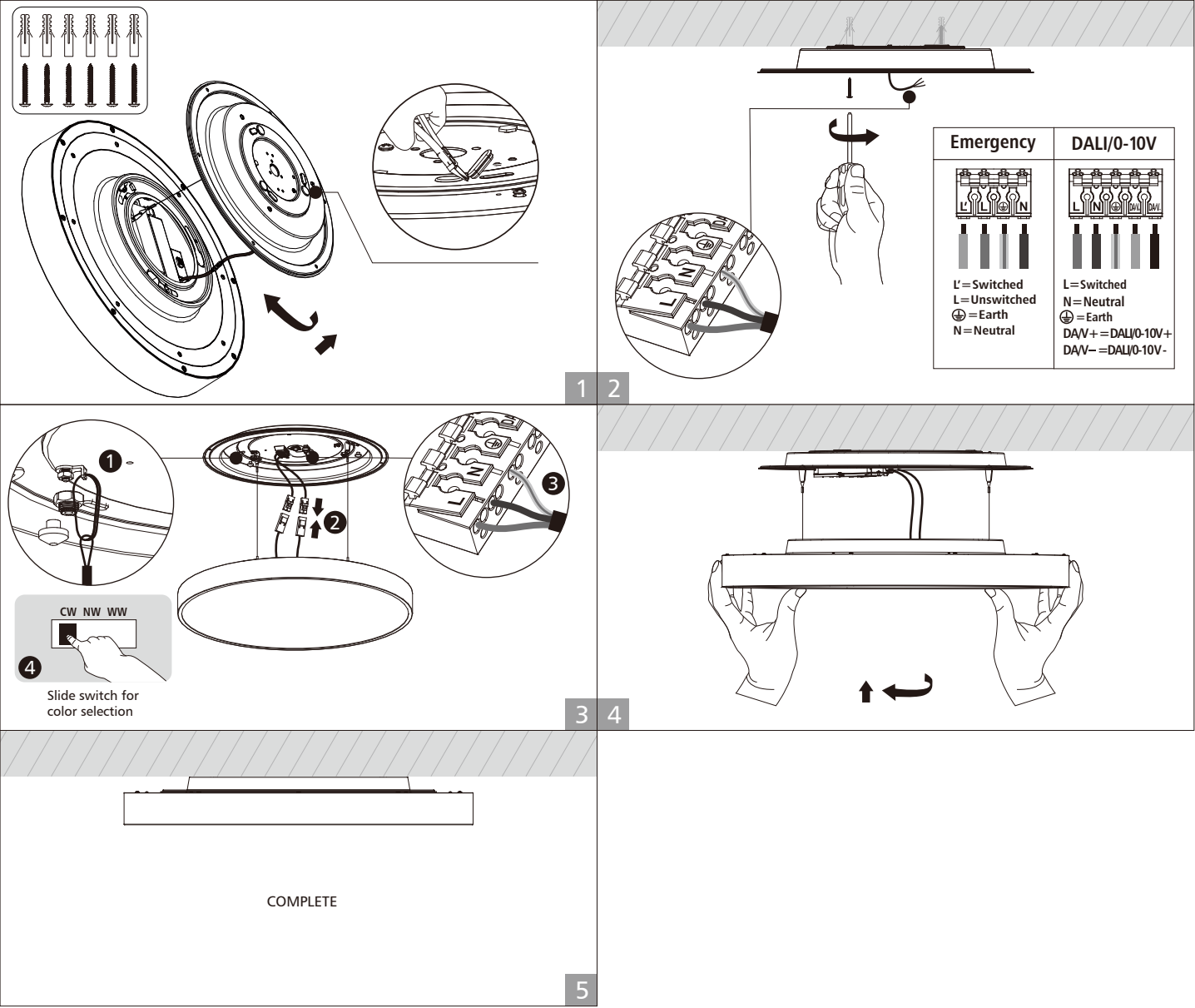
Function Table	AL99C/AL99D-16-40W	AL99C/AL99D-24-60W	AL99C/AL99D-32-75W	AL99C/AL99D-40-100W
Non-dim	√	√	√	√
Non-dim +CCT Switchable	√	√	√	√
Emergency	√	√	√	√
Emergency + Non-Dim +CCT Switchable	√	√	√	√
Sensor	√	√	√	√
Sensor + CCT Switchable	√	√	√	√
Sensor + Emergency	√	√	√	√
Sensor + Emergency + CCT Switchable	√	√	√	√
DALI Dim	√	√	√	√
DALI + CCT Switchable	√	√	√	√

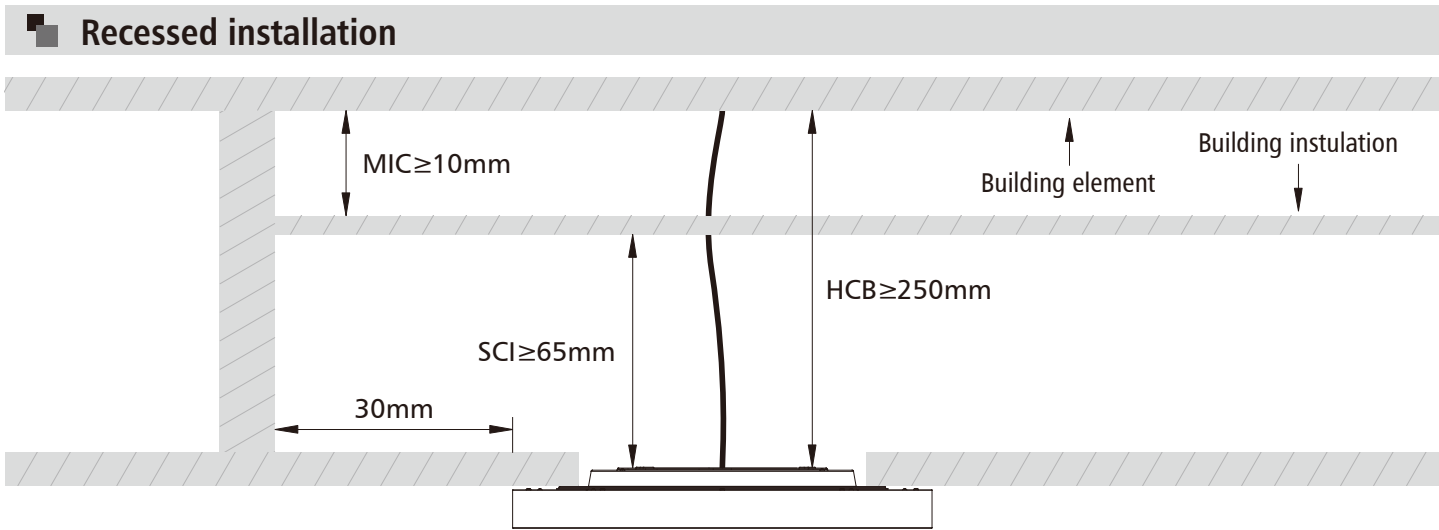
WARNING

- 1.Switch off before installation.
- 2.Switch on only after complete installation and examination of the circuit.
- 3.Professional electrician for installation and maintenance only.



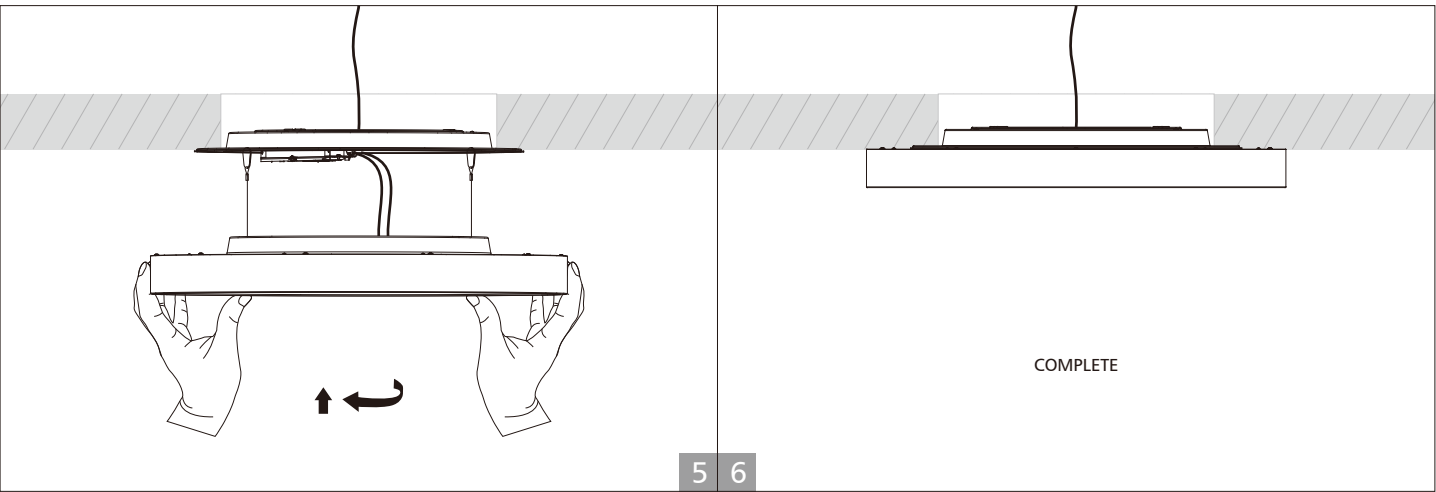
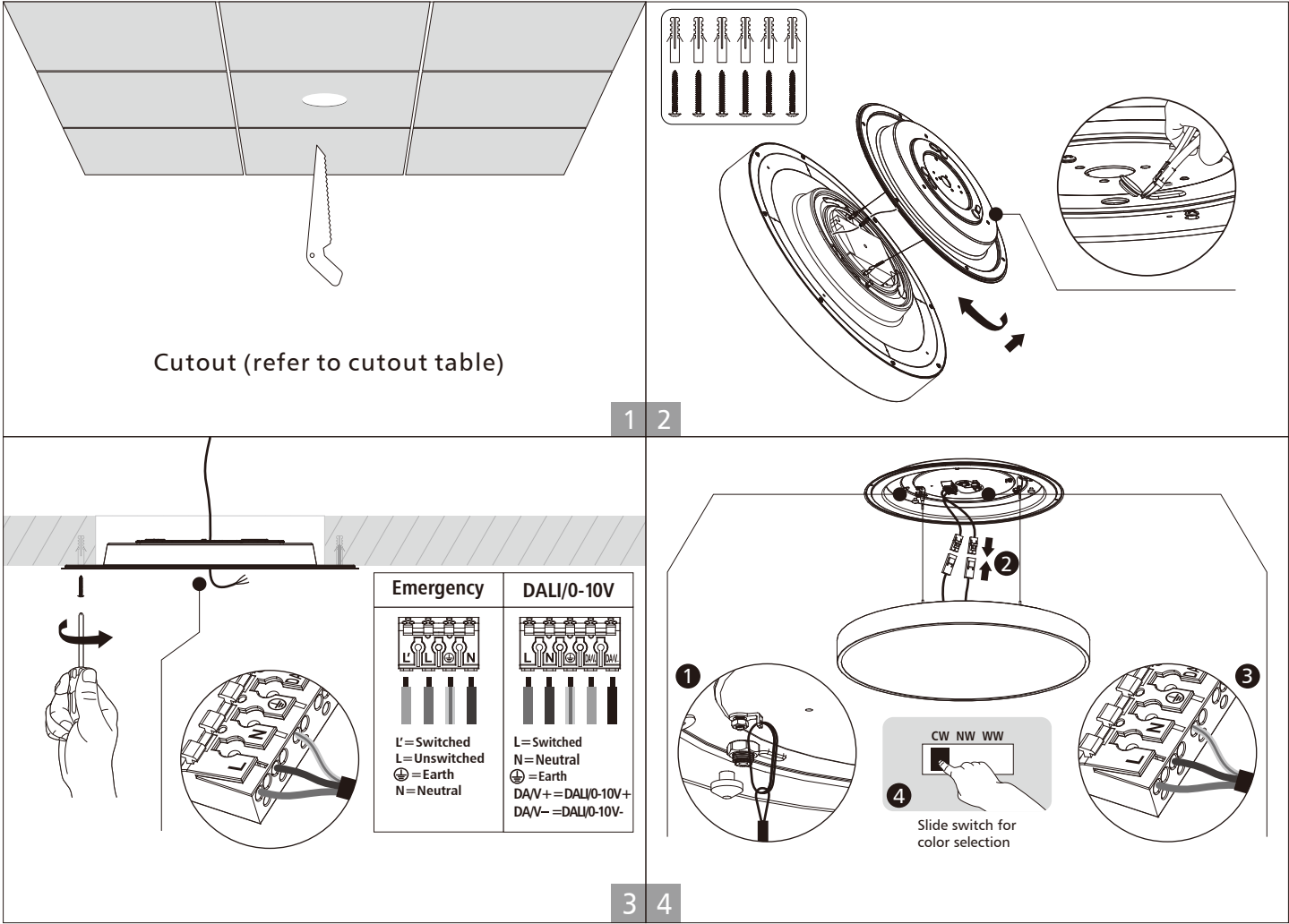
Surface Mount installation





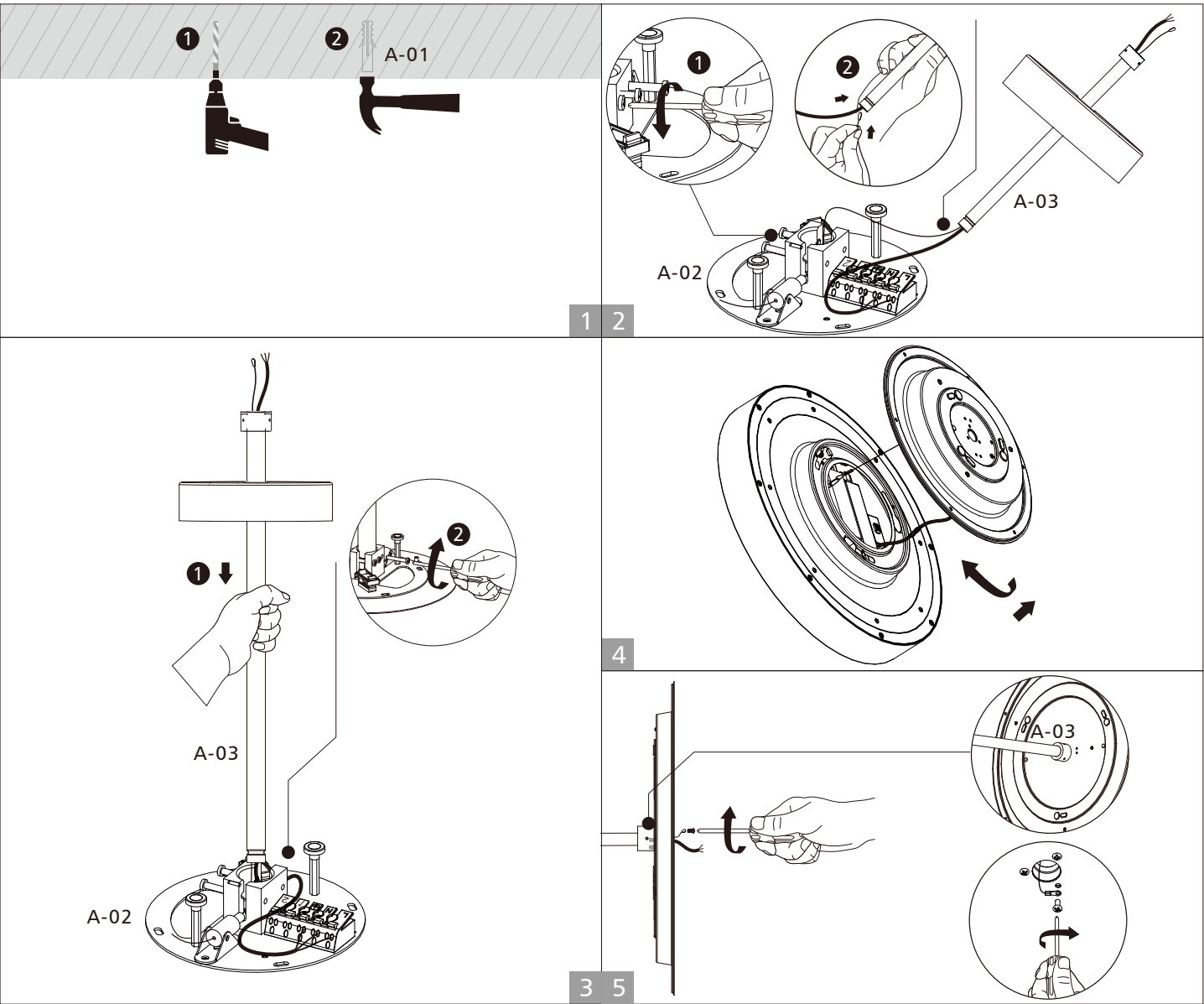
Ceiling cutout table

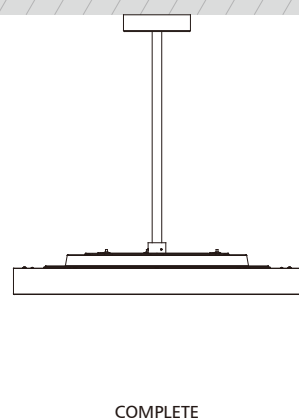
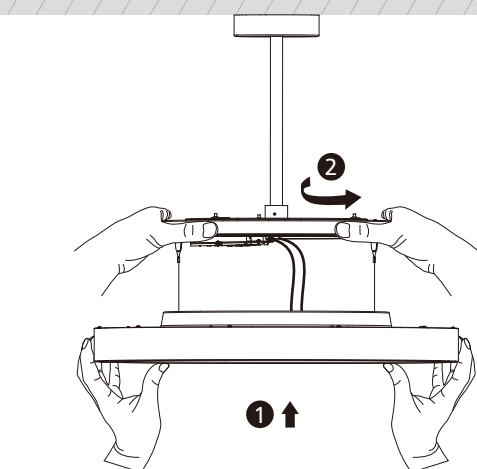
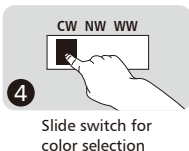
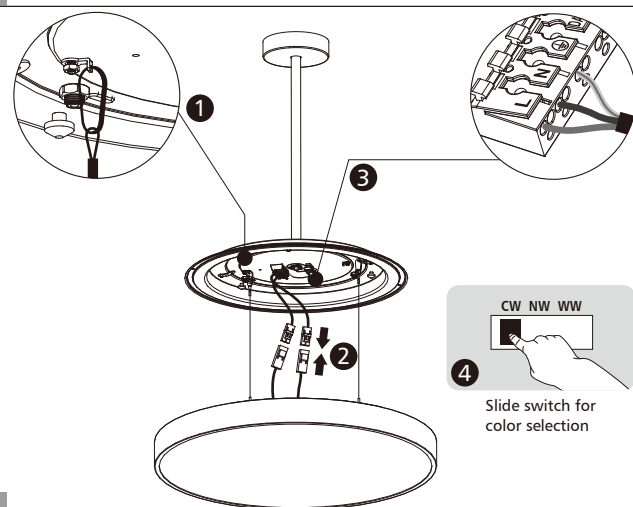
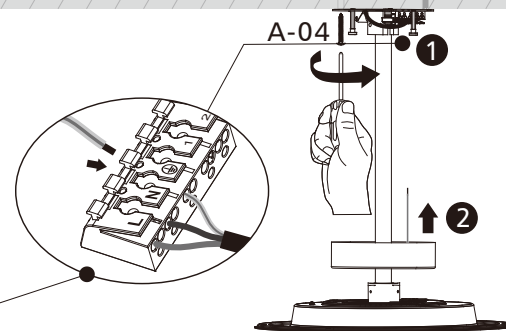
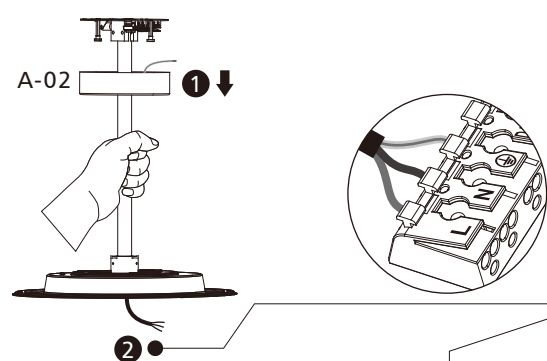
Downlight Dia (inch)	16	24	32	40
Ceiling Cutout (mm)	Ø220-250	Ø385-415		



With pendant rod suspension installation

Code	A-01	A-02	A-03	A-04
	x4	x1	x1	x4

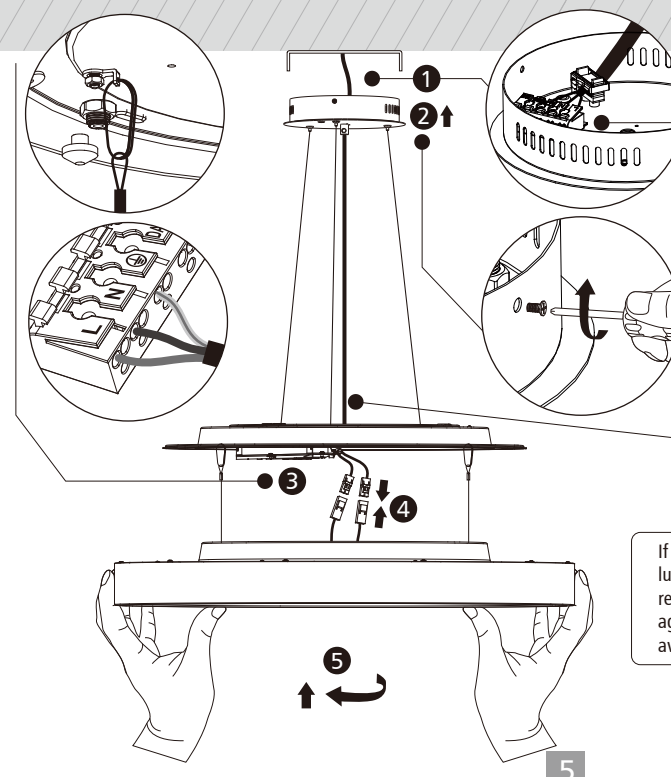
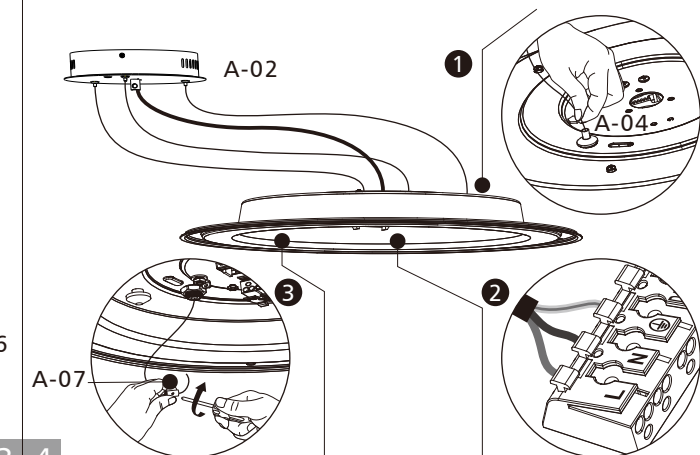
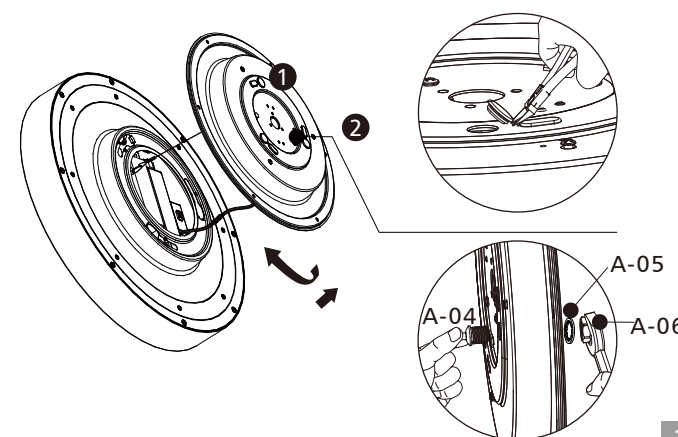
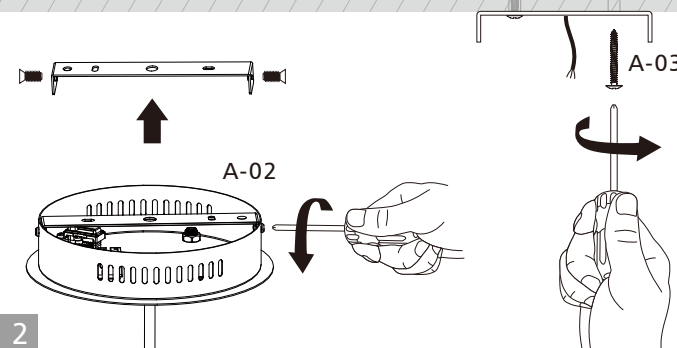
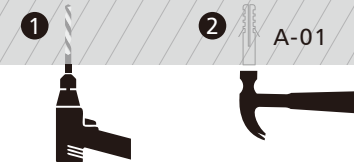


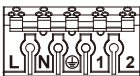
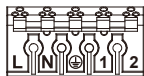
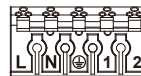


COMPLETE

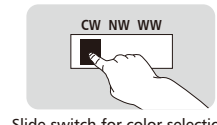
■ ■ With steel wire suspension installation

Code	A-01 	A-02 	A-03 	A-04 	A-05 	A-06 	A-07 
	x2	x1	x2	x3	x3	x3	x3

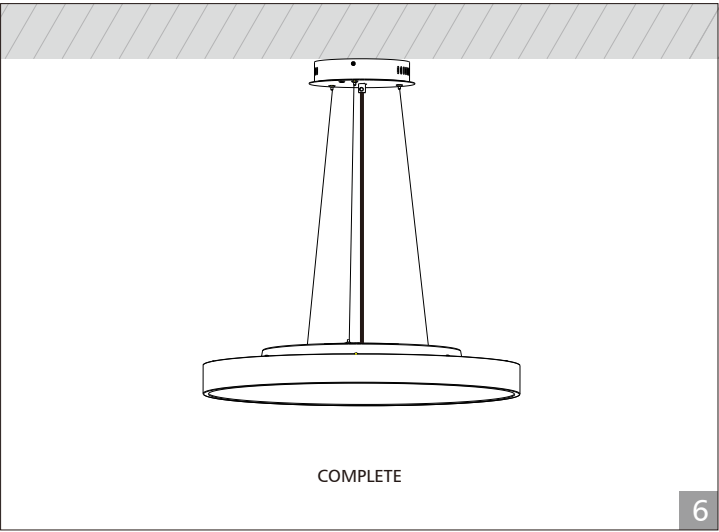


Standard	Emergency	DALI/0-10V
 L = Switched N = Neutral ⊕ = Earth 1 = N/A 2 = N/A	 L = Unswitched N = Neutral ⊕ = Earth 1 = Switched 2 = N/A	 L = Switched N = Neutral ⊕ = Earth 1 = DA/L V+ 2 = DA/N V-

If the external flexible cable or cord of this luminaire is damaged, it shall be exclusively replaced by the manufacturer or his service agent or a similar qualified person in order to avoid a hazard.

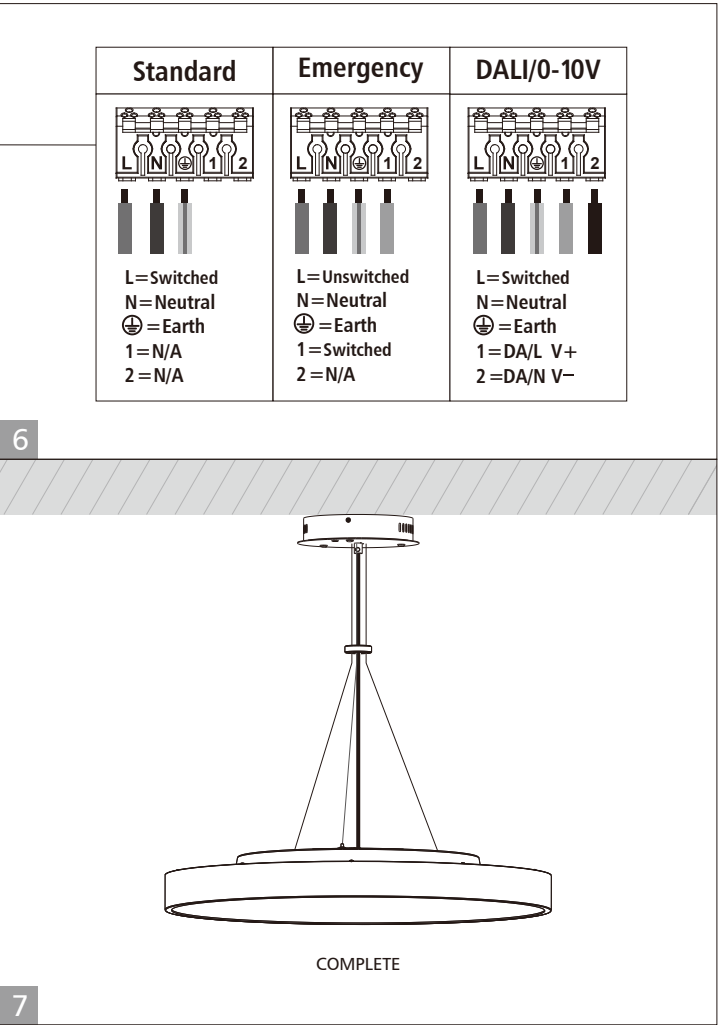
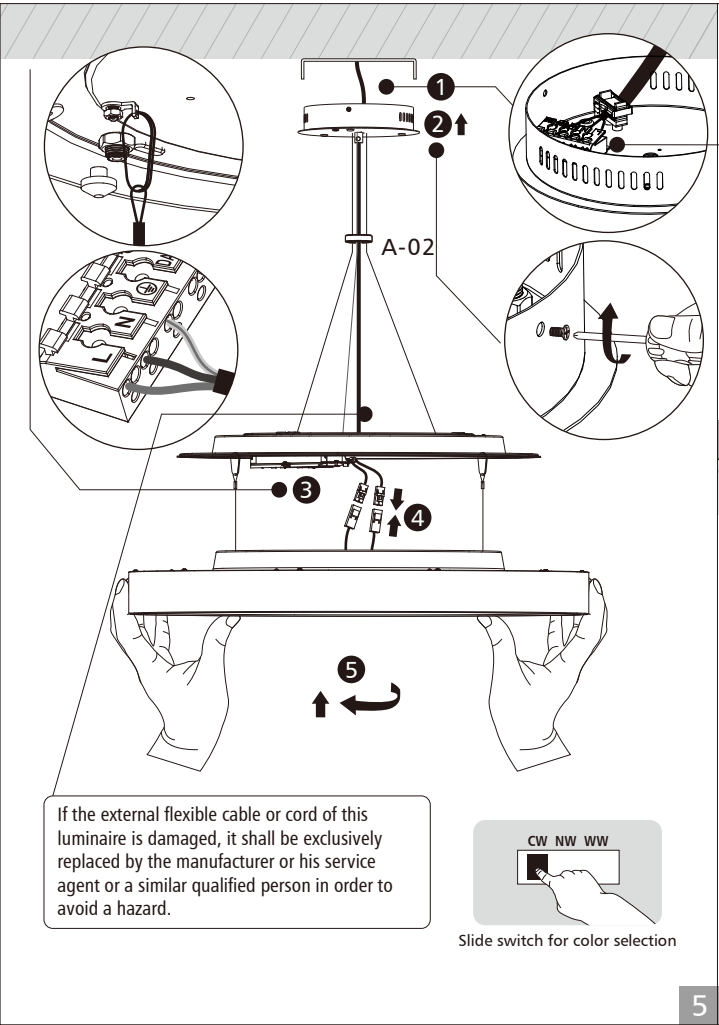
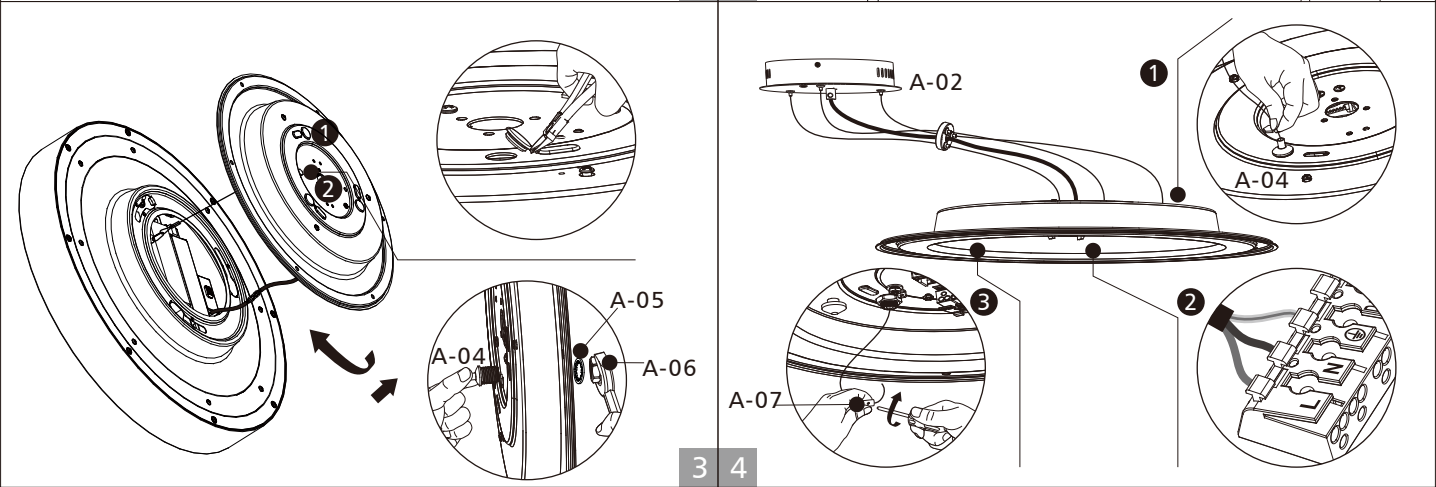
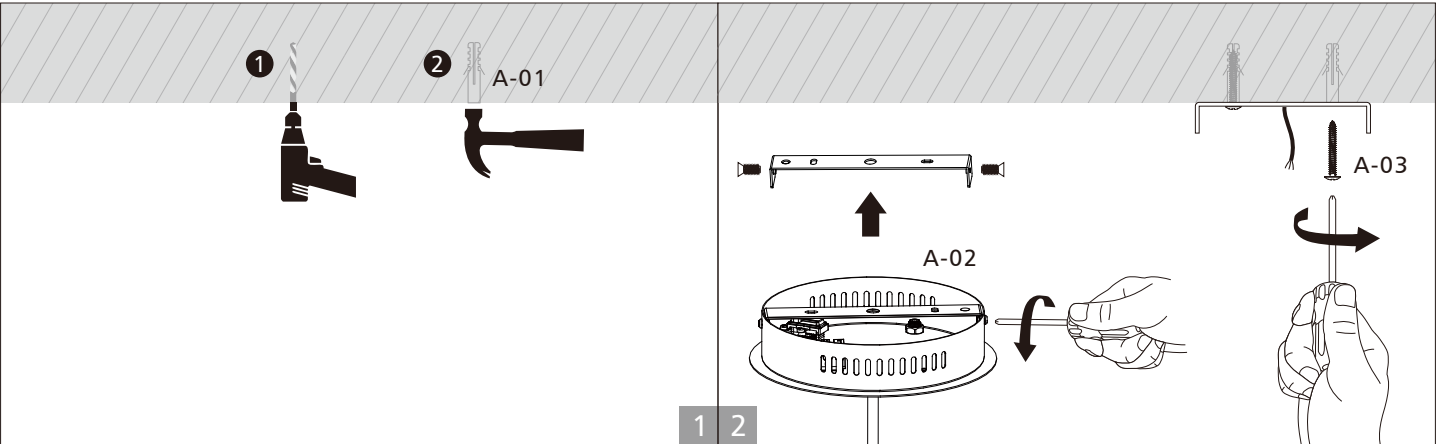


Slide switch for color selection



■ With wire harness suspension installation

Code	A-01	A-02	A-03	A-04	A-05	A-06	A-07
	x2	x1	x2	x3	x3	x3	x3



Standard	Emergency	DALI/0-10V
L=Switched N=Neutral ⊕=Earth 1=N/A 2=N/A	L=Unswitched N=Neutral ⊕=Earth 1=Switched 2=N/A	L=Switched N=Neutral ⊕=Earth 1=DA/L V+ 2=DA/N V-



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