

CORE Mini G2 COB Module

Product Specification



Product Description

CORE Mini G2 delivers high efficiency and high quality of Light and cost effective solution for spot and downlight. Flexible holder options maximize luminaire design freedom.

Benefits

- High efficiency and cost effective
- Flexible lumen output selection from 500 to 4000lm
- Separable COB and holder to improve assembly flexibility
- System approach (COB + Holder + Driver)
- Industrial standard package size to shorten design lead time

Features

- Color consistency < 3SDCM
- Max. current > 2 x nominal current
- Luminous efficacy up to 129 lm/W
- High density models available
- 50000 hours lifetime

Applications

- Retail, shop, restaurant, hospitality
- Gallery and museum

Table 1. Product Performance, T_j = 85°C

Product name	Nominal CCT (K)	Min CRI	Flux Output (lm)		Typical Efficacy (lm/W)	Test Current (mA)	Nominal Power (W)	Max Power (W)	LES (mm)
			Min	Typ					
CORE-MINI-G2-500-927-L06	2700	90	363	395	116	100	3.4	13.3	6
CORE-MINI-G2-500-930-L06	3000	90	373	405	119	100	3.4	13.3	6
CORE-MINI-G2-500-940-L06	4000	90	391	425	125	100	3.4	13.3	6
CORE-MINI-G2-500-9530-L06	3000	95	TBD	TBD	TBD	100	3.4	13.3	6
CORE-MINI-G2-500-9540-L06	4000	95	TBD	TBD	TBD	100	3.4	13.3	6
CORE-MINI-G2-1000HD-927-L09	2700	90	699	760	112	200	6.8	17.1	6
CORE-MINI-G2-1000HD-930-L09	3000	90	718	780	115	200	6.8	17.1	6
CORE-MINI-G2-1000HD-940-L09	4000	90	759	825	121	200	6.8	17.1	6
CORE-MINI-G2-1000HD-9530-L09	3000	95	TBD	TBD	TBD	200	6.8	17.1	6
CORE-MINI-G2-1000HD-9540-L09	4000	95	TBD	TBD	TBD	200	6.8	17.1	6
CORE-MINI-G2-1000-927-L09	2700	90	745	810	119	200	6.8	17.1	8.5
CORE-MINI-G2-1000-930-L09	3000	90	764	830	122	200	6.8	17.1	8.5
CORE-MINI-G2-1000-940-L09	4000	90	810	880	129	200	6.8	17.1	8.5
CORE-MINI-G2-1000-9530-L09	3000	95	TBD	TBD	TBD	200	6.8	17.1	8.5
CORE-MINI-G2-1000-9540-L09	4000	95	TBD	TBD	TBD	200	6.8	17.1	8.5
CORE-MINI-G2-1500-927-L09	2700	90	1086	1180	116	300	10.2	26.6	8.5
CORE-MINI-G2-1500-930-L09	3000	90	1113	1210	119	300	10.2	26.6	8.5

CORE-MINI-G2-1500-940-L09	4000	90	1187	1290	126	300	10.2	26.6	8.5
CORE-MINI-G2-1500-9530-L09	3000	95	TBD	TBD	TBD	300	10.2	26.6	8.5
CORE-MINI-G2-1500-9540-L09	4000	95	TBD	TBD	TBD	300	10.2	26.6	8.5
CORE-MINI-G2-2000HD-927-L09	2700	90	1380	1500	110	450	13.6	34.2	8.5
CORE-MINI-G2-2000HD-930-L09	3000	90	1408	1530	113	450	13.6	34.2	8.5
CORE-MINI-G2-2000HD-940-L09	4000	90	1500	1630	120	450	13.6	34.2	8.5
CORE-MINI-G2-2000HD-9530-L09	3000	95	TBD	TBD	TBD	450	13.6	34.2	8.5
CORE-MINI-G2-2000HD-9540-L09	4000	95	TBD	TBD	TBD	450	13.6	34.2	8.5
CORE-MINI-G2-2000-927-L12	2700	90	1518	1650	121	450	13.6	34.2	12
CORE-MINI-G2-2000-930-L12	3000	90	1546	1680	124	450	13.6	34.2	12
CORE-MINI-G2-2000-935-L12	3500	90	1564	1700	125	450	13.6	34.2	12
CORE-MINI-G2-2000-940-L12	4000	90	1638	1780	131	450	13.6	34.2	12
CORE-MINI-G2-2000-950-L12	5000	90	1638	1780	131	450	13.6	34.2	12
CORE-MINI-G2-2000-930UW-L12	3000UW	90	1472	1600	118	450	13.6	34.2	12
CORE-MINI-G2-2000-935UW-L12	3500UW	90	1490	1620	119	450	13.6	34.2	12
CORE-MINI-G2-2000-9530-L12	3000	95	TBD	TBD	TBD	450	13.6	34.2	12
CORE-MINI-G2-2000-9540-L12	4000	95	TBD	TBD	TBD	450	13.6	34.2	12
CORE-MINI-G2-3000-927-L12	2700	90	1859	2021	119	500	17.0	41.8	12
CORE-MINI-G2-3000-930-L12	3000	90	1905	2071	122	500	17.0	41.8	12
CORE-MINI-G2-3000-935-L12	3500	90	1924	2091	123	500	17.0	41.8	12
CORE-MINI-G2-3000-940-L12	4000	90	2016	2191	129	500	17.0	41.8	12
CORE-MINI-G2-3000-950-L12	5000	90	2016	2191	129	500	17.0	41.8	12
CORE-MINI-G2-3000-930UW-L12	3000UW	90	1766	1920	113	500	17.0	41.8	12
CORE-MINI-G2-3000-935UW-L12	3500UW	90	1785	1940	114	500	17.0	41.8	12
CORE-MINI-G2-3000-9530-L12	3000	95	TBD	TBD	TBD	500	17.0	41.8	12
CORE-MINI-G2-3000-9540-L12	4000	95	TBD	TBD	TBD	500	17.0	41.8	12
CORE-MINI-G2-4000-930-L14	3000	90	3036	3300	121	800	27.2	60.8	14
CORE-MINI-G2-4000-940-L14	4000	90	3211	3490	128	800	27.2	60.8	14
CORE-MINI-G2-4000-950-L14	5000	90	3211	3490	128	800	27.2	60.8	14

1. Nominal performance is measured with pulse current at Tj = 85°C
2. Tolerance of measurements for the luminous flux, efficacy, CRI and CCT is ±5%
3. LES is the diameter of effective light-emitting area
4. Maximal power is defined at Max rating current (Table. 4) and the Tc should be maintained under the Max Tc 105°C

Table 2. Optical Characteristics, Tj = 85°C

Product Name	Nominal CCT (K)	CRI (Ra)		Color Coordinate		Color Consistency	R9	IES TM30-15	
		Min	Typ	CIEx	CIEy			Rf	Rg
CORE-MINI-G2-xxx-927-xxx	2700	90	92	0.4578	0.4101	3SDCM	60	TBD	TBD
CORE-MINI-G2-xxx-930-xxx	3000	90	92	0.4338	0.4030	3SDCM	60	TBD	TBD
CORE-MINI-G2-xxx-935-xxx	3500	90	92	0.4073	0.3917	3SDCM	60	TBD	TBD
CORE-MINI-G2-xxx-940-xxx	4000	90	92	0.3818	0.3797	3SDCM	60	TBD	TBD
CORE-MINI-G2-xxx-950-xxx	5000	90	92	0.3447	0.3553	3SDCM	60	TBD	TBD
CORE-MINI-G2-xxx-930UW-xxx	3000	90	92	0.422	0.386	3SDCM	60	TBD	TBD
CORE-MINI-G2-xxx-935UW-xxx	3500	90	92	0.398	0.376	3SDCM	60	TBD	TBD
CORE-MINI-G2-xxx-9530-xxx	3000	95	96	0.4338	0.4030	3SDCM	TBD	TBD	TBD
CORE-MINI-G2-xxx-9540-xxx	4000	95	96	0.3818	0.3797	3SDCM	TBD	TBD	TBD

1. Nominal performance is measured with pulse current at Tj = 85°C
2. Tolerance of measurements for R9 is ±3, TM-30 Rf and Rg is ±3, Chromaticity Coordinate is ±0.005

Table 3. Electrical Characteristics, T_j = 85°C

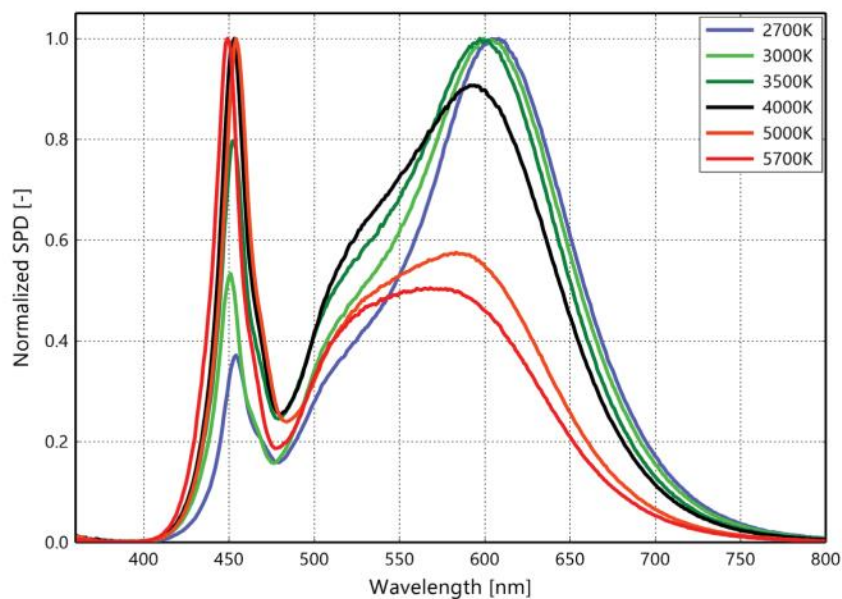
Product name	Forward Voltage(V)			Typical Power (W)
	Min	Typ	Max	
CORE-MINI-G2-500-xxx-L06	32	34	38	3.4
CORE-MINI-G2-1000HD-xxx-L06	32	34	38	6.8
CORE-MINI-G2-1000-xxx-L09	32	34	38	6.8
CORE-MINI-G2-1500-xxx-L09	32	34	38	10.2
CORE-MINI-G2-2000HD-xxx-L09	32	34	38	13.6
CORE-MINI-G2-2000-xxx-L12	32	34	38	13.6
CORE-MINI-G2-3000-xxx-L12	32	34	38	17
CORE-MINI-G2-4000-xxx-L14	32	34	38	27.2

1. Nominal performance is measured with pulse current at T_j = 85°C

Table 4. Absolute Maximum Ratings

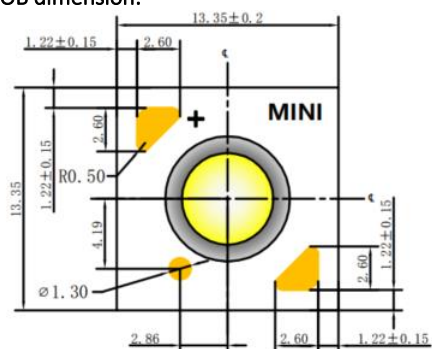
Product name	DC Forward Current (mA)	Case Temperature (T _c)	Operating Temperature (T _a)	ESD Classification	Storage Temperature
CORE-MINI-G2-500-xxx-L06	350	105°C	-40 to 60°C	2 kV	-40 to 80°C
CORE-MINI-G2-1000HD-xxx-L06	450	105°C	-40 to 60°C	2 kV	-40 to 80°C
CORE-MINI-G2-1000-xxx-L09	450	105°C	-40 to 60°C	2 kV	-40 to 80°C
CORE-MINI-G2-1500-xxx-L09	700	105°C	-40 to 60°C	2 kV	-40 to 80°C
CORE-MINI-G2-2000HD-xxx-L09	900	105°C	-40 to 60°C	2 kV	-40 to 80°C
CORE-MINI-G2-2000-xxx-L12	900	105°C	-40 to 60°C	2 kV	-40 to 80°C
CORE-MINI-G2-3000-xxx-L12	1100	105°C	-40 to 60°C	2 kV	-40 to 80°C
CORE-MINI-G2-4000-xxx-L14	1800	105°C	-40 to 60°C	2 kV	-40 to 80°C

Typical normalized power vs. wavelength

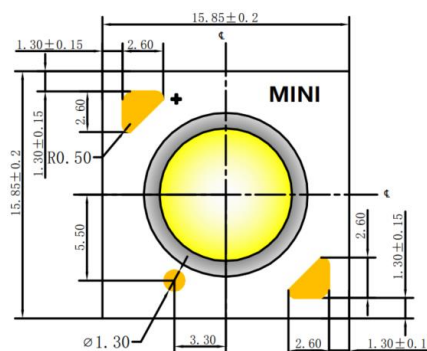


Mechanical Dimensions

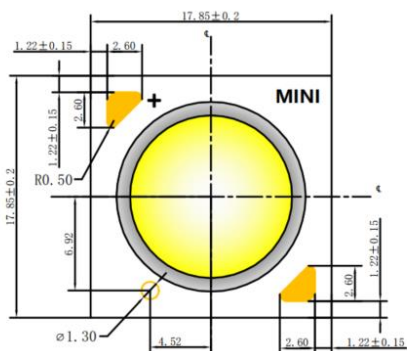
COB dimension:



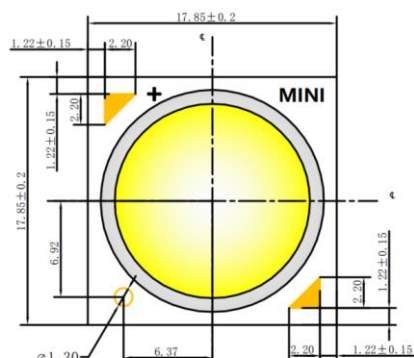
CORE-MINI-G2-500-xxx-L06
CORE-MINI-G2-1000HD-xxx-L06



CORE-MINI-G2-1000-xxx-L09
CORE-MINI-G2-1500-xxx-L09
CORE-MINI-G2-2000HD-xxx-L09



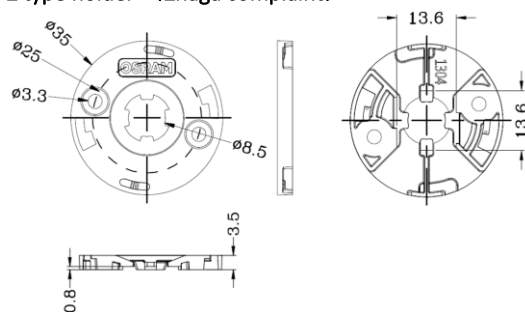
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CORE-MINI-G2-3000-xxx-L12



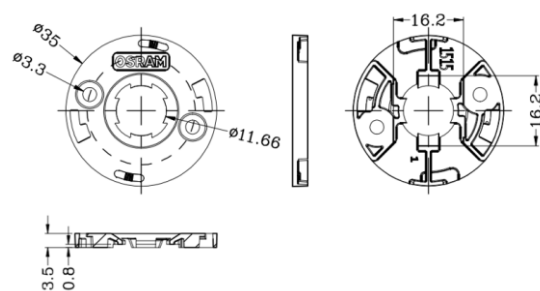
CORE-MINI-G2-4000-xxx-L14

Holder dimension:

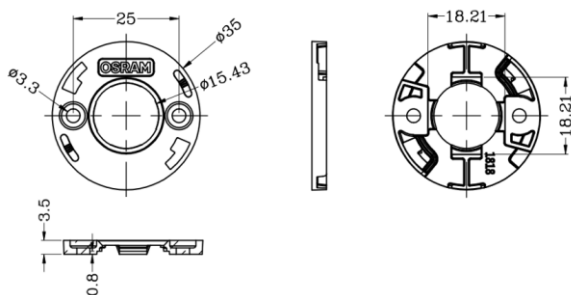
Z type holder (Zhaga compliant)



CORE-MINI-G2-500-xxx-L06-Z
CORE-MINI-G2-1000HD-xxx-L06-Z



CORE-MINI-G2-1000-xxx-L09-Z
CORE-MINI-G2-1500-xxx-L09-Z
CORE-MINI-G2-2000HD-xxx-L09-Z

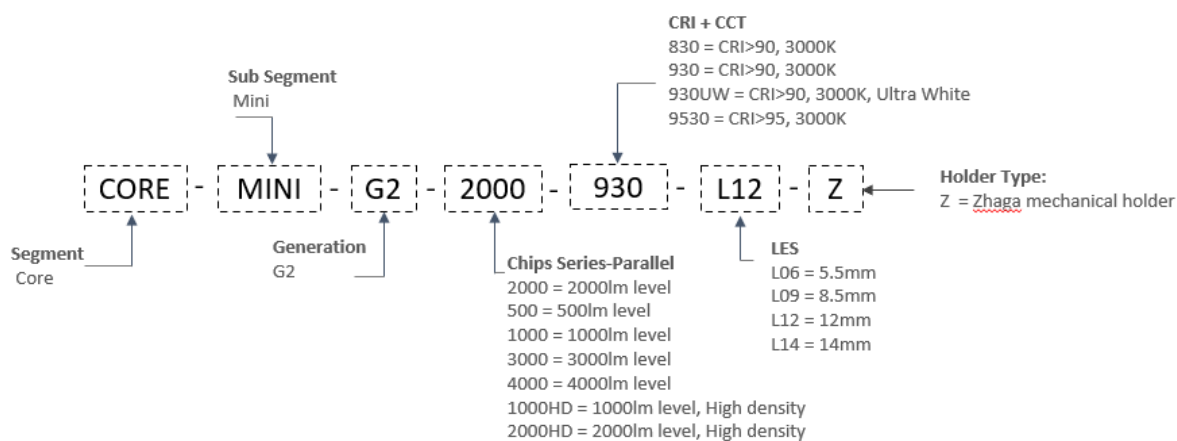


CORE-MINI-G2-2000-xxx-L12-Z
 CORE-MINI-G2-3000-xxx-L12-Z
 CORE-MINI-G2-4000-xxx-L14-Z

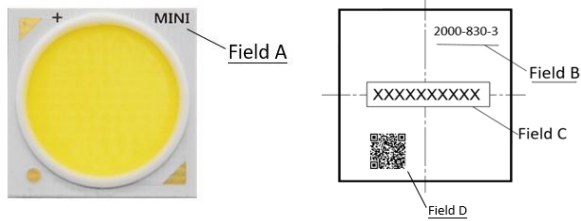
Color Bin Definition

CCT(K)	Color space	CIE x	CIE y	θ	a	b
2700	3SCDM	0.4578	0.4101	53.70	0.0081	0.0042
3000	3SCDM	0.4338	0.4030	53.22	0.0083	0.0041
3500	3SCDM	0.4073	0.3917	54.00	0.0093	0.0041
4000	3SCDM	0.3818	0.3797	53.72	0.0094	0.0040
5000	3SCDM	0.3447	0.3553	59.62	0.0082	0.0035
3000UW	3SCDM	0.422	0.386	TBD	TBD	TBD
3500UW	3SCDM	0.398	0.376	TBD	TBD	TBD

Product Code Nomenclature



Marking Format Definition on Substrate



Field A	Field B	Field C	Field D
CORE MINI logo	Model Name	Date Code / Lot Number	QR Code

Filed B: Package Name Format (Back Side) : PPPP - AAA - D

PPPP	AAA	D
COB Package	CCT/CRI	Color Consistency
500	500lm level	927 CRI 90, 2700K
1000	1000lm level	930 CRI 90, 3000K
1000HD	1000lm level, High Density	935 CRI 90, 3500K
1500	1500lm level	940 CRI 90, 4000K
2000	2000lm level	950 CRI 90, 5000K
2000HD	2000lm level, High Density	930UW CRI 90, 3000K, Ultra White
3000	3000lm level	935UW CRI 90, 3500K Ultra White
4000	4000lm level	9530 CRI 95, 3000K
		9540 CRI 95, 4000K

Ordering Guide

Module (COB + Holder)

Short text	EAN10	Pcs per Box
CORE-MINI-G2-500-927-L06-Z	4055462441096	400 (2 bags)
CORE-MINI-G2-500-930-L06-Z	4055462441119	400 (2 bags)
CORE-MINI-G2-500-940-L06-Z	4055462441133	400 (2 bags)
CORE-MINI-G2-500-9530-L06-Z	4055462441157	400 (2 bags)
CORE-MINI-G2-500-9540-L06-Z	4055462441171	400 (2 bags)
CORE-MINI-G2-1000HD-927-L09-Z	4055462442338	400 (2 bags)
CORE-MINI-G2-1000HD-930-L09-Z	4055462442352	400 (2 bags)
CORE-MINI-G2-1000HD-940-L09-Z	4055462442499	400 (2 bags)
CORE-MINI-G2-1000HD-9530-L09-Z	4055462442536	400 (2 bags)
CORE-MINI-G2-1000HD-9540-L09-Z	4055462442574	400 (2 bags)
CORE-MINI-G2-1000-927-L09-Z	4055462441195	300 (2 bags)
CORE-MINI-G2-1000-930-L09-Z	4055462441218	300 (2 bags)
CORE-MINI-G2-1000-940-L09-Z	4055462441232	300 (2 bags)
CORE-MINI-G2-1000-9530-L09-Z	4055462441256	300 (2 bags)
CORE-MINI-G2-1000-9540-L09-Z	4055462441270	300 (2 bags)
CORE-MINI-G2-1500-927-L09-Z	4055462441294	300 (2 bags)
CORE-MINI-G2-1500-930-L09-Z	4055462441317	300 (2 bags)
CORE-MINI-G2-1500-940-L09-Z	4055462441331	300 (2 bags)

CORE-MINI-G2-1500-9530-L09-Z	4055462441355	300 (2 bags)
CORE-MINI-G2-1500-9540-L09-Z	4055462441379	300 (2 bags)
CORE-MINI-G2-2000HD-927-L09-Z	4055462442611	300 (2 bags)
CORE-MINI-G2-2000HD-930-L09-Z	4055462442635	300 (2 bags)
CORE-MINI-G2-2000HD-940-L09-Z	4055462442659	300 (2 bags)
CORE-MINI-G2-2000HD-9530-L09-Z	4055462442673	300 (2 bags)
CORE-MINI-G2-2000HD-9540-L09-Z	4055462442697	300 (2 bags)
CORE-MINI-G2-2000-927-L12-Z	4055462441393	300 (2 bags)
CORE-MINI-G2-2000-930-L12-Z	4055462441416	300 (2 bags)
CORE-MINI-G2-2000-935-L12-Z	4055462441430	300 (2 bags)
CORE-MINI-G2-2000-940-L12-Z	4055462441454	300 (2 bags)
CORE-MINI-G2-2000-950-L12-Z	4055462441478	300 (2 bags)
CORE-MINI-G2-2000-930UW-L12-Z	4055462441539	300 (2 bags)
CORE-MINI-G2-2000-935UW-L12-Z	4055462441553	300 (2 bags)
CORE-MINI-G2-2000-9530-L12-Z	4055462441492	300 (2 bags)
CORE-MINI-G2-2000-9540-L12-Z	4055462441515	300 (2 bags)
CORE-MINI-G2-3000-927-L12-Z	4055462442031	300 (2 bags)
CORE-MINI-G2-3000-930-L12-Z	4055462442055	300 (2 bags)
CORE-MINI-G2-3000-935-L12-Z	4055462442079	300 (2 bags)
CORE-MINI-G2-3000-940-L12-Z	4055462442093	300 (2 bags)
CORE-MINI-G2-3000-950-L12-Z	4055462442116	300 (2 bags)
CORE-MINI-G2-3000-930UW-L12-Z	4055462442178	300 (2 bags)
CORE-MINI-G2-3000-935UW-L12-Z	4055462442192	300 (2 bags)
CORE-MINI-G2-3000-9530-L12-Z	4055462442130	300 (2 bags)
CORE-MINI-G2-3000-9540-L12-Z	4055462442154	300 (2 bags)
CORE-MINI-G2-4000-930-L14-Z	4055462442239	300 (2 bags)
CORE-MINI-G2-4000-940-L14-Z	4055462442253	300 (2 bags)
CORE-MINI-G2-4000-950-L14-Z	4055462442277	300 (2 bags)