



+7 (499) 647-80-74

zakaz@citi-el.ru

www.citi-el.ru

LED for General Lighting 2020

Contacts

Sales Offices

Europe

C-E (DEUTSCHLAND) GMBH. — Tel : +49-69-2992-480

North America

CECOL, INC. — Tel : +1-847-619-6700

Japan

Headquarters — Tel : +81-555-23-4121

TOKYO OFFICE — Tel : +81-3-3493-2744

KANSAI OFFICE — Tel : +81-6-6886-2402

Asia/ Hong Kong/ China (South China)

C-E (HONG KONG) LTD. — Tel : +852-2793-0613

China (East China/ North China)

CITIZEN ELECTRONICS (CHINA) CO., LTD. — Tel : +86-21-6295-5510

Beijing Branch Office — Tel : +86-10-5737-9733

Shenzhen Office — Tel : +86-755-3293-0988

Other areas — cej-inquiry@ml.citizen.co.jp

Distributors http://ce.citizen.co.jp/productse/sales_network.php

Requests / Inquiries E-mail : cej-inquiry@ml.citizen.co.jp

• Please visit our website for more information. <http://ce.citizen.co.jp/e/index.php>

CITILED is a trademark or a registered trademark of Citizen Electronics Co., Ltd. Japan.

These LEDs are intended to be used for general electronic equipment (such as office equipment, communication equipment, measurement instruments, and home appliances). Except as otherwise specified in specifications, we will not guarantee any application suitability for goods that require special quality and reliability (e.g. airplanes, spaceships, submarine repeaters, atomic energy control systems, automobiles, traffic control equipment, life-support systems, and safety devices), of which failure and malfunction may threaten human life or health directly. Please contact our sales team in advance if you consider using the LEDs for goods like those described above.

When adopting the products for mass production, please exchange formal specifications with us.



CITIZEN ELECTRONICS CO., LTD. JAPAN

1-23-1, Kamikurechi, Fujiyoshida-shi, Yamanashi-ken 403-0001, Japan Tel:+81-555-23-4121

<http://ce.citizen.co.jp/e/>

Ref.CE-0644P-202002

CITILED®
The Light Engine

4 Lighting Solutions



High Efficacy and 2-step ellipse Standard

CITILED COB Series Ver.8

By optimizing each production process, the chromaticity range has achieved 2-step ellipse as a standard specification.

The 2-step ellipse color definition at $T_j=85C$ ensures uniform optical performance in various applications.

The new model shares the same outline design and LES size as the traditional Standard Type (Ver.1 ~ 6).



Point Source

CITILED COB Series
High Intensity Type Ver.3

High Intensity Type Ver.3 has been developed as a high performance product with high luminous flux through the full use of the Citizen Electronics' packaging techniques. We have added the new LES size of $\phi 4.2mm$ and $\phi 3.3mm$ to our product lineup, which makes it possible to realize narrower light distribution than before and as a result contribute to the downsizing of optical parts. High Intensity Type Ver.3 offers an opportunity to develop compact and high performance truck light, downlight, lamp and other lighting products due to its high performance.



High Color Quality

CITILED VIVID Series

Much more vividness for LED lighting. In addition to the high color rendering LEDs aim at making the color of objects truer, the demands on high chromatic LEDs targeted for making objects more vivid are increasing. **For more brilliant & attractive display.** These new products are the most suitable for the applications that emphasize the appearance of commercial products like store lighting and lighting for signboards. **Spectrum tuning technology.** Citizen Electronics has developed high chromatic LEDs that enable the vivid appearance of objects by selecting LED dice or phosphor and tuning the light emitting spectrum.



Tunable White

CITILED Tunable White

Tunable White is a module PKG product that achieves thin, small size and LES small size by using ultra-small CSP.

By using the two-color LED, it is possible to freely change the luminous flux and color tone, so it is possible to produce light according to the scene.

Contents

High Efficacy & 2-step ellipse Standard P 2

Point Source P 8

High Color Quality P10

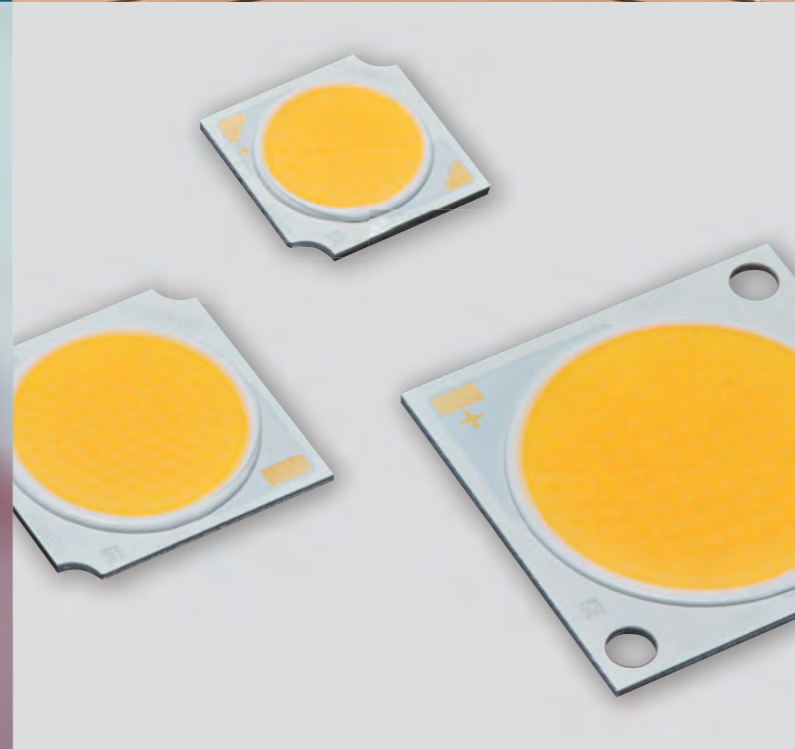
Tunable White P14

Amber color P16

Blue color P16

High Efficacy and 2-step ellipse Standard

High efficacy LED solutions make a great contribution to the high performance luminaires and luminaire design flexibility.

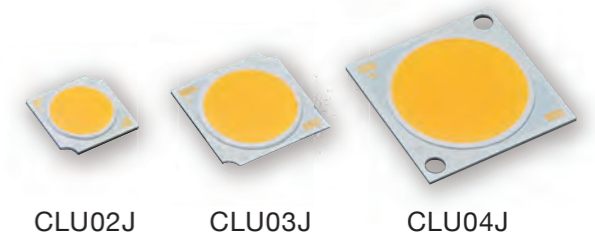


- Pursuit of color Quality
- High Efficacy
- 2-step Standardized for Ra80, 90, 97 series / 2,700K to 6,500K



CITILED COB Series Ver.8

By optimizing each production process, the chromaticity range has achieved 2-step ellipse as a standard specification. The 2-step ellipse color definition at $T_j=85^\circ\text{C}$ ensures uniform optical performance in various applications. The new model shares the same outline design and LES size as the traditional Standard Type (Ver.1~6).



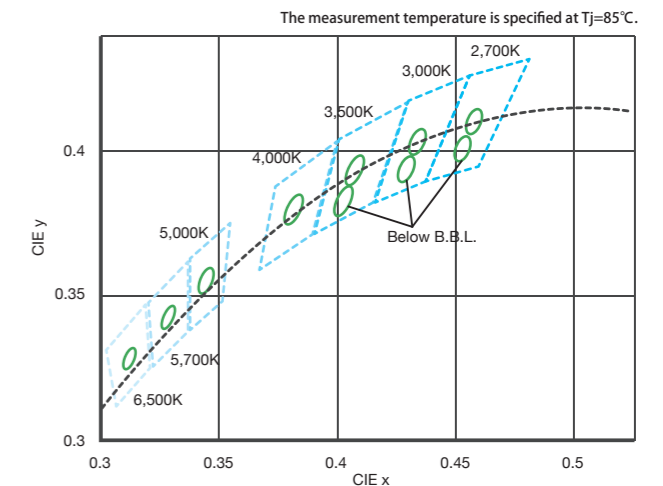
High Efficacy

By improved LED mounting and heat dissipation technology, higher efficacy than Ver.6 is realized. Realizing energy savings with higher efficacy COBs, while creating environmentally friendly products.



2-step Standardized for Ra80, 90, 97 series / 2,700K to 6,500K.

CITILED COB Ver.8 has realized a narrower color chromaticity. 2-step, about a half of the area ratio compared to the conventional 3-step chromaticity range, has been realized with all colors of Ra80, 90 and 97 series. It could be an effective solution for lighting environments that require strict color homogeneity.



Explanatory notes
 ● 2-step ellipse*
 ■ ANSI 7-step quadrangle
 * 2-step ellipse is based on ANSI 7-step quadrangle.

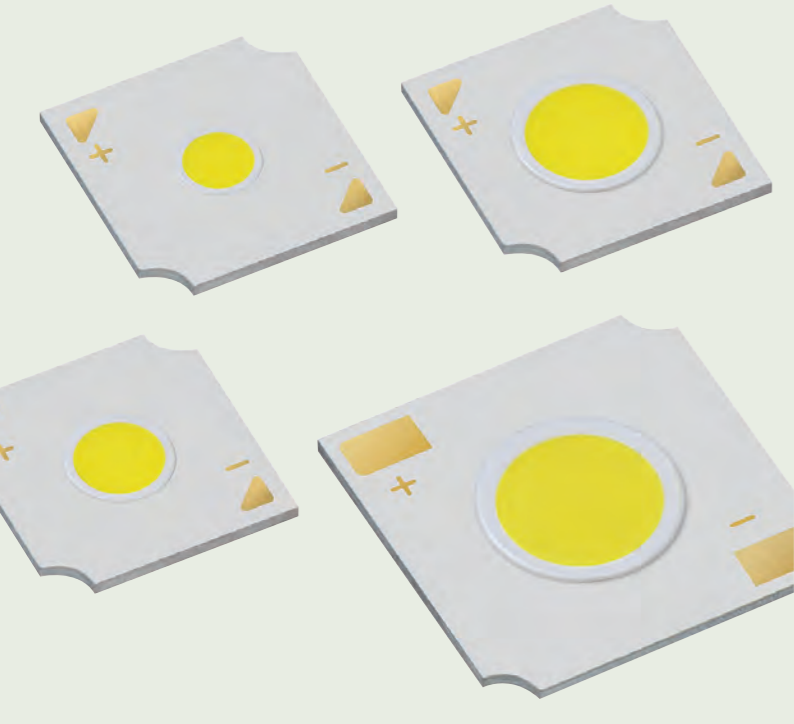
Color Variation

Package	Die Configuration	80 CRI Min.						90 CRI Min.					Below B.B.L. 90 CRI Min.			Super High CRI 97 CRI Typ.			
		2,700K	3,000K	3,500K	4,000K	5,000K	5,700K	6,500K	2,700K	3,000K	3,500K	4,000K	5,700K	2,700K	3,000K	3,500K	2,700K	3,000K	4,000K
 CLU02J (LES $\phi 9.7\text{mm}$)	1201C9	*	*	*	*	*		*	*	*	*	*					*	*	*
	1202C9	*	*	*	*	*		*	*	*	*	*					*	*	*
	1203C9	●	●	●	●	*		*	●	●	●	●		*	*	*	*	*	*
	1204C9	●	●	●	●	●		*	●	●	●	●					*	*	*
 CLU03J (LES $\phi 14.5\text{mm}$)	1205C9	●	●	●	●	●		*	●	●	●	●		*	*	*	*	*	*
	1206C9	●	●	●	●	*		*	●	●	●	●		●	●	●	●	●	●
	1208C9	●	●	●	●	●	*	*	●	●	●	●	*	*	*	*	*	*	*
	1210C9	●	●	●	●	*	*	*	●	●	●	●	*						
 CLU04J (LES $\phi 22.0\text{mm}$)	1211C9	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	1212C9	●	●	●	●	●	*	*	●	●	●	●	*	●	●	●	●	●	●
	1812C9	●	●	●	●	●	*	*	●	●	●	●	*				*	*	*
	1818C9	●	●	●	●	●	*	*	●	●	●	●	*						

Note 1: "●" indicates that it is a standard product.
 Note 2: "★" indicates that it is a non-standard product. Please contact our sales team if you are considering ordering the products.
 Note 3: Product codes and specifications in this catalogue are subject to change without notice for improvement, and products may be discontinued. We will not be held liable for any damages or costs caused by such change or discontinuation. Please ask our sales team for details of the release date and the latest specifications of each product.

Point Source

Point light source makes light beam control easier with optics and downsize luminaires.



- The world's smallest LES COB (φ3.3mm) *
- Easy optical control
- Extremely high light output with narrower LES
- Contributes to downsizing of luminaires

* According to our investigation as of August 2019.

CITILED COB Series High Intensity Type Ver.3

High Intensity Type Ver.3 has been developed as a high performance product with high luminous flux through the full use of the Citizen Electronics' packaging techniques. We have added the new LES size of φ4.2mm and φ3.3mm to our product lineup, which makes it possible to realize narrower light distribution than before and as a result contribute to the downsizing of optical parts.



Color Variation

Package	Die Configuration	80 CRI Min.				90 CRI Min.				Super High CRI 97 CRI Typ.			
		2,700K	3,000K	3,500K	4,000K	2,700K	3,000K	3,500K	4,000K	2,700K	3,000K	3,500K	4,000K
CLU7B2	0701C4	●	●	●	●	●	●	●	●	●	●	●	●
CLU7A2	1201C9	●	●	●	●	●	●	●	●	●	●	●	●
	0403C9	●	●	●	●	●	●	●	●	●	●	●	●
CLU702	1202C9	●	●	●	●	●	●	●	●	●	●	●	●
	1204C9	●	●	●	●	●	●	●	●	●	●	●	●

Note 1: "●" indicates that it is a standard product.

Product List

(Tj = 85°C)

Package	Product code	Electro-optical Characteristics									Absolute Maximum Rating
		CRI	CCT	Forward current (mA)	Voltage Typ. (V)	Input power Typ. (W)	Luminous flux Typ. (lm)	Efficacy Typ. (lm/W)	Thermal resistance Rj-c (°C/W)	Forward Current (mA)	
CLU7B2 (LES φ3.3mm)	CLU7B2-0701C4-273M2R1	80min	2700K	175	21.3	3.7	431	116	5.4	300	
	CLU7B2-0701C4-303M2R1	80min	3000K	175	21.3	3.7	451	121	5.4	300	
	CLU7B2-0701C4-353M2R1	80min	3500K	175	21.3	3.7	470	126	5.4	300	
	CLU7B2-0701C4-403M2R1	80min	4000K	175	21.3	3.7	477	128	5.4	300	
	CLU7B2-0701C4-273H5R2	90min	2700K	175	21.3	3.7	368	99	5.4	300	
	CLU7B2-0701C4-303H5R2	90min	3000K	175	21.3	3.7	389	104	5.4	300	
	CLU7B2-0701C4-353H5R2	90min	3500K	175	21.3	3.7	407	109	5.4	300	
	CLU7B2-0701C4-403H5R2	90min	4000K	175	21.3	3.7	416	112	5.4	300	
	CLU7B2-0701C4-273H7R4	97typ	2700K	175	21.3	3.7	326	87	5.4	300	
	CLU7B2-0701C4-303H7R4	97typ	3000K	175	21.3	3.7	343	92	5.4	300	
	CLU7B2-0701C4-353H7R4	97typ	3500K	175	21.3	3.7	372	100	5.4	300	
	CLU7B2-0701C4-403H7R4	97typ	4000K	175	21.3	3.7	378	101	5.4	300	
CLU7A2 (LES φ4.2mm)	CLU7A2-1201C9-273M2R1	80min	2700K	175	35.6	6.2	745	120	3.0	300	
	CLU7A2-1201C9-303M2R1	80min	3000K	175	35.6	6.2	779	125	3.0	300	
	CLU7A2-1201C9-353M2R1	80min	3500K	175	35.6	6.2	799	128	3.0	300	
	CLU7A2-1201C9-403M2R1	80min	4000K	175	35.6	6.2	818	131	3.0	300	
	CLU7A2-1201C9-273H5R2	90min	2700K	175	35.6	6.2	625	100	3.0	300	
	CLU7A2-1201C9-303H5R2	90min	3000K	175	35.6	6.2	660	106	3.0	300	
	CLU7A2-1201C9-353H5R2	90min	3500K	175	35.6	6.2	707	113	3.0	300	
	CLU7A2-1201C9-403H5R2	90min	4000K	175	35.6	6.2	716	115	3.0	300	
	CLU7A2-1201C9-273H7R4	97typ	2700K	175	35.6	6.2	562	90	3.0	300	
	CLU7A2-1201C9-303H7R4	97typ	3000K	175	35.6	6.2	586	94	3.0	300	
	CLU7A2-1201C9-353H7R4	97typ	3500K	175	35.6	6.2	629	101	3.0	300	
	CLU7A2-1201C9-403H7R4	97typ	4000K	175	35.6	6.2	660	106	3.0	300	
	CLU7A2-0403C9-273M2R1	80min	2700K	525	11.9	6.2	745	120	3.0	900	
	CLU7A2-0403C9-303M2R1	80min	3000K	525	11.9	6.2	779	125	3.0	900	
	CLU7A2-0403C9-353M2R1	80min	3500K	525	11.9	6.2	799	128	3.0	900	
	CLU7A2-0403C9-403M2R1	80min	4000K	525	11.9	6.2	818	131	3.0	900	
	CLU7A2-0403C9-273H5R2	90min	2700K	525	11.9	6.2	625	100	3.0	900	
	CLU7A2-0403C9-303H5R2	90min	3000K	525	11.9	6.2	660	106	3.0	900	
	CLU7A2-0403C9-353H5R2	90min	3500K	525	11.9	6.2	707	113	3.0	900	
	CLU7A2-0403C9-403H5R2	90min	4000K	525	11.9	6.2	716	115	3.0	900	
CLU7A2-0403C9-273H7R4	97typ	2700K	525	11.9	6.2	562	90	3.0	900		
CLU7A2-0403C9-303H7R4	97typ	3000K	525	11.9	6.2	586	94	3.0	900		
CLU7A2-0403C9-353H7R4	97typ	3500K	525	11.9	6.2	629	101	3.0	900		
CLU7A2-0403C9-403H7R4	97typ	4000K	525	11.9	6.2	660	106	3.0	900		
CLU702 (LES φ6.0mm)	CLU702-1202C9-273M2R1	80min	2700K	350	35.6	12.5	1502	121	1.6	600	
	CLU702-1202C9-303M2R1	80min	3000K	350	35.6	12.5	1576	126	1.6	600	
	CLU702-1202C9-353M2R1	80min	3500K	350	35.6	12.5	1627	131	1.6	600	
	CLU702-1202C9-403M2R1	80min	4000K	350	35.6	12.5	1658	133	1.6	600	
	CLU702-1202C9-273H5R2	90min	2700K	350	35.6	12.5	1246	100	1.6	600	
	CLU702-1202C9-303H5R2	90min	3000K	350	35.6	12.5	1342	108	1.6	600	
	CLU702-1202C9-353H5R2	90min	3500K	350	35.6	12.5	1420	114	1.6	600	
	CLU702-1202C9-403H5R2	90min	4000K	350	35.6	12.5	1424	114	1.6	600	
	CLU702-1202C9-273H7R4	97typ	2700K	350	35.6	12.5	1130	91	1.6	600	
	CLU702-1202C9-303H7R4	97typ	3000K	350	35.6	12.5	1187	95	1.6	600	
	CLU702-1202C9-353H7R4	97typ	3500K	350	35.6	12.5	1274	102	1.6	600	
	CLU702-1202C9-403H7R4	97typ	4000K	350	35.6	12.5	1363	109	1.6	600	
CLU712 (LES φ8.5mm)	CLU712-1204C9-273M2R1	80min	2700K	700	35.6	24.9	3094	124	0.91	1200	
	CLU712-1204C9-303M2R1	80min	3000K	700	35.6	24.9	3196	128	0.91	1200	
	CLU712-1204C9-353M2R1	80min	3500K	700	35.6	24.9	3325	133	0.91	1200	
	CLU712-1204C9-403M2R1	80min	4000K	700	35.6	24.9	3363	135	0.91	1200	
	CLU712-1204C9-273H5R2	90min	2700K	700	35.6	24.9	2560	103	0.91	1200	
	CLU712-1204C9-303H5R2	90min	3000K	700	35.6	24.9	2728	109	0.91	1200	
	CLU712-1204C9-353H5R2	90min	3500K	700	35.6	24.9	2879	116	0.91	1200	
	CLU712-1204C9-403H5R2	90min	4000K	700	35.6	24.9	2920	117	0.91	1200	
	CLU712-1204C9-273H7R4	97typ	2700K	700	35.6	24.9	2319	93	0.91	1200	
	CLU712-1204C9-303H7R4	97typ	3000K	700	35.6	24.9	2446	98	0.91	1200	
	CLU712-1204C9-353H7R4	97typ	3500K	700	35.6	24.9	2545	102	0.91	1200	
	CLU712-1204C9-403H7R4	97typ	4000K	700	35.6	24.9	2696	108	0.91	1200	

Note 3: Product codes and specifications in this catalogue are subject to change without notice for improvement, and products may be discontinued. We will not be held liable for any damages or costs caused by such change or discontinuation. Please ask our sales team for details of the release date and the latest specifications of each product.

High Color Quality

CITILED VIVID Series provides beautiful and enriched high color quality light.



- Light that makes an illuminated object look more vivid
- High-chromatic LED that pursues more vividness
- Available in two lineups according to purpose
 - Brilliant Series which pursues reproduction of texture
 - Natural Series which makes objects look more natural while maintaining vividness

CITILED VIVID Series

Much more vividness for LED lighting.

In addition to the high color rendering LEDs aim at making the color of objects truer, the demands on high chromatic LEDs targeted for making objects more vivid are increasing.

For more brilliant & attractive display.

These new products are the most suitable for the applications that emphasize the appearance of commercial products like store lighting and lighting for signboards.

Spectrum tuning technology.

Citizen Electronics has developed high chromatic LEDs that enable the vivid appearance of objects by selecting LED dice or phosphor and tuning the light emitting spectrum.

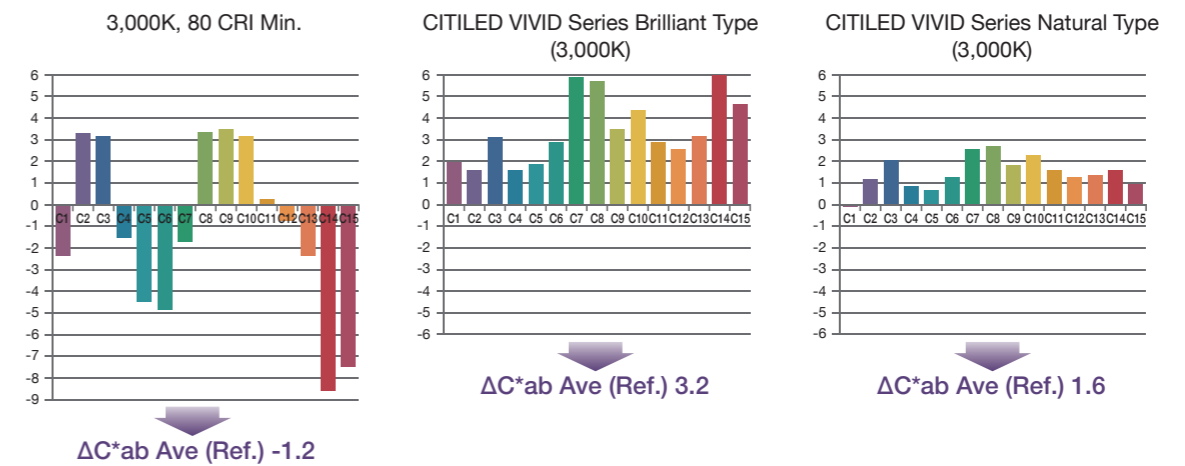


Toward more vivid and beautiful colors

They are not only bright but have a high chroma to make the original colors of the object look more vivid. At the same time the contrast between brightness and darkness is improved, enabling fine details to be expressed.



Comparison of the chroma difference



Sophisticated expression even in illumination at night

They are LEDs pursuing not only energy saving and high efficiency, but 'quality of light,' which enables an illuminated object to look more vivid. They express pale and subtle color of petals of cherry blossoms vividly and light up cherry blossoms at night more beautifully than before.



Illuminating vividly without color cast

With spectrum tuning technique, which controls light, chroma was increased to make the original colors of the object look more vivid. At the same time the contrast between brightness and darkness is improved, enabling fine details to be expressed. Lighting which makes illuminated objects look more beautiful has been realized for museums, cultural properties, stores and cosmetic counters.



Tunable White

Tunable White is a module PKG product that achieves thin, small size and LES small size by using ultra-small CSP.

By using the two-color LED, it is possible to freely change the luminous flux and color tone, so it is possible to produce light according to the scene.

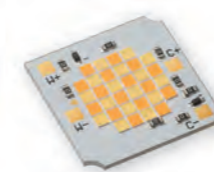


- Narrow LES module with CSPs of high-density
- Color temperature can be adjusted freely
- Extensive CCT range Warm 2,700K - Cool 6,500K
- Arrangement design of CSPs for better color homogeneity
- Covers up to 3000lm class

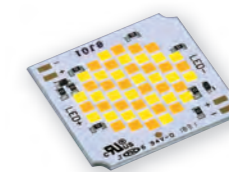
CITILED Tunable White



LCN-C01B/C04B



LCN-C02B/C05B



LCN-C03A/C06A

Color temperature can be changed according to scenes where the light is used.

For example, in a living room, Cool Color makes it easier for children to study, and Warm Color creates a comfortable atmosphere at mealtime.

In addition, color temperature can be changed from morning through night as if the natural light changes its color by time of day, so that workers can stay more comfortable in the workplace.



Product List

(Tc=25°C)

Package	Product code	Electro-optical Characteristics								Absolute Maximum Rating
		CRI	CCT	Forward current (mA)	Voltage Typ. (V)	Input power Typ.(W)	Luminous flux Typ. (lm)	Efficacy Typ. (lm/W)	Thermal resistance Rj-c(°C/W)	Forward Current (mA) *1
	LCN-C01B	80min	2700K	350	24.0	8.4	965	115	3.5	400
		80min	6500K	350	24.0	8.4	1116	133	3.5	400
	LCN-C04B	90min	2700K	350	24.0	8.4	828	99	3.5	400
		90min	6500K	350	24.0	8.4	1011	120	3.5	400
	LCN-C02B	80min	2700K	700	24.0	16.8	1929	115	2.3	800
		80min	6500K	700	24.0	16.8	2232	133	2.3	800
	LCN-C05B	90min	2700K	700	24.0	16.8	1655	99	2.3	800
90min		6500K	700	24.0	16.8	2023	120	2.3	800	
	LCN-C03A	80min	2700K	700	36.0	25.2	2894	115	1.5	800
		80min	6500K	700	36.0	25.2	3348	133	1.5	800
	LCN-C06A	90min	2700K	700	36.0	25.2	2483	99	1.5	800
90min		6500K	700	36.0	25.2	3034	120	1.5	800	

* 1 Absolute maximum of power input and Forward current are the summation of cool color & warm color, not for individual value of each input.
 Note 3: Product codes and specifications in this catalogue are subject to change without notice for improvement, and products may be discontinued. We will not be held liable for any damages or costs caused by such change or discontinuation. Please ask our sales team for details of the release date and the latest specifications of each product.

This product has sales restrictions. Please contact our sales team prior to placing your order.

CITILED Amber color COB

Replacement of High Pressure Sodium Lamps

The solution for the replacement of high pressure sodium lamps used in street lights, seaport lights and high masts.



Product List

(Tj = 85°C)

Package	Product code	Electro-optical Characteristics								Absolute Maximum Rating
		CRI	CCT	Forward current (mA)	Voltage Typ. (V)	Input power Typ.(W)	Luminous flux Typ. (lm)	Efficacy Typ. (lm/W)	Thermal resistance Rj-c(°C/W)	Forward Current (mA)
CLU038 (LES φ14.5mm)	CLU038-1208C4-22AL1K3	65typ.	2200K	720	34.6	24.9	3,495	140	0.51	1,440
	CLU038-1210C4-22AL1K3	65typ.	2200K	900	34.6	31.1	4,339	139	0.42	1,800
CLU048 (LES φ22.0mm)	CLU048-1212C4-22AL1K3	65typ.	2200K	1,080	34.6	37.4	5,422	145	0.34	2,160
	CLU048-1812C4-22AL1K3	65typ.	2200K	1,080	52.0	56.2	7,935	141	0.25	2,160
	CLU048-1818C4-22AL1K3	65typ.	2200K	1,620	52.0	84.2	11,583	138	0.17	3,240
CLU058 (LES φ32.8mm)	CLU058-1825C4-22AL1K3	65typ.	2200K	2,250	52.0	117.0	16,961	145	0.14	4,500
	CLU058-3618C4-22AL1K3	65typ.	2200K	1,620	103.9	168.3	23,421	139	0.10	3,240

Note 3: Product codes and specifications in this catalogue are subject to change without notice for improvement, and products may be discontinued. We will not be held liable for any damages or costs caused by such change or discontinuation. Please ask our sales team for details of the release date and the latest specifications of each product.

CITILED Blue color COB

High Power Blue LED

High-power blue LED suitable for various applications such as lighting for swimming pools and architectural lighting.



Product List

(Tc = 25°C)

Package	Product code	Electro-optical Characteristics								Absolute Maximum Rating
		Forward current (mA)	Voltage Typ. (V)	Input power Typ.(W)	Radiant Flux (W)		Wave Length Dominant (nm)		Thermal resistance Rj-c(°C/W)	Forward Current (mA)
					Min.	Max.	Min.	Max.		
CLU038 (LES φ14.5mm)	CLU038-1208C4-B455-XX	720	35.8	25.8	11	17	445	465	0.51	1,440
	CLU038-1210C4-B455-XX	900	35.8	32.2	13	21	445	465	0.42	1,800
CLU048 (LES φ22.0mm)	CLU048-1212C4-B455-XX	1,080	35.8	38.7	17	27	445	465	0.34	2,160
	CLU048-1812C4-B455-XX	1,080	53.6	57.9	25	39	445	465	0.25	2,160
	CLU048-1818C4-B455-XX	1,620	53.6	86.8	37	57	445	465	0.17	3,240
CLU058 (LES φ32.8mm)	CLU058-1825C4-B455-XX	2,250	53.6	120.6	54	82	445	465	0.14	4,500
	CLU058-3618C4-B455-XX	1,620	107.1	173.5	75	113	445	465	0.10	3,240

Note 3: Product codes and specifications in this catalogue are subject to change without notice for improvement, and products may be discontinued. We will not be held liable for any damages or costs caused by such change or discontinuation. Please ask our sales team for details of the release date and the latest specifications of each product.

Technical Note

- Chromaticity Range P18
- Outline Drawings P19
- Customer Support P21

Chromaticity Range

CITILED COB Series Ver.8

• 2-step Ellipse

80 CRI Min. : 2,700K, 3,000K, 3,500K, 4,000K, 5,000K, 5,700K, 6,500K
 90 CRI Min. : 2,700K, 3,000K, 3,500K, 4,000K, 5,700K
 90 CRI Min.(Below B.B.L.) : 2,700K, 3,000K, 3,500K
 97 CRI Typ. : 2,700K, 3,000K, 4,000K

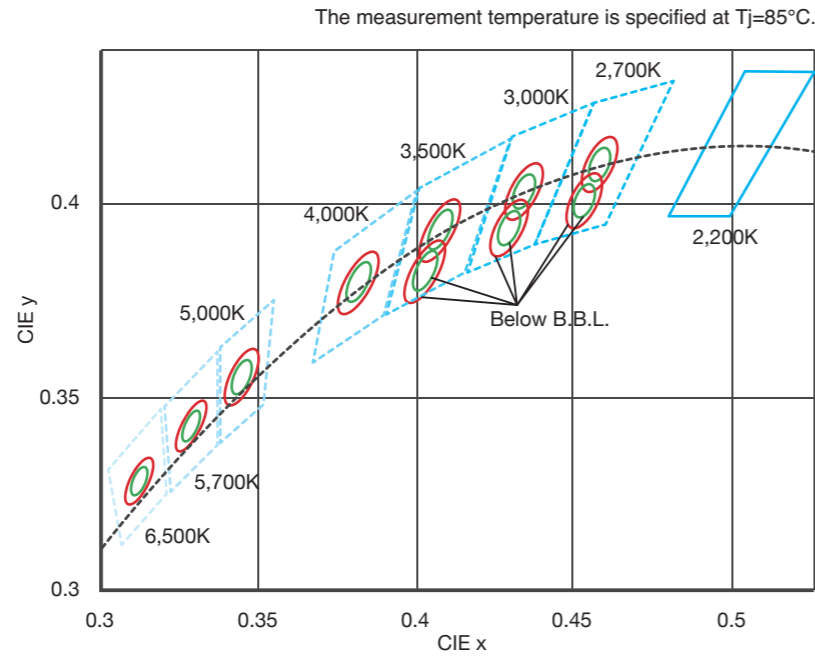
CITILED COB Series High Intensity Type Ver.3

• 3-step Ellipse

80 CRI Min. : 2,700K, 3,000K, 4,000K
 90 CRI Min. : 2,700K, 3,000K, 4,000K
 97 CRI Typ. : 2,700K, 3,000K, 4,000K

CITILED Amber color COB

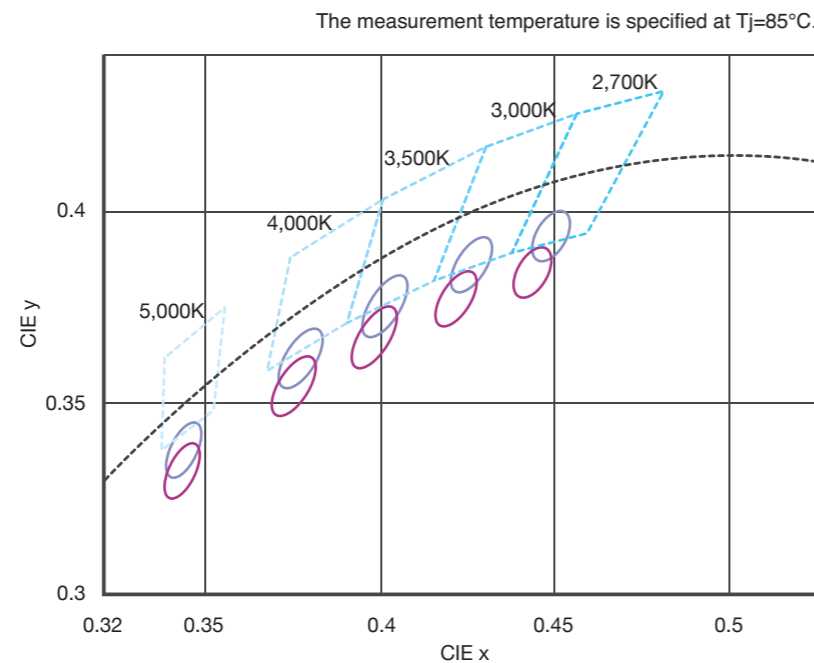
• ANSI 7-step quadrangle



CITILED VIVID Series


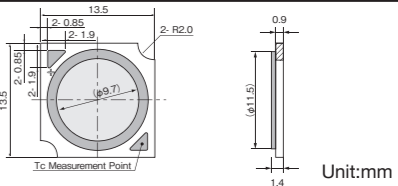

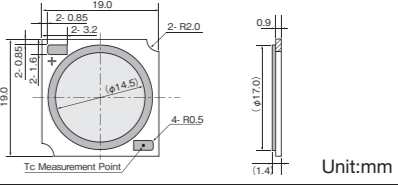
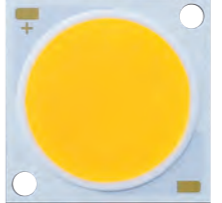
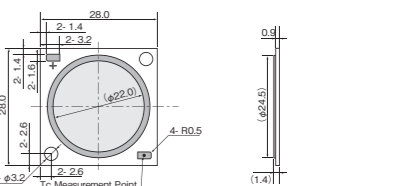

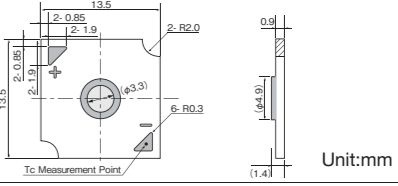

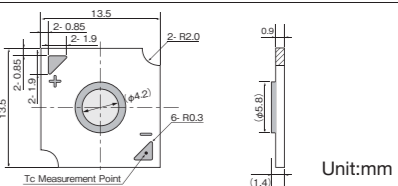

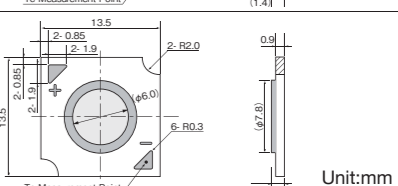

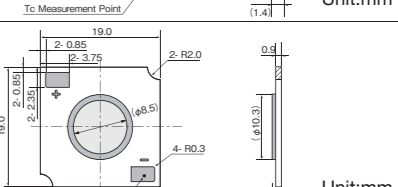

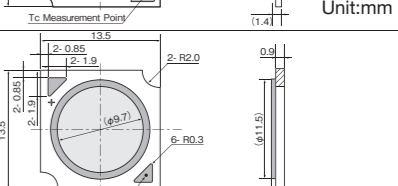

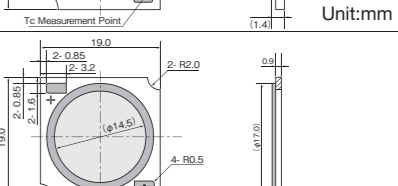
• 3-step Ellipse

Natural series : 2,700K, 3,000K, 3,500K, 4,000K, 5,000K
 Brilliant series : 2,700K, 3,000K, 3,500K, 4,000K, 5,000K


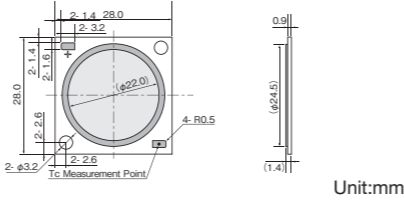
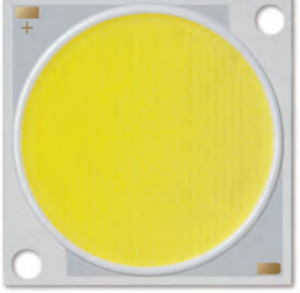
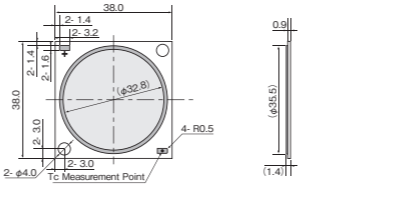

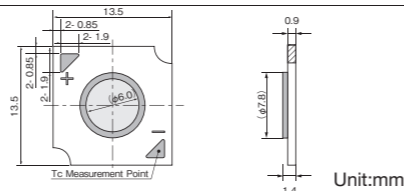

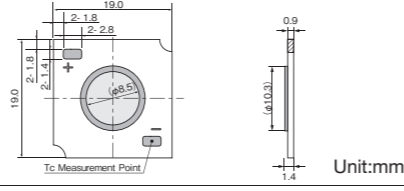

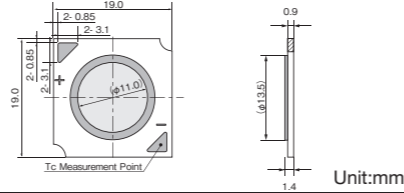

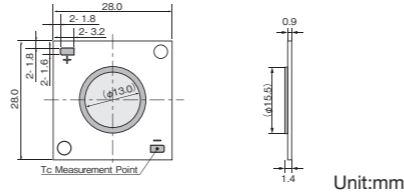
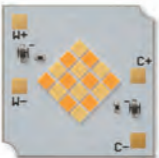
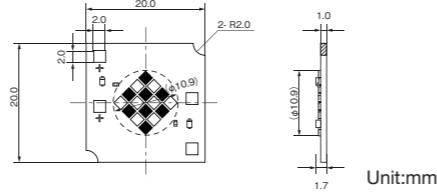
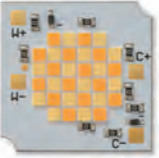
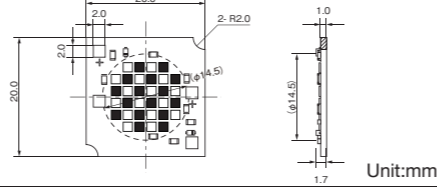
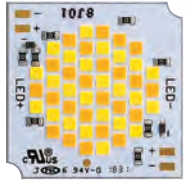
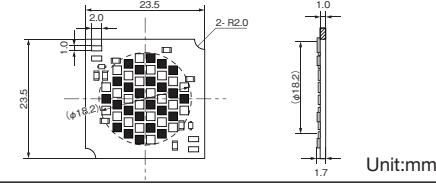


Outline Drawing

CITILED COB Series Ver.8, CITILED COB Series High Intensity Type Ver.3, CITILED VIVID Series, CITILED Tunable White, CITILED Amber color COB, CITILED Blue color COB

Package	Appearance (Actual size)	Outline drawing
CLU02J	 13.5x13.5 mm	 Unit:mm
CLU03J	 19.0x19.0 mm	 Unit:mm
CLU04J	 28.0x28.0 mm	 Unit:mm
CLU7B2	 13.5x13.5 mm	 Unit:mm
CLU7A2	 13.5x13.5 mm	 Unit:mm
CLU702	 13.5x13.5 mm	 Unit:mm
CLU712	 19.0x19.0 mm	 Unit:mm
CLU028	 13.5x13.5 mm	 Unit:mm
CLU038	 19.0x19.0 mm	 Unit:mm

Note 3: Product codes and specifications in this catalogue are subject to change without notice for improvement, and products may be discontinued. We will not be held liable for any damages or costs caused by such change or discontinuation. Please ask our sales team for details of the release date and the latest specifications of each product.

Package	Appearance (Actual size)	Outline drawing
CLU048	 28.0×28.0 mm	 Unit:mm
CLU058	 38.0×38.0 mm	 Unit:mm
CLU701	 13.5×13.5 mm	 Unit:mm
CLU711	 19.0×19.0 mm	 Unit:mm
CLU721	 19.0×19.0 mm	 Unit:mm
CLU731	 28.0×28.0 mm	 Unit:mm
LCN-C01B / C04B	 20.0×20.0 mm	 Unit:mm
LCN-C02B / C05B	 20.0×20.0 mm	 Unit:mm
LCN-C03A / C06A	 23.5×23.5 mm	 Unit:mm

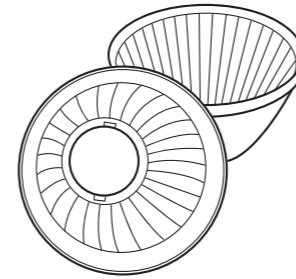
Note 3: Product codes and specifications in this catalogue are subject to change without notice for improvement, and products may be discontinued. We will not be held liable for any damages or costs caused by such change or discontinuation. Please ask our sales team for details of the release date and the latest specifications of each product.

Customer Support

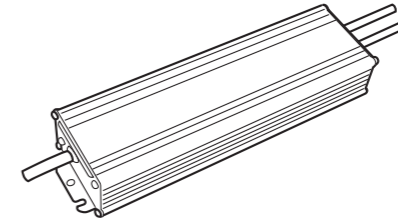
We offer various kinds of customer support.
Our goal is to support your application development efficiently.

Solution Information

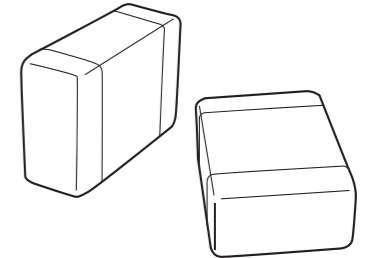
We have introduced a variety of solutions produced by manufacturers in several countries, in order to support business solutions.



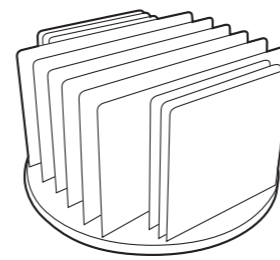
Optical solutions



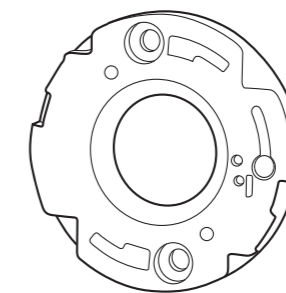
Electrical solutions



Electrical devices



Thermal solutions



Connectors

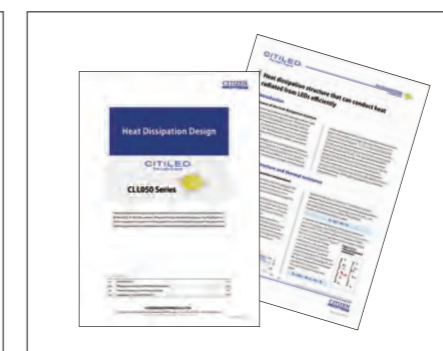
<http://ce.citizen.co.jp/productse/solutions.php>

Application Notes

We have prepared a variety of technical information to support your development easily. Our application notes solve your design problems with Thermal management, Driving, Instruction manual.



Instruction manual
(COB LED Package)



Thermal management

<http://ce.citizen.co.jp/productse/technology.php>