

PL COIN 50 2000 DC COB G3

Product Specification



Product Description

COIN 50 2000 COB G3 delivers the brilliant color effect, high flux density, and various beam angle options to enhance visual experience.

- CE mark
- L70B50 50khrs
- 5 years warranty
- Type of protection: IP20

Features

- Color consistency < 2SDCM
- TM30 compliant
- High flux output up to 1980lm
- Beam angle in 24°, 40°, 60°

Applications

- Retail, shop, restaurant, hospitality
- High-end residential
- Suitable for indoor applications

Table 1. Product Performance

Product name	Nominal CCT (K)	Min CRI	Flux Output (lm)		Typical Efficacy (lm/W)	Test Current (mA)	Nominal Power (W)
			Min	Typ			
PL-CN50-COB-2000-927-24D-G3	2700	90	1539	1710	100	500	17.2
PL-CN50-COB-2000-930-24D-G3	3000	90	1661	1845	107	500	17.2
PL-CN50-COB-2000-940-24D-G3	4000	90	1692	1880	109	500	17.2
PL-CN50-COB-2000-965-24D-G3	6500	90	1692	1880	109	500	17.2
PL-CN50-COB-2000-927-40D-G3	2700	90	1620	1800	104.5	500	17.2
PL-CN50-COB-2000-930-40D-G3	3000	90	1710	1900	110.5	500	17.2
PL-CN50-COB-2000-940-40D-G3	4000	90	1773	1970	114.5	500	17.2
PL-CN50-COB-2000-965-40D-G3	6500	90	1791	1990	115.5	500	17.2
PL-CN50-COB-2000-927-60D-G3	2700	90	1589	1765	102.5	500	17.2
PL-CN50-COB-2000-930-60D-G3	3000	90	1674	1860	108	500	17.2
PL-CN50-COB-2000-940-60D-G3	4000	90	1697	1885	109.5	500	17.2
PL-CN50-COB-2000-965s-60D-G3	6500	90	1688	1875	109	500	17.2

1. Nominal performance is measured with steady state 500mA at tc=70°C (@ta=25 °C)
2. Tolerance of measurements for the luminous flux is ±7%

Table 2. Optical Characteristics

Product Name	Beam Angle (FWHM)	Color Coordinate		Color Consistency	R9	IES TM30-15	
		CIE _x	CIE _y			R _f	R _g
PL-CN50-COB-2000-927-24D-G3	24±3°	0.4606	0.4128	2SDCM	50	91	97
PL-CN50-COB-2000-930-24D-G3	24±3°	0.4376	0.4061	2SDCM	50	91	97
PL-CN50-COB-2000-940-24D-G3	24±3°	0.3858	0.3837	2SDCM	50	90	97
PL-CN50-COB-2000-965-24D-G3	24±3°	0.3156	0.3340	2SDCM	50	91	97
PL-CN50-COB-2000-927-40D-G3	40±3°	0.4606	0.4128	2SDCM	50	91	97
PL-CN50-COB-2000-930-40D-G3	40±3°	0.4376	0.4061	2SDCM	50	91	97
PL-CN50-COB-2000-940-40D-G3	40±3°	0.3858	0.3837	2SDCM	50	90	97
PL-CN50-COB-2000-965-40D-G3	40±3°	0.3156	0.3340	2SDCM	50	91	97
PL-CN50-COB-2000-927-60D-G3	55±5°	0.4606	0.4128	2SDCM	50	91	97
PL-CN50-COB-2000-930-60D-G3	55±5°	0.4376	0.4061	2SDCM	50	91	97
PL-CN50-COB-2000-940-60D-G3	55±5°	0.3858	0.3837	2SDCM	50	90	97
PL-CN50-COB-2000-965-60D-G3	55±5°	0.3156	0.3340	2SDCM	50	91	97

1. Nominal performance is measured with steady state 500mA at tc=70°C (@ta=25 °C)
2. Tolerance of measurements for R9 is ±3, TM-30 R_f and R_g is ±3, Chromaticity Coordinate is ±0.005

Table 3. Electrical Characteristics(Tc = 70°C)

Product name	Forward Voltage(V)			Typical Power (W)
	Min	Typ	Max	
PL-CN50-COB-2000-xxx-xxD-G3	31	34.3	36	17.2

1. Nominal performance is measured with steady state 500mA at tc=70°C (@ta=25 °C)

Table 4. Lifetime calculation

Product name	Rated Current	Lumen Maintenance	L70		L80		L90	
	(mA)	(x hrs)	B10	B50	B10	B50	B10	B50
PL-CN50-COB-2000-9XX-XXD-G3	500	tc 95°C	>50000	>50000	44000	47000	21000	23000
		tc 85°C	>50000	>50000	45000	48000	22000	23000
	350	tc 95°C	>50000	>50000	44000	47000	21000	23000
		tc 85°C	>50000	>50000	45000	48000	22000	23000

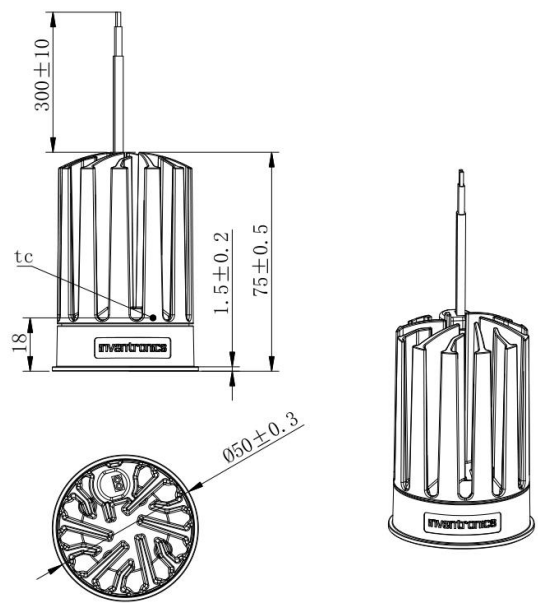
Table 5. HE mode Performance table

Module	Current(mA)	Flux (%)	Efficacy (%)	Typ Vf (V)	Power (W)
HO Mode	500	100.0%	100.0%	34.3	17.2
	350	73.6%	108.1%	33.4	11.7
HE Mode	300	64.1%	110.9%	33.1	9.9
	250	54.3%	113.8%	32.8	8.2
	200	44.1%	116.9%	32.4	6.5
	180	39.9%	118.1%	32.2	5.8
	150	33.5%	120.1%	32.0	4.8
	120	27.1%	122.1%	31.7	3.8
	100	22.7%	123.4%	31.5	3.2

Table 6. Lifetime vs tc (ta for reference)

PL-CN50-COB-2000-9XX- XXD-G3	Orientation	Nominal (Performance)		5-year Warranty (L70B50 50k hrs)	
		ta	tc	ta	tc
500mA (HO mode)	Downward	25	70	50	95
	Horizontal	25	80	40	95

Mechanical Dimensions

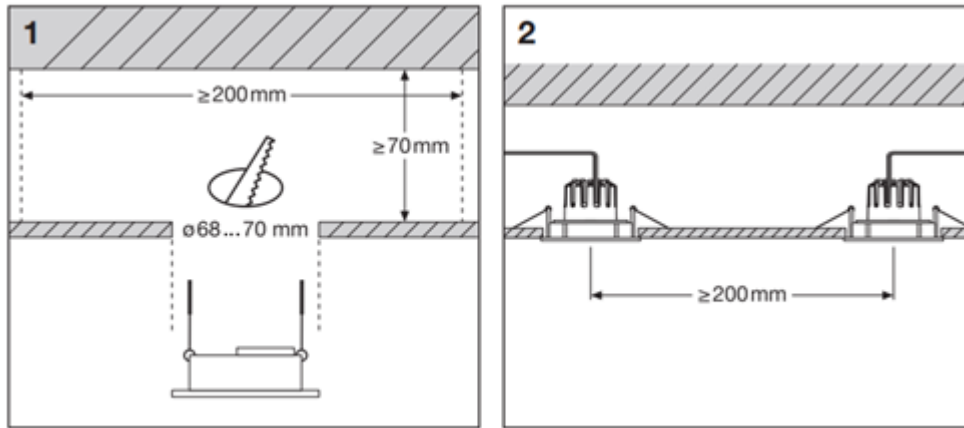


CN50	Dimension	Tolerance	Unit
Diameter	50	±0.3	mm
Height	75	±0.5	mm
Optics	PC Lens		
Weight	121	±5	gram
Wire length	300	±10	mm

Standard Compliance

Eye security	IEC 62778
Flayyability	IEC 61347-1
Safety Requirements	EN 62031 IEC 60598-1
EMC / radio disturbance characteristics	EN 55015
EMC / iyyunity	EN 61547
CE Mark,ENEC	Yes
Working voltage for insulation	PL-CN50-COB-1400-9XX-15D-G3: 32-38V PL-CN50-COB-1400-9XX-24D/40D/60D-G3: 31-36V PL-CN50-COB-1000-TW-90-XXD-G3: 32-38V

Suggestions for installation holes



Safety information

- ◆ Suitable for indoor applications
- ◆ Connecting multiple modules in parallel on one LED driver is not permitted
- ◆ Connecting multiple modules in series on one LED driver is not recommended
- ◆ Do not use in sealed fixture
- ◆ Avoid covering the lens with dust or any object
- ◆ The LED module itself and all its components may not be mechanical stressed.
- ◆ Assembly must not damage or destroy conducting paths on the circuit board.
- ◆ To avoid mechanical damage to the connecting cables, the module should be attached securely to the fixture. Heavy vibration should be avoided.
- ◆ Installation of LED modules (with power supplies) needs to be made with regard to all applicable electrical and safety standards. Only qualified personnel should be allowed to perform installation.
- ◆ Please ensure that the power supply is of adequate power to operate the total load.
- ◆ Max. working voltage is 60V and only operation on SELV LED control gears is permitted.
- ◆ CN50-COB module need to connect with constant current DC driver which must has stable constant current (+/-5% tolerance suggested) output.
- ◆ Electrical contact is achieved with the contact cables.
- ◆ The design of the housing should be according to the IP standards in the application.
- ◆ Pay attention to standard ESD precautions when installing the module.
- ◆ If surge protection structure not within power supplier, a lightening protector should be needed additionally.
- ◆ Tc value is the maximum temperature for safety, higher tc application is not recommended.
- ◆ Blue Light Hazard Classification: RG1 unlimited.

Ordering Guide

Short text	EAN10	EAN40	Pcs per Box
PL-CN50-COB-2000-927-24D-G3	6937186151438	6937186151445	20
PL-CN50-COB-2000-930-24D-G3	6937186151452	6937186151469	20
PL-CN50-COB-2000-940-24D-G3	6937186151476	6937186151483	20
PL-CN50-COB-2000-965-24D-G3	6937186151490	6937186151506	20
PL-CN50-COB-2000-927-40D-G3	6937186151513	6937186151520	20
PL-CN50-COB-2000-930-40D-G3	6937186151537	6937186151544	20
PL-CN50-COB-2000-940-40D-G3	6937186151551	6937186151568	20
PL-CN50-COB-2000-965-40D-G3	6937186151575	6937186151582	20
PL-CN50-COB-2000-927-60D-G3	6937186151599	6937186151605	20
PL-CN50-COB-2000-930-60D-G3	6937186151612	6937186151629	20
PL-CN50-COB-2000-940-60D-G3	6937186151636	6937186151643	20
PL-CN50-COB-2000-965-60D-G3	6937186151650	6937186151667	20