



Technical Application
Guide for LED Ceiling light
AL45-12-18W

Introduction



With high performance(Dimmable, Non-dimmable, DALI Dimmable, Emergency, Sensor, Sensor+Emergency, DIP function). Easy to install: labor-saver(quick terminal block design) , Connect in series(Opening wiring and concealed wiring are optional). IP65, IK10. Easier maintenance, as the driver can be replaced easily, different standard drivers in the market can be matched.

- Up to 70% energy saving compared to standard CFL
- Long lifetime of 50,000 hours
- Triac dim, 0-10V dim, DALI dim
- 120° wide beam angle
- CCT: 3000K 4000K 5000K 5700K
- No UV/IR light
- Environment friendly, without Mercury or any other hazardous substances

Application notes

- IP65 both for indoor and outdoor use
- Professional electrician for installation only
- Switch off before installation
- Do not touch when in use
- Keep away from hot steam and corrosive gas

Application Areas

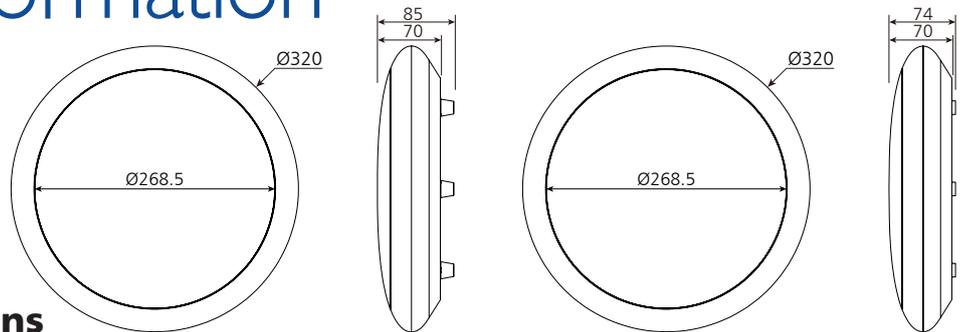
It is designed for general lighting applications in office, supermarket, shop, school, hotel, etc. It is also widely used for public areas, such as stairway, lobby, reception, corridors etc.

Certificate

CE RoHS



Product Information



Technical Specifications

Model	Voltage	Power	Power Factor	Lumen (±5%)	Beam angle	CCT	Lifespan	CRI	Dimmable	Dimension
AL45-12-18W	AC230V	18W	≥0.9	1800	120°	3000K	50000h	≥80	No	Ø320*70mm
AL45-12-18W	AC230V	18W	≥0.9	1940	120°	4000K	50000h	≥80	No	Ø320*70mm
AL45-12-18W	AC230V	18W	≥0.9	1800	120°	5000K	50000h	≥80	No	Ø320*70mm
AL45-12-18W	AC230V	18W	≥0.9	1800	120°	5700K	50000h	≥80	No	Ø320*70mm
AL45-12-18W-D	AC230V	18W	≥0.9	1750	120°	3000K	50000h	≥80	Yes	Ø320*70mm
AL45-12-18W-D	AC230V	18W	≥0.9	1870	120°	4000K	50000h	≥80	Yes	Ø320*70mm
AL45-12-18W-D	AC230V	18W	≥0.9	1782	120°	5000K	50000h	≥80	Yes	Ø320*70mm
AL45-12-18W-D	AC230V	18W	≥0.9	1750	120°	5700K	50000h	≥80	Yes	Ø320*70mm

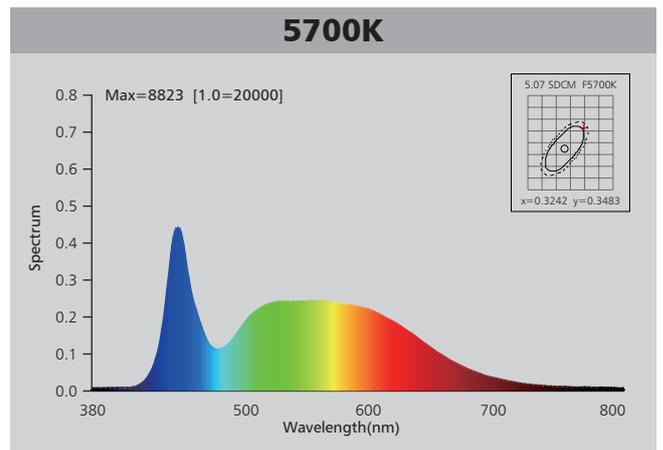
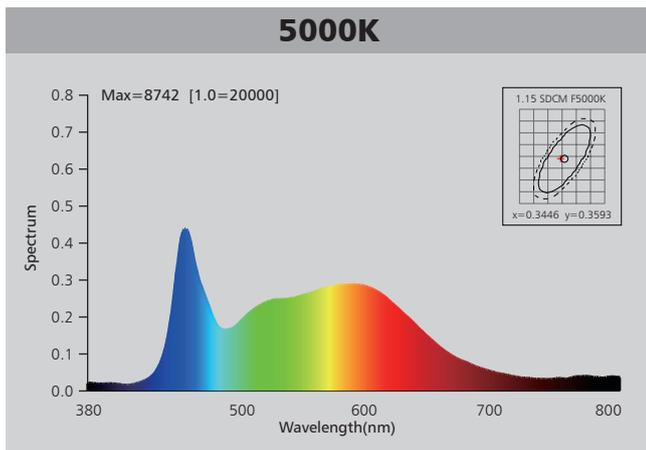
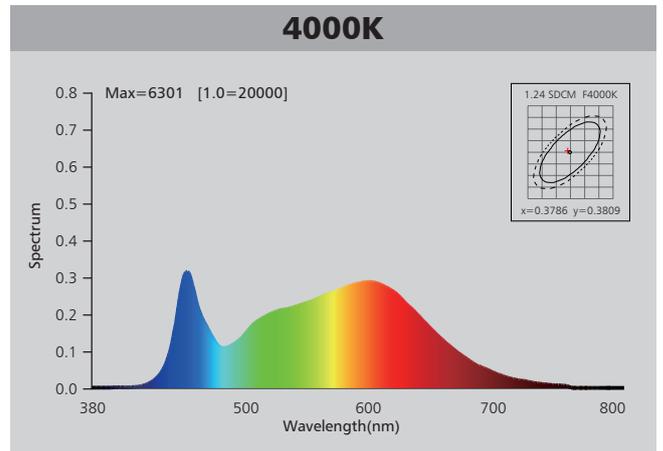
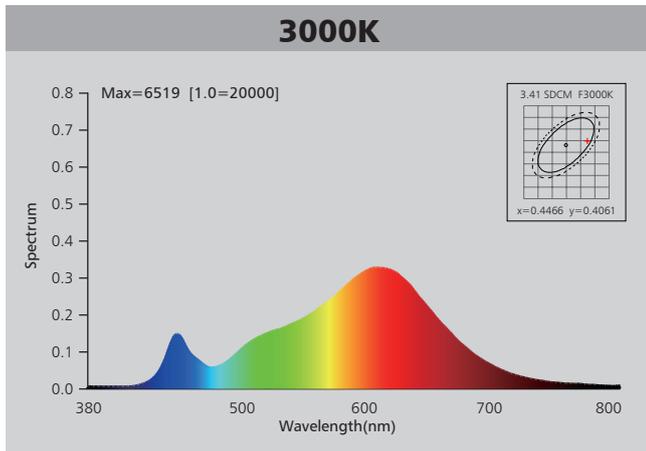
Driver data Sheet

Driver data	DIM	Non-dim
Input rated Voltage	AC230V	AC230V
Frequency	50Hz	50/60Hz
Input Voltage	AC200-240V	AC200-240V
Efficiency	≥83%	≥85%
No load wattage	≤1W	≤0.5W
Total load Wattage	18W±1W	18W±1W
Power Factor	≥0.9	≥0.9
Rated input current	≤0.1A	≤0.1A
Full load output Voltage	DC23-40V	DC27-40V
Rated output current	480mA	500mA
Output current range	480mA±5%	500mA±5%
Power tolerance	±5%	±5%
Current output tolerance	±5%	±5%
Dimming range	8%-100%	—
Dimmer	Triac dimmers	—
Short circuit protection	PASS	PASS
Over voltage protection	PASS	PASS
Over temperature protection	PASS	PASS
THD	≤20%	≤18%
Withstand voltage	AC3750V	AC3750V

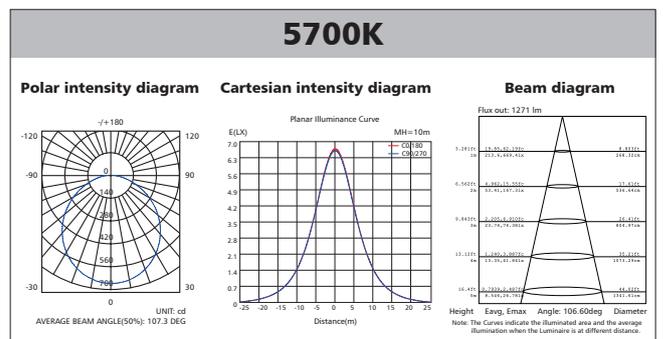
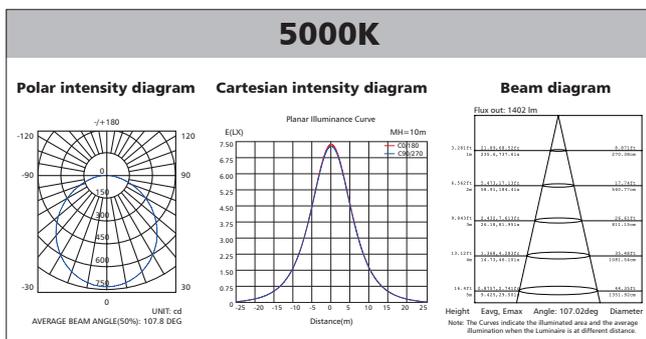
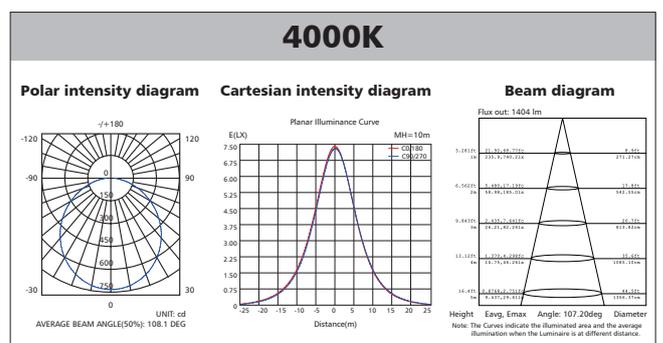
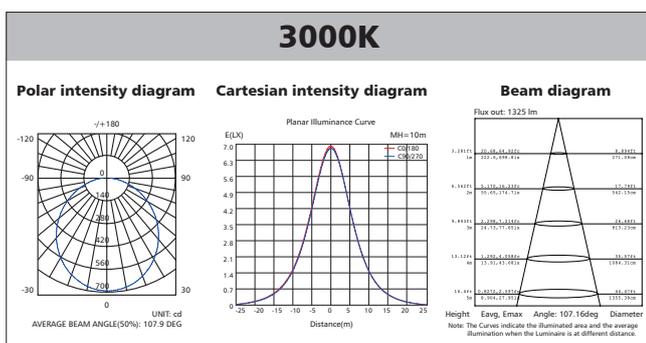
Fixture Compatibility

Rated Wattage	Electrical Classification	Ingress Protection	Operating Temp	Operating Humidity	Storage Temp
18W	II	IP65	-20°C~45°C	0~90%	-20°C~65°C

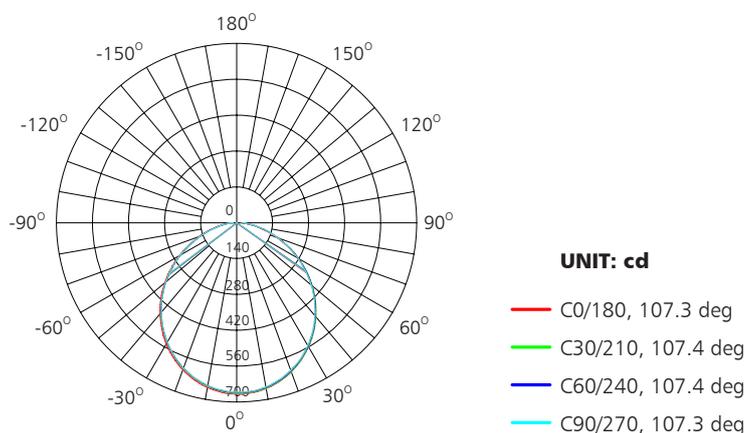
Spectral Distribution



Photometric Diagram



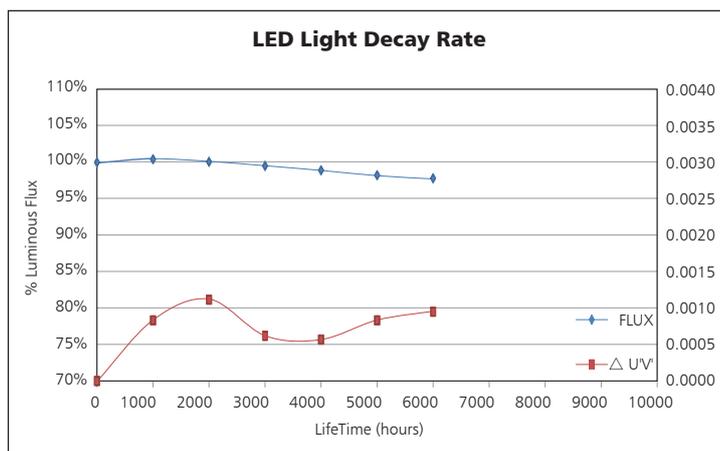
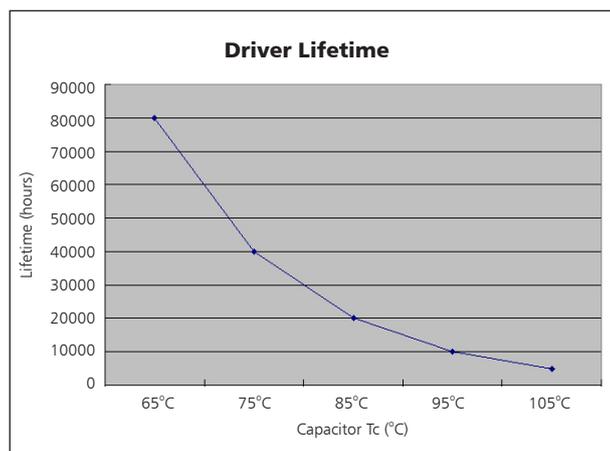
Polar Diagram Comparison



AVERAGE BEAM ANGLE (50%): 107.3 DEG

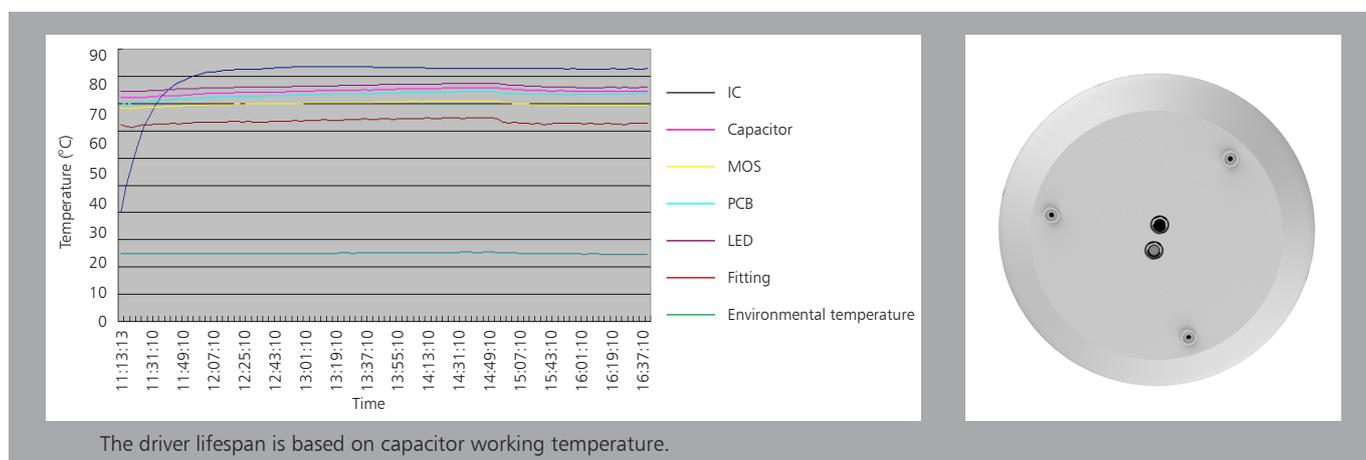


Driver lifetime & LED light decay rate



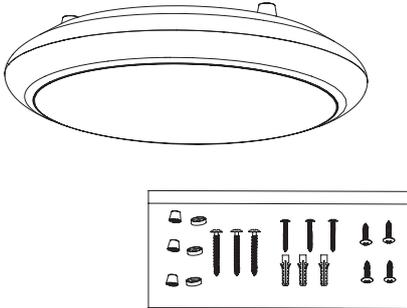
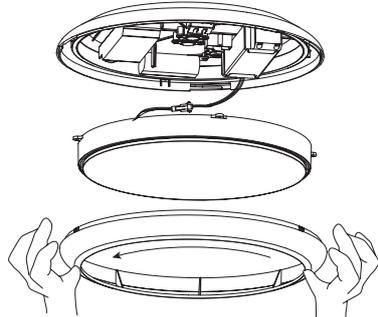
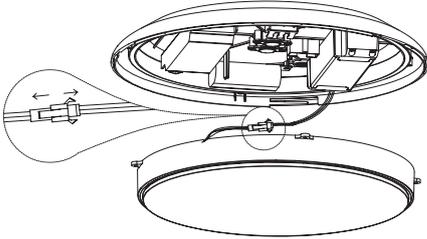
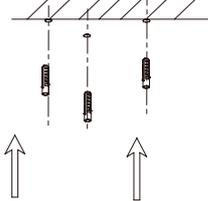
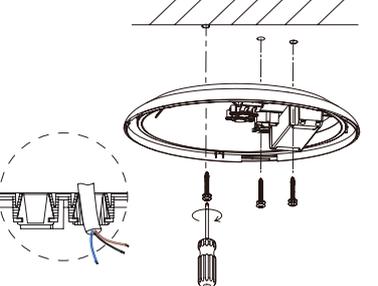
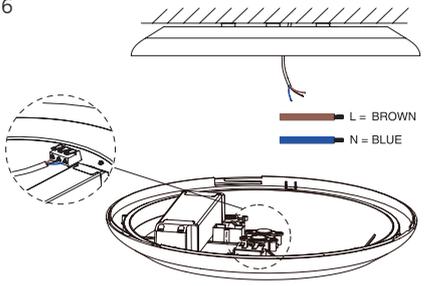
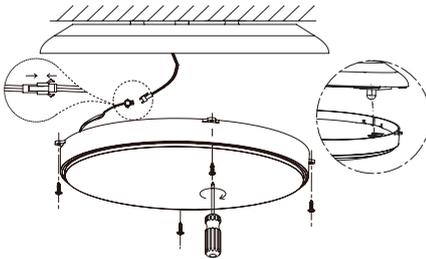
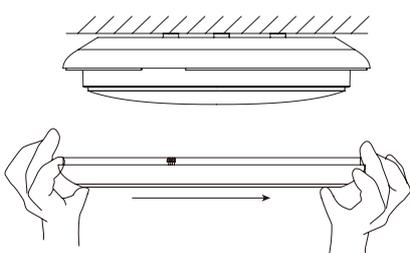
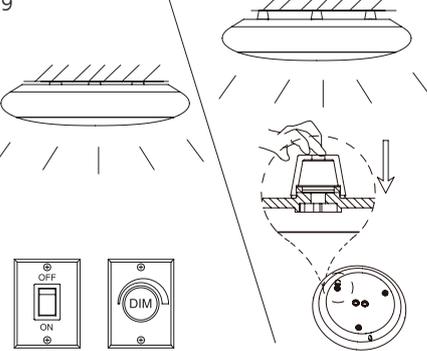
Temperature

- The testing is operated at 25°C
- The lifetime of capacitor, minimum of 5,000 hours if operated at 105°C, will be doubled whenever the temperature drops 10°C
- The highest withstand temperature of IC, MOS could be 120°C
- The highest withstand temperature of LED junction temperature is 150°C



The driver lifespan is based on capacitor working temperature.

Installation

<p>1</p>  <p>Take out accessory pack.</p>	<p>2</p>  <p>Unscrew the front frame anticlockwise and take it out, make the frame, diffuser and back housing separately.</p>	<p>3</p>  <p>Disconnect the connection plug.</p>
<p>4</p>  <p>Put the plastic anchor into the ceiling.</p>	<p>5</p>  <p>Make the input wires through entrance hole and waterproof bushing, cover the screws with waterproof washer, fix the back housing by these screws.</p>	<p>6</p>  <p>Connect the wires to the block through the reliefs.</p>
<p>7</p>  <p>Settle the male and female connectors well and fix the diffuser cover on the back housing by screws.</p>	<p>8</p>  <p>Match the gaps for each part and rotate the frame clockwise.</p>	<p>9</p>  <p>Installation finished, turn on the switch.</p>

Packaging Information

	SIZE(CM)	N.W/pc (KGS)	G.W.(KGS)	Q'TY(PCs)
Carton	52.5*34*34	0.995	8.7	6

	CTNS	Q'TY(PCs)	VOLUME(CBM)
20" standard container	450	2700	28
40" standard container	900	5400	56

