

# CITILED COB Series VIVID Type

CLL020-1204B7 / CLL030-1208B7 / CLL030-1212B7



## Product concept

### Much more vividness for LED lighting

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

### For More brilliant & attractive displaying

These new products are the most suitable for the applications that place emphasis on the appearance of commercial products such as for store lighting.

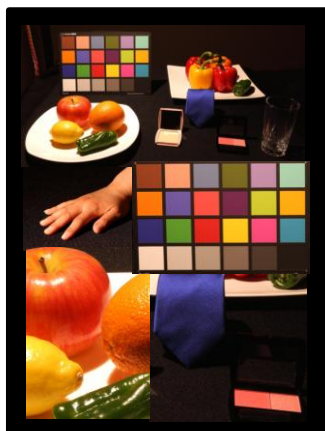
### Spectrum tuning technology

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.

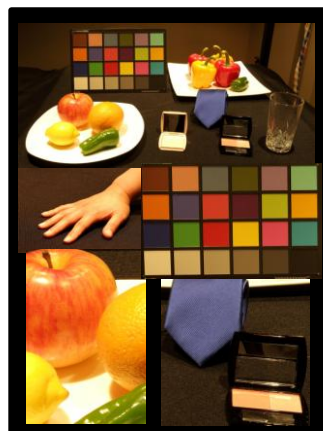


## Comparison

VIVID LED ( warm vivid )



Halogen Lamp ( 3,000K Ra100 )



## Characteristics

Tentative value / Tc 25 degC

Product Code	Color	IF	VF	Φv	LPW
		[mA]	[V]	[lm]	[lm/W]
CLL020-1204B7-35GH6D4	Warm	240	(38.2)	565	61.6
CLL020-1204B7-45GH6D4	White			565	61.6
CLL030-1208B7-35GH6D4	Warm	480	(38.2)	1170	63.8
CLL030-1208B7-45GH6D4	White			1180	64.4
CLL030-1212B7-35GH6D4	Warm	720	(38.2)	1730	62.9
CLL030-1212B7-45GH6D4	White			1735	63.1

CITIZEN ELECTRONICS CO., LTD. shall not be liable for any disadvantages or damages resulting from the use of technical information or data included in this document or the impossibility of download and use, responsibility for the cause of lawsuit or any other damages or losses.  
 This technical information or data shall be provided 'as is' to users and CITIZEN ELECTRONICS CO., LTD. does not guarantee the absence of error or other defects in this technical information or data, conformance of this technical information or data to specific purpose, this technical information or data or its use will not infringe the rights of users or third parties or any other content.  
 CITIZEN ELECTRONICS CO., LTD. reserves the right to make changes to technical information or data without notification.

Copyright © 2014 CITIZEN ELECTRONICS CO., LTD. All Rights reserved.

### CITIZEN ELECTRONICS CO., LTD.

1-23-1, Kamikurechi, Fujiyoshida-shi, Yamanashi, 403-0001, Japan  
 Tel. +81-555-23-4121 <http://ce.citizen.co.jp>



# Global Sales Network



## Headquarters

- CITIZEN ELECTRONICS CO., LTD.  
1-23-1, Kamikurechi Fujiyoshida-shi  
Yamanashi-ken 403-0001, Japan  
Tel: +81-555-23-4121

## Sales Offices

### Japan

- Tokyo Office  
1-23-9, Nishigotanda, Shinagawa-ku,  
Tokyo 141-0031, Japan  
Tel: +81-3-3493-2744

### North America area

- CECOL, INC  
Tel: +1-847-619-6700

### Europe area

- C-E (DEUTSCHLAND) GMBH.  
Tel: +49-69-2992-4810

### Asia area

- C-E (HONG KONG) LTD.  
Tel: +852-2793-0613
- CITIZEN ELECTRONICS (CHINA) CO., LTD.  
Tel: +86-21-6295-5510

### South East Asia / India area

- C-E (Hong Kong) LTD.  
Tel: +852-2793-0613

### Other area

- CITIZEN ELECTRONICS CO., LTD.  
Lighting Sales Section,  
2nd Sales Division  
Tel: +81-3-3493-2744



## Distributors

- KAGA ELECTRONICS CO., LTD.
- OKAMOTO ELECTRONICS CORPORATION

### Americas

- AVNET  
Tel: +1-800-408-8353

### Europe area Italy / Slovenia

- Velco S.p.a.  
Tel: +39-0444-922-922

### Germany / Austria / Switzerland

- Endrich Bauelemente Vertriebs GmbH  
Tel: +49-7452-600756

### United Kingdom

- Marl International Ltd. (Optosource)  
Tel: +44-1229-582430
- Prime Light Electrical Ltd.  
Tel: +44-20 8968 2000

### France

- Eurocomposant SA.  
Tel: +33-1-30-64-06-44

### Spain / Portugal

- Antonio Lopez Garrido, S.A.  
Tel: +34-96-192-06-34

### Scandinavia / Baltic States / Russia / Ukraine

- Arrant-Light Oy  
Tel: +358-2-2462-300

### Belgium / Netherlands / Luxembourg

- Elincom Electronics B. V.  
Tel: +31-10-264-0270

### Turkey

- Empa Enerji A.Ş.  
Tel: +90-212-465-26-63

### Bulgaria / Greece / Rumania

- Lumina Ltd.  
Tel: +359-2-9831132

### Poland

- Transfer Multisoft Elektronik Sp. zo. o  
Tel: +48-42-644-54-86
- DJP Sp. z o.o.  
Tel: +48 22 639 70 37

### Czech Republic

- DNA CENTRAL EUROPE, s.r.o.  
Tel: +420 326 992 511

### Slovakia / Hungary

- DNA Slovakia, spol. s r.o.  
Tel: 035/ 6400 616, 6426 824, 6426 825

### Middle East Area Israel

- Electrosen Ltd.  
Tel: + 972 36184131

### United Arab Emirates

- Luxtron Systems FZCO  
Tel: +971-4-3712740

### Asia area China

- Honestar Technologies Co., Ltd.  
Tel: +86-755-8601-8818
- Rikei Corporation (H.K.) Ltd.  
Tel: +852-2865-5393
- Mostyle Corporation (China)  
Tel: +86-21-6259-0606
- Avnet Sunrise Limited Hong kong  
Tel: +852-2176-5397
- Elematec International Trading Co., Ltd.  
Tel: +86-755-8217-0257
- Avnet Sunrise Limited  
Tel: +86-755-8378-1886

### Korea

- Uniquet (www.uniquet.co.kr)  
Contact person : Jake Park  
Tel: +82-31-708-9988  
E-mail: citizen@uniquet.co.kr

### Taiwan

- Mostyle Corporation (Taiwan)  
Tel: +886-2-8797-2800

### South East Asia Singapore

- Supreme Components Intl. Pte. Ltd.  
Tel: +65-6848-1178
- SETSUYO ASTEC SINGAPORE PTE. LTD.  
Tel: +65-6538-9001

### Thailand / Malaysia / Indonesia / Vietnam / Philippines

- Supreme Components Intl. Pte. Ltd.  
Tel: +65-6848-1178

### South Asia India

- SETSUYO ASTEC SINGAPORE PTE. LTD.  
(INDIA LIAISON OFFICE)  
Tel: +91-11-416-74491
- Supreme Components Intl. Pte Ltd.  
Tel: +65-6848-1178
- Elematec Trading India Private Limited  
Tel: +91-80-4093-5645

### Oseania

- Supreme Components Intl. Pte. Ltd.  
Tel: +65-6848-1178

Copyright © 2014 CITIZEN ELECTRONICS CO., LTD. All Rights reserved.

**CITIZEN ELECTRONICS CO., LTD.**

1-23-1, Kamikurechi, Fujiyoshida-shi, Yamanashi, 403-0001, Japan  
Tel. +81-555-23-4121 <http://ce.citizen.co.jp>

**CITIZEN**  
Micro HumanTech