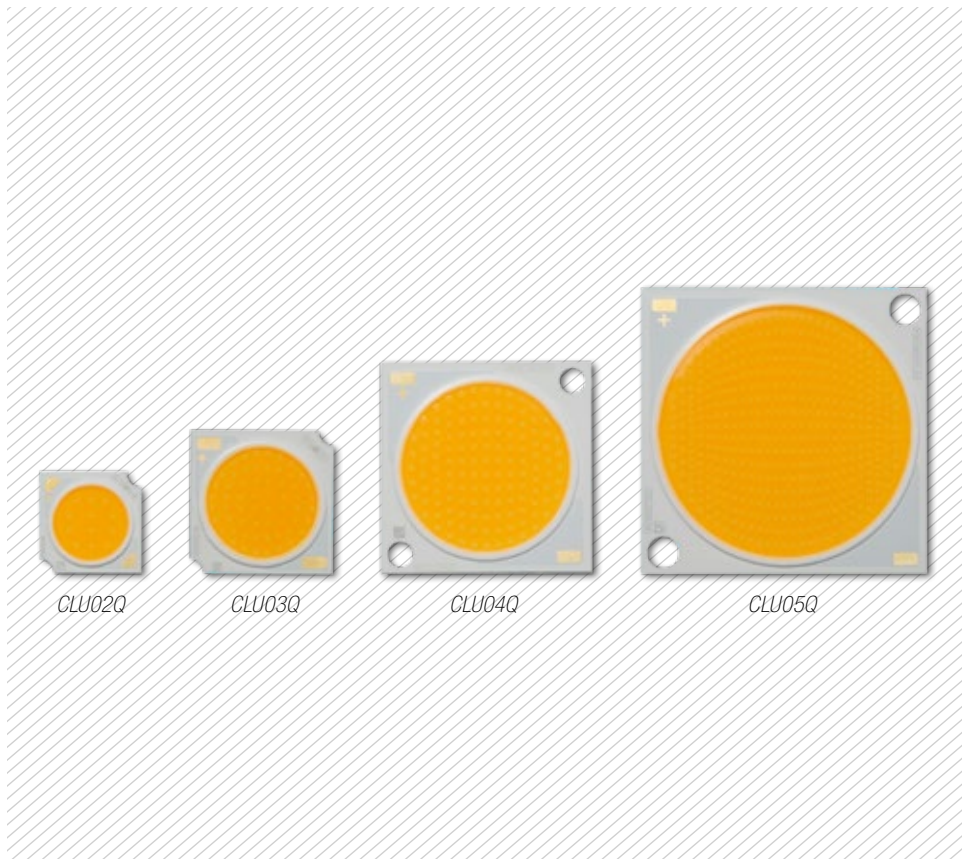


endrich news

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OUR PRODUCT OF THE MONTH:

CITILED STANDARD COB SERIES VER.9



FEATURES

- High efficacy
- Long lifetime
- 2-step standardized for Ra80, 90, 97 series



BM32S2031-1 PROXIMITY SENSING MODULE

HAVE A LOOK

This device is an infrared proximity sensing module, which is designed for object detection applications. When an object enters the detection range, the reflected energy of the infrared will change. Proximity is determined by detecting changes in reflection.



BM32S2031-1
Proximity Sensing Module

Compared with the general infrared sensing modules on the market, this module has a small size, supports detection of objects at a distance of up to 100 cm and has a low standby current consumption of 14 μ A at 3.3V, allowing the module to meet the requirements of a large number of product applications with varying power designs.

Having a modular design ensures much reduced product development time. This proximity sensing module is suitable for all types of smart home electronic products, such as smart door locks, smart makeup mirrors, smart sanitary ware and automatic dryers. The module provides two user selectable output modes, namely I/O and UART types. When used together with a dedicated development platform, the required module characteristics can be rapidly setup and adjusted to implement fast and convenient product development.

FEATURES

- Wide distance detection application
- Operating voltage: 3.3V/5.0V
- Low current consumption: Standby current: Typ. 14 μ A (3.3V/default at 85 cm/scanning time = 0.5 s)
- Wide operating range: Distance: 1~100 cm
- Factory-calibrated
- Detection distance learning function
- Optional communication interfaces: UART mode or I/O mode

APPLICATIONS

- White goods
- Consumer electronics
- Electrical door locks
- Bath equipment

RELIABLE POWER SUPPLIES WITH ULTRA-WIDE INPUT VOLTAGE RANGES

HAVE A
LOOK

Ultra-wide input voltage ranges of 21.6 – 305 VAC and 18 – 430 VDC allow the new LD10-2WBxx AC/DC converters to operate directly on many AC and DC networks.

The LD10-2WBxx series AC/DC converters, which are also approved for low input voltages, once again significantly expand the application possibilities of the already very versatile LD power supply series. The new modules have a fully encapsulated 4-pole DIL housing with dimensions of only 55 x 45 x 21 mm and supply an output voltage of 5 V, 9 V, 12 V, 15 V or 24 V, depending on the version. The isolation between the input and output circuits has a dielectric strength of 4,000 VAC.

The new power supplies meet the requirements of safety standards EN 62368 (electronic equipment), EN 61558 (power supplies) and EN 60335 (white goods), and their emitted interference can be reduced below the limits of class B of the EMC standard EN 55032 with external circuitry. Protection mechanisms against overcurrent, short-circuit and overvoltage and an MTBF (Mean Time Between Failures) of over 300,000 hours ensure safe and reliable operation. The first-class specification also includes efficiencies of up to 81 % and no-load power consumption of less than 0.5 W.

Application areas

The power supplies of the new LD10-2WBxx series can be used very advantageously for devices in the fields of industry, measurement technology, information, household, workshop and laboratory.



LD10-2WB05

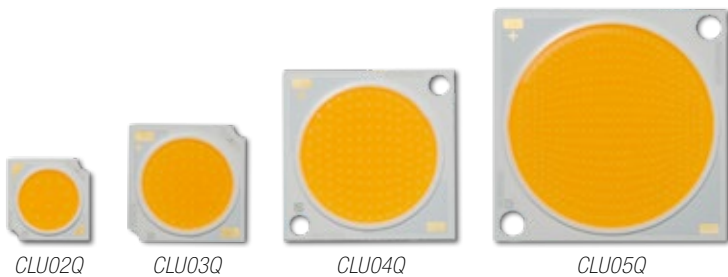
FEATURES

- Compact size: 55 x 45 x 21 mm
- Ultra-wide input voltage range: 21.6 VAC – 305 VAC / 18 VDC – 430 VDC
- Wide operating temperature range: –40 °C to +85 °C
- EMI meets CLASS A and meets CLASS B with peripheral circuits
- Meet IEC/EN/UL62368 / EN60335 (white goods) / EN61558 standards
- High isolation voltage up to 4,000 VAC
- Leakage current as low as 277 Vac / <0.1 mA

AC/DC-CONVERTER LD10-2WBXX				
INPUT VOLTAGE	PART NUMBER	OUTPUT		DIMENSIONS
		VOLTAGE	POWER	
21.6 – 305 VAC or 18 – 430 VDC	LD10-2WB05	5 V	10 W	length: 55 mm width: 45 mm height: 21 mm
	LD10-2WB09	9 V	9.9 W	
	LD10-2WB12	12 V	9.96 W	
	LD10-2WB15	15 V	10.05 W	
	LD10-2WB24	24 V	10.06 W	

CITILED STANDARD COB SERIES VER.9

Save limited natural resources with advanced technology



The new COB series Ver. 9 has improved two properties required for lighting LEDs. Firstly, the long-term reliability has been improved, which ensures constant brightness even when the LEDs are used over a long period of time. Also, the gas resistance has been improved, the Ver.9 achieved an excellent result in the gas resistance test, which is important when used outdoors and in tunnels. The advantages of these

improvements are that both features contribute to a reduction in environmental impact, because the improved luminous efficacy saves electricity. The frequency of replacement or repair of the LED light source and luminaire is also reduced. Furthermore, a higher efficiency than Ver. 6 and Ver. 8 is achieved because the LED housing technology has improved. The COB series Ver. 9 is 2-step standardized for Ra80, 90, 97 series. 2-step is about a half of the area ratio compared to the 3-step chromaticity range, has been realized with all colors of Ra80, 90, 97 series. IF value of Ver.9 does not fluctuate and the efficiency is maintained.

FEATURES

- High efficacy
- Long lifetime
- 2-step standardized for Ra80, 90, 97 series

Color Variation

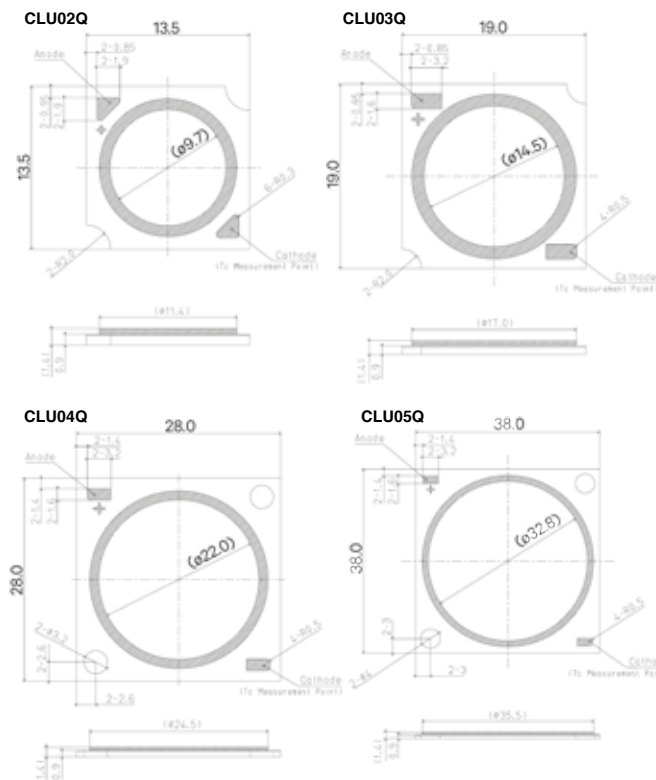
Package	Die Configuration	70 CRI Min.			80 CRI Min.							90 CRI Min.					Below B.B.L. 90 CRI Min.			Super High CRI 97 CRI TyP.		
		30	40	50	27	30	35	40	50	57	65	27	30	35	40	57	27	30	35	27	30	40
CLU02Q	1201	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	1202	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	1203	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	1204	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
CLU03Q	1205	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	1206	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	1208	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	1210	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
CLU04Q	1211	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	1212	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	1812	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	1818	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
CLU05Q	1825	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	3618	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

CITILED STANDARD COB SERIES VER.9

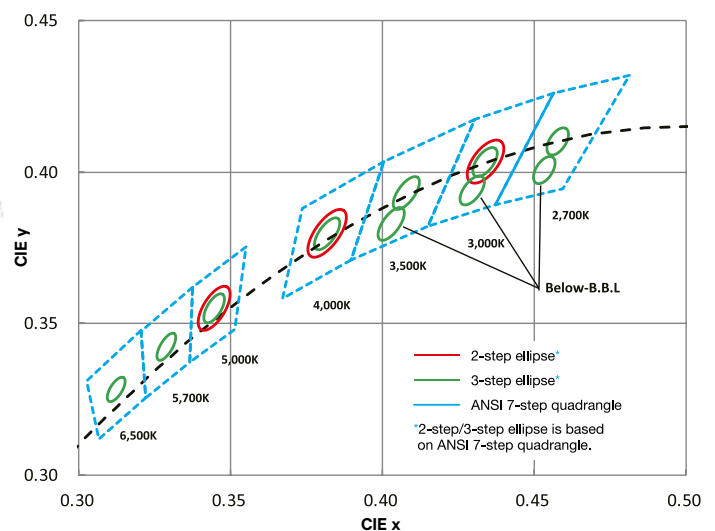
Representative specifications

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)
CLU02Q-1201E1-302M2X2	80 min	3,000 K	90	33.8	3.0	491	161	2.6	230
CLU02Q-1202E1-302M2X2	80 min	3,000 K	180	33.8	6.1	973	160	1.5	460
CLU02Q-1203E1-302M2X2	80 min	3,000 K	270	33.8	9.1	1,445	158	1.0	690
CLU02Q-1204E1-302M2X2	80 min	3,000 K	360	33.8	12.2	1,908	157	0.86	920
CLU03Q-1205E1-302M2X2	80 min	3,000 K	450	33.8	15.2	2,455	161	0.68	1,150
CLU03Q-1206E1-302M2X2	80 min	3,000 K	540	33.8	18.3	2,918	160	0.61	1,380
CLU03Q-1208E1-302M2X2	80 min	3,000 K	720	33.8	24.3	3,852	158	0.48	1,840
CLU03Q-1210E1-302M2X2	80 min	3,000 K	900	33.8	30.4	4,770	157	0.40	2,300
CLU04Q-1211E1-302M2X2	80 min	3,000 K	990	33.8	33.5	5,401	161	0.36	2,530
CLU04Q-1212E1-302M2X2	80 min	3,000 K	1,080	33.8	36.5	5,892	161	0.32	2,760
CLU04Q-1812E1-302M2X2	80 min	3,000 K	1,080	50.7	54.8	8,635	158	0.24	2,760
CLU04Q-1818E1-302M2X2	80 min	3,000 K	1,620	50.7	82.1	12,796	156	0.16	4,140
CLU05Q-1825E1-302M2X2	80 min	3,000 K	2,250	50.7	114.1	17,990	158	0.14	5,750
CLU05Q-3618E1-302M2X2	80 min	3,000 K	1,620	101.4	164.3	25,593	156	0.10	4,140

Note: Please check the details of the release data and the latest specification of each product on this website (<https://ce.citizen.co.jp/e/>).



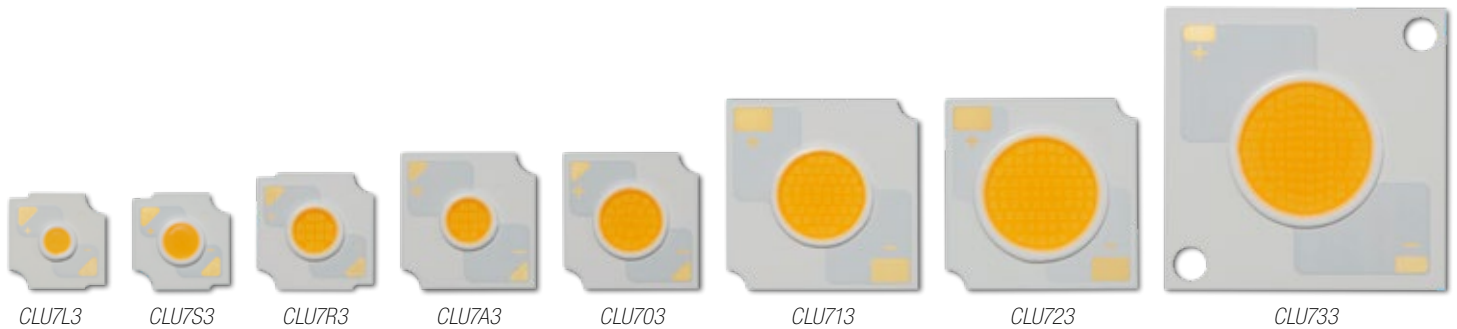
Chromaticity Range



Note: The measurement temperature is specified at $T_j=85^\circ\text{C}$.

CITILED HIGH INTENSITY COB SERIES VER.4

Superior light source for professional light design



The High Intensity COB Series Ver. 4 is the smallest LES COB in the world, $\phi 2.4\text{ mm}(*1)$. It has a super high CRI with a narrower LES. By reducing the light emission diameter and increasing the light density, it can achieve "excellent light distribution control" and "downsize the fixture". The small

product size (9.5 mm) enables small fixture designs and the small LES size ($\phi 2.4/\phi 3.5\text{ mm}$) enables simpler optical design. In addition, the High Intensity COB Series Ver.4 with Super HCRI "Ra97" can achieve a light source with high colour quality and reduce colour unevenness.

FEATURES

- Smallest LES COB in the world
- High CRI with narrower LES
- Small product size (9.5 mm)
- Small LES size ($\phi 2.4/\phi 3.5\text{ mm}$)

Color Variation

Package	Die Configuration	80 CRI Min.					90 CRI Min.					Below B.B.L. 90 CRI Min.			Super High CRI 97 CRI TyP.				
		27	30	35	40	50	24	27	30	35	40	50	27	30	35	27	30	35	40
CLU7L3	0104	★	★	★	★	★	✓	✓	✓	✓	✓	★	★	✓	★	✓	✓	✓	✓
CLU7S3	0403	★	★	★	★	★	✓	✓	✓	✓	✓	★	★	✓	★	✓	✓	✓	✓
CLU7R3	0403	★	★	★	★	★	✓	✓	✓	✓	✓	★	★	✓	★	✓	✓	✓	✓
CLU7A3	0403	✓	✓	✓	✓	★	✓	✓	✓	✓	✓	★	★	✓	★	✓	✓	✓	✓
CLU7A3	1201	✓	✓	✓	✓	★	✓	✓	✓	✓	✓	★	★	✓	★	✓	✓	✓	✓
CLU7O3	1202	✓	✓	✓	✓	★	✓	✓	✓	✓	✓	★	★	✓	★	✓	✓	✓	✓
CLU7I3	1204	✓	✓	✓	✓	★	✓	✓	✓	✓	✓	★	★	✓	★	✓	✓	✓	✓
CLU7Z3	1206	✓	✓	✓	✓	★	★	✓	✓	✓	✓	★	★	★	★	★	★	★	★
CLU733	1210	✓	✓	✓	✓	✓	★	✓	✓	✓	✓	★	★	★	★	★	★	★	★

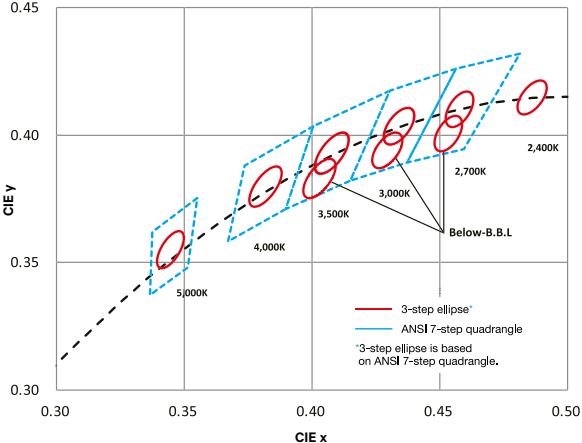
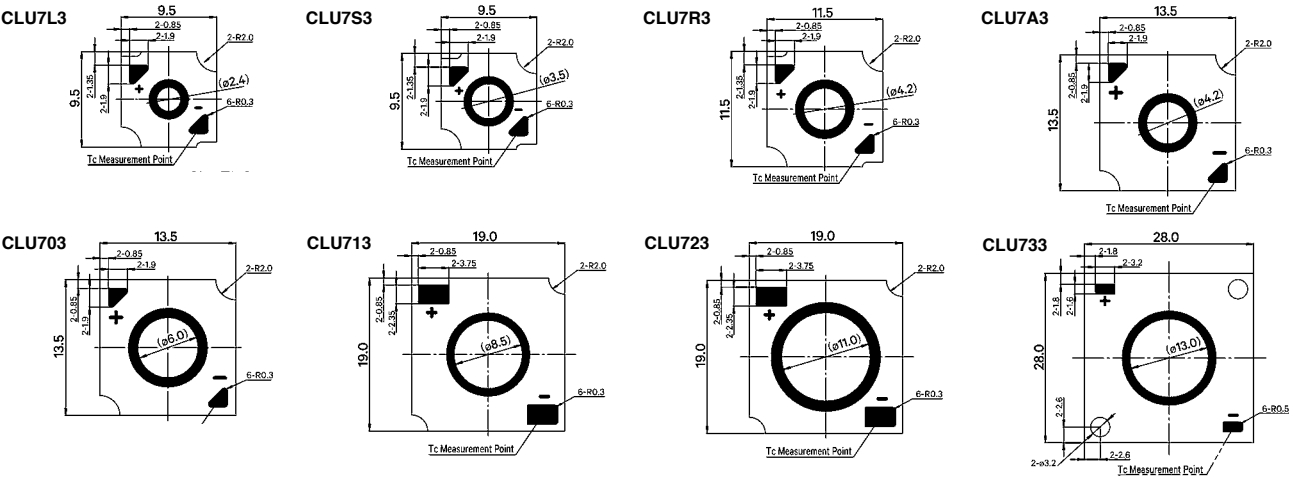
Note : "★" indicate that optional color line up. Please contact our sales team if you are considering ordering the color which is except for standard line up.

CITILED HIGH INTENSITY COB SERIES VER.4

Representative specifications

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)
CLU7L3	90 min	3,000 K	700	3.1	2.2	210	97	9.9	1,000
CLU7S3	90 min	3,000 K	525	12.2	6.4	624	97	3.9	750
CLU7R3	90 min	3,000 K	525	12.2	6.4	711	111	4.0	900
CLU7A3	90 min	3,000 K	525	12.2	6.4	711	111	3.4	900
CLU7A3	90 min	3,000 K	175	36.5	6.4	711	111	3.4	300
CLU703	90 min	3,000 K	350	36.5	12.8	1,432	112	1.7	600
CLU713	90 min	3,000 K	700	36.5	25.6	2,900	113	0.95	1,200
CLU723	90 min	3,000 K	1,050	36.5	38.3	4,411	115	0.62	1,380
CLU733	90 min	3,000 K	1,750	36.5	63.9	7,164	112	0.35	2,300

Note: Please check the details of the release data and the latest specification of each product on this website (<https://ce.citizen.co.jp/e/>).



Note: The measurement temperature is specified at Tj=85 °C.

HIGH PRECISION DUAL BAND GNSS MOUSE FROM LOCOSYS

**HAVE A
LOOK**

The latest GNSS Mouse receiver family from Locosys supports not only all global civil satellite systems (multi constellation GPS, GLONASS, Galileo, BeiDou, QZSS and IRNSS (NavIC) but also dual-frequency GNSS in bands L1 and L5.

The latest mouse receiver has a better performance than previous ones. It can receive over 60 satellites in the same time which is more than L1 only GNSS solution. Positioning accuracy is able to under 1.5m CEP. To keep the delivery times, pricing and support efforts low the module inside is the Locosys own product MC-1612-V2b.



FEATURES

- Concurrent reception of L1 and L5 band signals
- Multi constellation GPS, GLONASS, Galileo, BeiDou, QZSS and IRNSS (NavIC)
- Support for SBAS ranging, WAAS, EGNOS, MSAS and GAGAN
- Fast TTFF at low signal level
- Free hybrid ephemeris prediction to achieve faster cold start
- Smart jammer detection and suppression
- Build-in micro battery to reserve system data for rapid satellite acquisition
- Brand new design with improved visibility on signal LEDs
- LED indicator for GNSS fix or not

MOUSE NAME	INTERFACE	CONNECTOR	CABLE LENGTH
LC23030-V2	USB	USB	2 m
LC23032-V2	RS232	PS2	2 m
LC23036-V2	RS232	RJ-11	3 m

APPLICATIONS

- Personal positioning and navigation
- Automotive development or aftermarket
- Marine navigation
- High-quality NTP time server
- Agriculture

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