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OSRAM

PrevaLED® COIN 111 DC COB G2

Product Specification



Product Description

COIN 111 DC COB G2 family deliver the brilliant color effect, high flux density, and various beam angle options to enhance visual experience.

- CE mark
- L70B50 50khrs
- 5 years warranty

Benefits

- Compact form factor compatible with conventional AR111 lamps
- Precise optical control and free from multi-shadow issues
- Dual-mode options in High Output (HO) and High Efficacy (HE)

Features

- Color consistency < 2SDCM
- High flux output up to 4900lm
- Beam angles: 15°, 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-CN111-COB-2800-830-15D-G2	3000	80	2686	2984	118	700	25.3
PL-CN111-COB-2800-840-15D-G2	4000	80	2839	3154	125	700	25.3
PL-CN111-COB-2800-865-15D-G2	6500	80	2808	3120	123	700	25.3
PL-CN111-COB-2800-927-15D-G2	2700	90	2180	2422	96	700	25.3
PL-CN111-COB-2800-930-15D-G2	3000	90	2293	2548	101	700	25.3

PL-CN111-COB-2800-935-15D-G2	3500	90	2363	2626	104	700	25.3
PL-CN111-COB-2800-940-15D-G2	4000	90	2413	2681	106	700	25.3
PL-CN111-COB-2800-930UW-15D-G2	3000	90	2128	2364	93	700	25.3
PL-CN111-COB-2800-935UW-15D-G2	3500	90	2149	2388	94	700	25.3
PL-CN111-COB-2800-830-24D-G2	3000	80	2623	2914	115	700	25.3
PL-CN111-COB-2800-840-24D-G2	4000	80	2773	3081	122	700	25.3
PL-CN111-COB-2800-865-24D-G2	6500	80	2743	3048	120	700	25.3
PL-CN111-COB-2800-927-24D-G2	2700	90	2129	2366	94	700	25.3
PL-CN111-COB-2800-930-24D-G2	3000	90	2240	2489	98	700	25.3
PL-CN111-COB-2800-935-24D-G2	3500	90	2309	2565	101	700	25.3
PL-CN111-COB-2800-940-24D-G2	4000	90	2357	2619	104	700	25.3
PL-CN111-COB-2800-930UW-24D-G2	3000	90	2078	2309	91	700	25.3
PL-CN111-COB-2800-935UW-24D-G2	3500	90	2100	2333	92	700	25.3
PL-CN111-COB-2800-830-40D-G2	3000	80	2561	2845	112	700	25.3
PL-CN111-COB-2800-840-40D-G2	4000	80	2706	3007	119	700	25.3
PL-CN111-COB-2800-865-40D-G2	6500	80	2678	2975	118	700	25.3
PL-CN111-COB-2800-927-40D-G2	2700	90	2079	2310	91	700	25.3
PL-CN111-COB-2800-930-40D-G2	3000	90	2186	2429	96	700	25.3
PL-CN111-COB-2800-935-40D-G2	3500	90	2254	2504	99	700	25.3
PL-CN111-COB-2800-940-40D-G2	4000	90	2301	2557	101	700	25.3
PL-CN111-COB-2800-930UW-40D-G2	3000	90	2029	2254	89	700	25.3
PL-CN111-COB-2800-935UW-40D-G2	3500	90	2049	2277	90	700	25.3
PL-CN111-COB-4300-830-24D-G2	3000	80	4185	4650	127	1050	36.7
PL-CN111-COB-4300-840-24D-G2	4000	80	4424	4916	134	1050	36.7
PL-CN111-COB-4300-865-24D-G2	6500	80	4356	4840	132	1050	36.7
PL-CN111-COB-4300-927-24D-G2	2700	90	3396	3773	103	1050	36.7
PL-CN111-COB-4300-930-24D-G2	3000	90	3572	3969	108	1050	36.7
PL-CN111-COB-4300-935-24D-G2	3500	90	3685	4094	112	1050	36.7
PL-CN111-COB-4300-940-24D-G2	4000	90	3765	4183	114	1050	36.7
PL-CN111-COB-4300-930UW-24D-G2	3000	90	3301	3668	100	1050	36.7
PL-CN111-COB-4300-935UW-24D-G2	3500	90	3335	3705	101	1050	36.7
PL-CN111-COB-4300-830-40D-G2	3000	80	4087	4541	124	1050	36.7
PL-CN111-COB-4300-840-40D-G2	4000	80	4320	4800	131	1050	36.7
PL-CN111-COB-4300-865-40D-G2	6500	80	4253	4726	129	1050	36.7

PL-CN111-COB-4300-927-40D-G2	2700	90	3316	3684	100	1050	36.7
PL-CN111-COB-4300-930-40D-G2	3000	90	3488	3875	106	1050	36.7
PL-CN111-COB-4300-935-40D-G2	3500	90	3598	3998	109	1050	36.7
PL-CN111-COB-4300-940-40D-G2	4000	90	3677	4085	111	1050	36.7
PL-CN111-COB-4300-930UW-40D-G2	3000	90	3223	3581	98	1050	36.7
PL-CN111-COB-4300-935UW-40D-G2	3500	90	3256	3618	99	1050	36.7
PL-CN111-COB-4300-830-60D-G2	3000	80	4037	4486	122	1050	36.7
PL-CN111-COB-4300-840-60D-G2	4000	80	4269	4743	129	1050	36.7
PL-CN111-COB-4300-865-60D-G2	6500	80	4202	4669	127	1050	36.7
PL-CN111-COB-4300-927-60D-G2	2700	90	3276	3640	99	1050	36.7
PL-CN111-COB-4300-930-60D-G2	3000	90	3446	3829	104	1050	36.7
PL-CN111-COB-4300-935-60D-G2	3500	90	3554	3949	108	1050	36.7
PL-CN111-COB-4300-940-60D-G2	4000	90	3632	4035	110	1050	36.7
PL-CN111-COB-4300-930UW-60D-G2	3000	90	3184	3538	96	1050	36.7
PL-CN111-COB-4300-935UW-60D-G2	3500	90	3217	3574	97	1050	36.7

1. All parameters are derived at steady state when:
PL-CN111-COB-2800: $t_p=65^{\circ}\text{C}$ ($@t_a=25^{\circ}\text{C}$)
PL-CN111-COB-4300: $t_p=80^{\circ}\text{C}$ ($@t_a=25^{\circ}\text{C}$)
PL-CN111-COB-4300-865: $t_p=75^{\circ}\text{C}$ ($@t_a=25^{\circ}\text{C}$)
Nominal performance at High Output mode is measured with steady state 700mA for PL-CN111-COB-2800 and 1050mA for PL-CN111-COB-4300
2. High Efficacy (HE) mode is driven at 500mA or below for PL-CN111-COB-2800 and 700mA or below for PL-CN111-COB-4300; the corresponding performance is given in Table 2
3. Tolerance of measurements for the luminous flux is $\pm 7\%$

Table 2. Relative performance of High Output (HO) / High Efficacy (HE) modes

PL-CN111-COB-2800-xxx	Current (mA)	Flux (%)	Efficacy (%)	Typ. Vf (V)	Power (W)
High Output (HO) mode	700	100	100	36.2	25.3
	650	94	102	35.9	23.3
	600	88	104	35.6	21.4
	550	82	107	35.3	19.4
High Efficacy (HE) mode	500	76	109	35	17.5
	450	69	113	34.7	15.6
	400	63	115	34.3	13.7
	350	56	118	34	11.9
	300	48	121	33.7	10.1

PL-CN111-COB-4300-xxx	Current (mA)	Flux (%)	Efficacy (%)	Typ. Vf (V)	Power (W)
High Output (HO) mode	1050	100	100	35	36.7
	1000	96	101	34.8	34.8
	950	92	102	34.6	32.9
	900	88	104	34.5	31
	850	83	105	34.3	29.2
	800	79	106	34.1	27.3
	750	75	107	34	25.5
High Efficacy (HE) mode	700	70	109	33.8	23.7

Table 3. Optical characteristics

Product name	Beam angle (FWHM)	Color coordinates		Color consistency	R9	IES TM30-15	
		CIEx	CIEy			Rf	Rg
PL-CN111-COB-2800-830-15D-G2	15°	0.437	0.4075	2SDCM	10	83	94
PL-CN111-COB-2800-840-15D-G2	15°	0.385	0.3842	2SDCM	0	81	92
PL-CN111-COB-2800-865-15D-G2	15°	0.3163	0.3327	2SDCM	10	82	93
PL-CN111-COB-2800-927-15D-G2	15°	0.461	0.4146	2SDCM	50	90	98
PL-CN111-COB-2800-930-15D-G2	15°	0.437	0.4075	2SDCM	50	89	97
PL-CN111-COB-2800-935-15D-G2	15°	0.4105	0.3962	2SDCM	50	89	99
PL-CN111-COB-2800-940-15D-G2	15°	0.385	0.3842	2SDCM	50	88	97
PL-CN111-COB-2800-930UW-15D-G2	15°	0.4252	0.3905	2SDCM	50	89	98
PL-CN111-COB-2800-935UW-15D-G2	20°	0.4012	0.3805	2SDCM	50	89	98
PL-CN111-COB-2800-830-24D-G2	20°	0.437	0.4075	2SDCM	10	83	94
PL-CN111-COB-2800-840-24D-G2	20°	0.385	0.3842	2SDCM	0	81	92
PL-CN111-COB-2800-865-24D-G2	20°	0.3163	0.3327	2SDCM	10	82	93
PL-CN111-COB-2800-927-24D-G2	20°	0.461	0.4146	2SDCM	50	90	98
PL-CN111-COB-2800-930-24D-G2	20°	0.437	0.4075	2SDCM	50	89	97
PL-CN111-COB-2800-935-24D-G2	20°	0.4105	0.3962	2SDCM	50	89	99
PL-CN111-COB-2800-940-24D-G2	20°	0.385	0.3842	2SDCM	50	88	97
PL-CN111-COB-2800-930UW-24D-G2	20°	0.4252	0.3905	2SDCM	50	89	98
PL-CN111-COB-2800-935UW-24D-G2	20°	0.4012	0.3805	2SDCM	50	89	98

PL-CN111-COB-2800-830-40D-G2	35°	0.437	0.4075	2SDCM	10	83	94
PL-CN111-COB-2800-840-40D-G2	35°	0.385	0.3842	2SDCM	0	81	92
PL-CN111-COB-2800-865-40D-G2	35°	0.3163	0.3327	2SDCM	10	82	93
PL-CN111-COB-2800-927-40D-G2	35°	0.461	0.4146	2SDCM	50	90	98
PL-CN111-COB-2800-930-40D-G2	35°	0.437	0.4075	2SDCM	50	89	97
PL-CN111-COB-2800-935-40D-G2	35°	0.4105	0.3962	2SDCM	50	89	99
PL-CN111-COB-2800-940-40D-G2	35°	0.385	0.3842	2SDCM	50	88	97
PL-CN111-COB-2800-930UW-40D-G2	35°	0.4252	0.3905	2SDCM	50	89	98
PL-CN111-COB-2800-935UW-40D-G2	35°	0.4012	0.3805	2SDCM	50	89	98
PL-CN111-COB-4300-830-24D-G2	24°	0.437	0.4075	2SDCM	10	83	94
PL-CN111-COB-4300-840-24D-G2	24°	0.385	0.3842	2SDCM	0	81	92
PL-CN111-COB-4300-865-24D-G2	24°	0.3163	0.3327	2SDCM	10	82	93
PL-CN111-COB-4300-927-24D-G2	24°	0.461	0.4146	2SDCM	50	90	98
PL-CN111-COB-4300-930-24D-G2	24°	0.437	0.4075	2SDCM	50	89	97
PL-CN111-COB-4300-935-24D-G2	24°	0.4105	0.3962	2SDCM	50	89	99
PL-CN111-COB-4300-940-24D-G2	24°	0.385	0.3842	2SDCM	50	88	97
PL-CN111-COB-4300-930UW-24D-G2	24°	0.4252	0.3905	2SDCM	50	89	98
PL-CN111-COB-4300-935UW-24D-G2	24°	0.4012	0.3805	2SDCM	50	89	98
PL-CN111-COB-4300-830-40D-G2	37°	0.437	0.4075	2SDCM	10	83	94
PL-CN111-COB-4300-840-40D-G2	37°	0.385	0.3842	2SDCM	0	81	92
PL-CN111-COB-4300-865-40D-G2	37°	0.3163	0.3327	2SDCM	10	82	93
PL-CN111-COB-4300-927-40D-G2	37°	0.461	0.4146	2SDCM	50	90	98
PL-CN111-COB-4300-930-40D-G2	37°	0.437	0.4075	2SDCM	50	89	97
PL-CN111-COB-4300-935-40D-G2	37°	0.4105	0.3962	2SDCM	50	89	99
PL-CN111-COB-4300-940-40D-G2	37°	0.385	0.3842	2SDCM	5	88	97
PL-CN111-COB-4300-930UW-40D-G2	37°	0.4252	0.3905	2SDCM	50	89	98
PL-CN111-COB-4300-935UW-40D-G2	37°	0.4012	0.3805	2SDCM	50	89	98
PL-CN111-COB-4300-830-60D-G2	55°	0.437	0.4075	2SDCM	10	83	94
PL-CN111-COB-4300-840-60D-G2	55°	0.385	0.3842	2SDCM	0	81	92
PL-CN111-COB-4300-865-60D-G2	55°	0.3163	0.3327	2SDCM	10	82	93
PL-CN111-COB-4300-927-60D-G2	55°	0.461	0.4146	2SDCM	50	90	98

PL-CN111-COB-4300-930-60D-G2	55°	0.437	0.4075	2SDCM	50	89	97
PL-CN111-COB-4300-935-60D-G2	55°	0.4105	0.3962	2SDCM	50	89	99
PL-CN111-COB-4300-940-60D-G2	55°	0.385	0.3842	2SDCM	50	88	97
PL-CN111-COB-4300-930UW-60D-G2	55°	0.4252	0.3905	2SDCM	50	89	98
PL-CN111-COB-4300-935UW-60D-G2	55°	0.4012	0.3805	2SDCM	50	89	98

1. Nominal performance at High Output mode is measured with steady state 700mA for PL-CN111-COB-2800 and 1050mA for PL-CN111-COB-4300
2. Tolerance of measurements: R9 ±3; TM-30 Rf and Rg ±3; Chromaticity Coordinates ±0.005

Table 4. Electrical characteristics, Tj=25°C

Product name	Forward voltage (V)			Typ. power (W)
	Min	Typ	Max	
PL-CN111-COB-2800-xxx	32.9	36.2	40.7	25.3
PL-CN111-COB-4300-xxx	31.8	35	39.7	36.7

1. Nominal performance at High Output mode is measured with steady state 700mA for PL-CN111-COB-2800 and 1050mA for PL-CN111-COB-4300

Thermal Performance

Table 5.1. PL-CN111-COB-2800-xxx

Drive current	Orientation	Nominal (performance)		Lifetime (L70B50 50khrs)		Max (safe operation limit)	
		Ta	Tc	Ta	Tc	Ta	Tc
700mA (HO mode)	Downward	25	65	40	80	50	90
500mA (HE mode)	Downward	25	55	55	85	60	90
	Upward	25	55	55	85	60	90

Table 5.2. PL-CN111-COB-4300-865

Drive current	Orientation	Nominal (performance)		Lifetime (L70B50 50khrs)		Max (safe operation limit)	
		Ta	Tc	Ta	Tc	Ta	Tc
1050mA (HO mode)	Downward	25	75	30	80	50	100
700mA (HE mode)	Downward	25	60	50	85	65	100
	Upward	25	60	50	85	65	100

Table 5.3. PL-CN111-COB-4300-xxx (865 not included)

Drive current	Orientation	Nominal (performance)		Lifetime (L70B50 50khrs)		Max (safe operation limit)	
		Ta	Tc	Ta	Tc	Ta	Tc
1050mA (HO mode)	Downward	25	80	25	80	45	100
700mA (HE mode)	Downward	25	60	55	90	65	100
	Upward	25	60	55	90	65	100

1. HO mode allows only **downward** lighting to ensure thermal reliability
2. HE mode can accept **upward** lighting ONLY WHEN the Tc temperature is properly controlled within the limit in Tables 5.1, 5.2, 5.3
3. Tc should be measured with thermocouple after the module stabilizes inside certain housing during application
4. Ta is the estimated ambient temperature for reference only

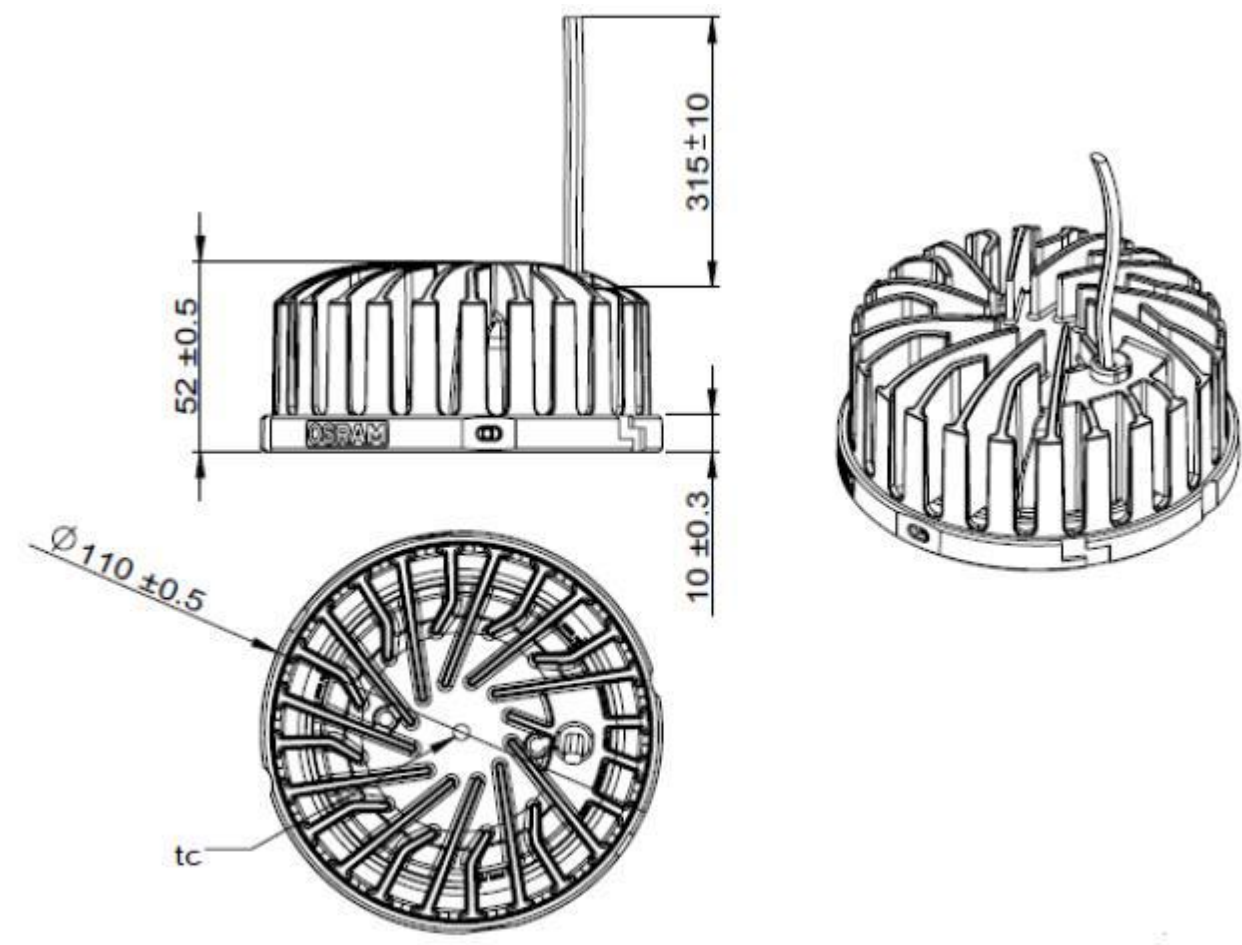
Standards

Eye security	IEC 62471
Flammability	IEC 60598-1
Protection class	EN 60529
Safety requirements	EN 62031 IEC 60598-1
EMC / Radio disturbance characteristics	EN 55015
EMC / Immunity	EN 61547
CE Mark	Yes

Safety Information

- The LED module itself and all its components may not be mechanical stressed.
- The module net weight is 385±5g.
- Assembly must not damage 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.
- The CN111-COB module needs to connect with constant current DC driver, which must have stable constant current (±5% current tolerance recommended) 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 is not within the power supply, a surge protection device should be needed additionally.
- Tc value is the maximum temperature for safety. Exceeding the tc is not recommended.
- Blue Light Hazard Classification: PL-CN111-COB-4300-865-XXX-G2 and PL-CN111-COB-2800-865-XXX-G2 are RG2 and Ethr (lx): 1.2E+03. All other modules are RG1 unlimited.
- The module is IP20 and only for indoor use.

Mechanical Dimensions



	Dimension	Tolerance	Units
Diameter	110	±0.5	mm
Height	52	±0.5	mm
Weight	385	±5	g
Wire length	315	±10	mm
Optics	PC lens		

Ordering guide

Product	EAN10	EAN40	Pcs per box
PL-CN111-COB-2800-830-15D-G2	4052899621664	4052899622296	12
PL-CN111-COB-2800-830-24D-G2	4052899621756	4052899622388	12
PL-CN111-COB-2800-830-40D-G2	4052899620995	4052899621107	12
PL-CN111-COB-2800-840-15D-G2	4052899621671	4052899622302	12

PL-CN111-COB-2800-840-24D-G2	4052899621763	4052899622395	12
PL-CN111-COB-2800-840-40D-G2	4052899621008	4052899621114	12
PL-CN111-COB-2800-865-15D-G2	4052899621688	4052899622319	12
PL-CN111-COB-2800-865-24D-G2	4052899621770	4052899622401	12
PL-CN111-COB-2800-865-40D-G2	4052899621015	4052899621121	12
PL-CN111-COB-2800-927-15D-G2	4052899621695	4052899622326	12
PL-CN111-COB-2800-927-24D-G2	4052899621787	4052899622418	12
PL-CN111-COB-2800-927-40D-G2	4052899621022	4052899621138	12
PL-CN111-COB-2800-930-15D-G2	4052899621701	4052899622333	12
PL-CN111-COB-2800-930-24D-G2	4052899621794	4052899622425	12
PL-CN111-COB-2800-930-40D-G2	4052899621039	4052899621145	12
PL-CN111-COB-2800-930UW-15D-G2	4052899621732	4052899622364	12
PL-CN111-COB-2800-930UW-24D-G2	4052899620971	4052899621084	12
PL-CN111-COB-2800-930UW-40D-G2	4052899621060	4052899621176	12
PL-CN111-COB-2800-935-15D-G2	4052899621718	4052899622340	12
PL-CN111-COB-2800-935-24D-G2	4052899621800	4052899622432	12
PL-CN111-COB-2800-935-40D-G2	4052899621046	4052899621152	12
PL-CN111-COB-2800-935UW-15D-G2	4052899621749	4052899622371	12
PL-CN111-COB-2800-935UW-24D-G2	4052899620988	4052899621091	12
PL-CN111-COB-2800-935UW-40D-G2	4052899621077	4052899621183	12
PL-CN111-COB-2800-940-15D-G2	4052899621725	4052899622357	12
PL-CN111-COB-2800-940-24D-G2	4052899621817	4052899622449	12
PL-CN111-COB-2800-940-40D-G2	4052899621053	4052899621169	12
PL-CN111-COB-4300-830-24D-G2	4052899621398	4052899622029	12
PL-CN111-COB-4300-830-40D-G2	4052899621480	4052899622111	12
PL-CN111-COB-4300-830-60D-G2	4052899621572	4052899622203	12
PL-CN111-COB-4300-840-24D-G2	4052899621404	4052899622036	12
PL-CN111-COB-4300-840-40D-G2	4052899621497	4052899622128	12
PL-CN111-COB-4300-840-60D-G2	4052899621589	4052899622210	12
PL-CN111-COB-4300-865-24D-G2	4052899621411	4052899622043	12
PL-CN111-COB-4300-865-40D-G2	4052899621503	4052899622135	12

PL-CN111-COB-4300-865-60D-G2	4052899621596	4052899622227	12
PL-CN111-COB-4300-927-24D-G2	4052899621428	4052899622050	12
PL-CN111-COB-4300-927-40D-G2	4052899621510	4052899622142	12
PL-CN111-COB-4300-927-60D-G2	4052899621602	4052899622234	12
PL-CN111-COB-4300-930-24D-G2	4052899621435	4052899622067	12
PL-CN111-COB-4300-930-40D-G2	4052899621527	4052899622159	12
PL-CN111-COB-4300-930-60D-G2	4052899621619	4052899622241	12
PL-CN111-COB-4300-930UW-24D-G2	4052899621466	4052899622098	12
PL-CN111-COB-4300-930UW-40D-G2	4052899621558	4052899622180	12
PL-CN111-COB-4300-930UW-60D-G2	4052899621640	4052899622272	12
PL-CN111-COB-4300-935-24D-G2	4052899621442	4052899622074	12
PL-CN111-COB-4300-935-40D-G2	4052899621534	4052899622166	12
PL-CN111-COB-4300-935-60D-G2	4052899621626	4052899622258	12
PL-CN111-COB-4300-935UW-24D-G2	4052899621473	4052899622104	12
PL-CN111-COB-4300-935UW-40D-G2	4052899621565	4052899622197	12
PL-CN111-COB-4300-935UW-60D-G2	4052899621657	4052899622289	12
PL-CN111-COB-4300-940-24D-G2	4052899621459	4052899622081	12
PL-CN111-COB-4300-940-40D-G2	4052899621541	4052899622173	12
PL-CN111-COB-4300-940-60D-G2	4052899621633	4052899622265	12

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