03/2023

endrich NEWS

www.endrich.com

Don't talk, but act!



Wolfgang Endrich

Yes, we managed to make three liquefied gas terminals on our coasts ready for service within the shortest possible time. The speed was spectacular. Despite laws, regulations and concerns. The impossible became reality. But what about the many laws and regulations that makes our daily lives almost unbearable? We constantly get reports on TV about new unnecessary laws and regulations. For example, think of the whistleblower law, which is now on hold for the moment, the supply chain law, the dispute over whether to support highways or rather federal railroads, the problems with applications for new solar and wind energy parks, which make investors almost hopeless due to a wall of possible lawsuits, and then the processing times until approval. In Berlin, they say, it takes months before you can get married!

Our politicians, including the previous government, had promised to clear this jungle of laws. Unfortunately, nothing has been done until today. Or another example: If an investor has two buildings and the roof of one building is covered with solar power cells, the opposite building, which is only separated by a road, is not allowed to be supplied with the same solar power, or if one wants to install a floating solar power system on a small pond, this is also not approved because there is no experience yet how the fish underneath would take it! Ha, ha! Kidding? No, sadly true.

You cannot avoid a good thermal insulation in a new building, even though you would have the damage anyway due to higher energy costs. Or the speed limits on the highways, forgetting that we are now supposed to switch to electric cars, which do not produce any CO2. Where is the motivation then, with all that horsepower? The sense of logic is missing here.

The social problems are also there. Yes, we have many citizens who are living in a poverty situation. We can't target them and support them because there is no database about them. Or, for example, our tax numbers. We all have at least two numbers. Why is it not possible to harmonize this and streamline administration through a digital process? We don't know which student doesn't need help because he has rich parents and which one can't study because he doesn't have the money, or the apartment rents are too high.

We have plenty of ministries. The question you have to ask yourself is: what are these people doing? What is shameful is that the German armed forces procurement office would really deserve another name: that is, order-preventing-institution. Because of this, we are missing clothing, weapons, and even warm socks and bulletproof clothing for our soldiers.

Every CEO would be fired if his company were in such chaos as our administration.

Please continue reading on page 2

If you no longer wish the endrich news by mail, please write an e-mail to newsletter@endrich.com

Continued from page 1

Don't talk, but act!

Nothing against our civil servants, who hardly dare to make their own decisions because they might be punished for it. They prefer certificates drawn up on the lines of protection, which cost the taxpayers billions.

In fact, only the consulting firms and lobbyists get the benefit of this, and it doesn't help to increase legal certainty either. Ludwig Erhard is regarded as the father of the social market economy, and he led Germany on a free-market course, resulting in the so-called economic miracle.

If we had had the restraints in the economy as they are today, this miracle would not have happened. Individual initiative must be supported, and prudence must be given priority. Besides that, our EU lawmakers in Brussels also play a major role in the jungle of laws.

Wolfgang Endrich

ELECTION OF THE MANAGER OF THE YEAR

Your vote for Dr. Christiane Endrich!



For the ninth time, Markt&Technik is calling on its readers to vote for the managers of the year. The editors have compiled a list of managers who are up for election. Up to three votes can be cast in each category. **Voting is open until March 24, 2023.**

Our CEO Dr. Christiane Endrich has been nominated in the "Supply Chain" category. Ms. Endrich has been at the helm of the Endrich Group since 2011. Under her leadership, the product portfolio was expanded and the growth course of the group of companies continued. This was also recently honored with the Economic Medal of the State of Baden-Württemberg for outstanding services to the economy. Focus for the future is now to transform the group of companies into a solution provider.

The three managers who have received the most votes in their respective categories in recent years will be chosen as the "Managers of the Year 2023" and will receive their award at the "Markt&Technik" top event on May 25, 2023. Irrespective of this, the editorial team will again publish the winners of this year's election online and in the print edition of "Markt&Technik". Those who have already been voted "Manager of the Year" three times will receive induction into the "Hall of Fame" as a special honor.

The categories:

- Electromechanics
- Embedded Systems
- Power semiconductors
- Passive components
- Human Resources
- Sensors
- Supply Chain

Simply scan the QR code and vote!

Dr. Christiane Endrich thanks you for your vote in the Supply Chain category!

IEWS

THE MP6006

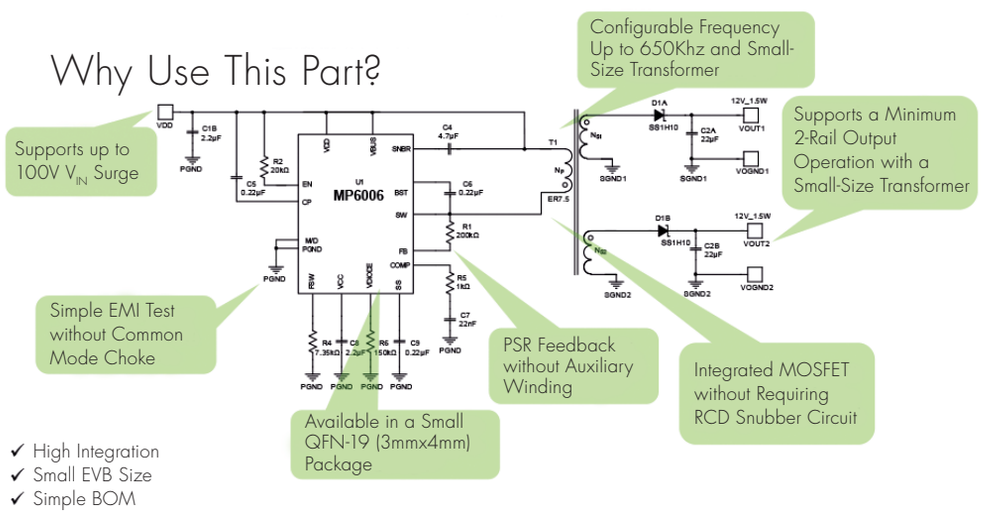
is a high-efficiency, active-clamp flyback converter with a wide input voltage (VIN) range

The device is specifically designed for extremely small primary-side regulation (PSR) flyback topology. It can also be set to a secondary-side regulation (SSR) flyback topology.In PSR flyback mode, the output voltage (VOUT) is sampled from the SW pin instead of the auxiliary winding, which simplifies transformer design. The MP6006 integrates two MOSFETs with an active-clamp flyback topology. It saves traditional RCD clamp circuits and provides a simple BOM for an isolated power solution. The compact, active-clamp power loop works with the frequency dither function to provide excellent EMI performance. The MP6006 features full protections including overload protection (OLP), over-voltage protection (OVP), and over-temperature protection (OTP).

Why Buy?

- 4.5 V to 60 V Working Voltage and 100 V VINSurge
- Frequency Up to 650 kHz and Small-Size Transformer
- Integrated MOSFET without Requiring RCD Snubber Circuit
- PSR and SSR Feedback without Auxiliary Winding
- Outstanding EMI with Frequency Dithering

Why Use This Part?



✓ High Integration
✓ Small EVB Size
✓ Simple BOM

Test Conditions: VIN = 48 V, OUT1 = 12 V_1.5 W, OUT2 = 12 V_1.5 W

APPLICATIONS

- Isolated Power Module/Bias Supplies
- IGBT/SiCFET Gate Drives
- Isolated Field Transmitters/Field Actuators
- Motor Drive System Power
- Power Grids
- Building Automation HVAC Sytems

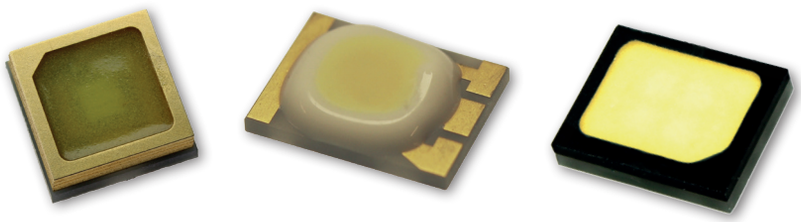
FEATURES

- Supports a Wide 4.5 V to 60 V Input Voltage (VIN) Range
- Supports Up to 100 V VINSurge
- Supports a Minimum 2-Rail Output Operation with a Small-Size Transformer
- Integrated MOSFET without Requiring RCD Snubber Circuit
- Primary-Side Regulation (PSR) Feedback without Auxiliary Winding
- Active-Clamp PSR Flyback without Auxiliary Winding
- Active-Clamp Secondary-Side Regulation (SSR) Flyback through Optocoupler
- Configurable Frequency Up to 650 kHz
- EMI Reduction with Frequency Dithering
- Full Protections Include Input and Output Over-Voltage Protection (OVP), Overload Protection (OLP), and Over-Temperature Protection (OTP)
- Available in a QFN-19 (3 mm x 4 mm) Package

Contact for information: Mr. Bubser · **phone:** +49 7452 6007-975 · **e-mail:** b.bubser@endrich.com

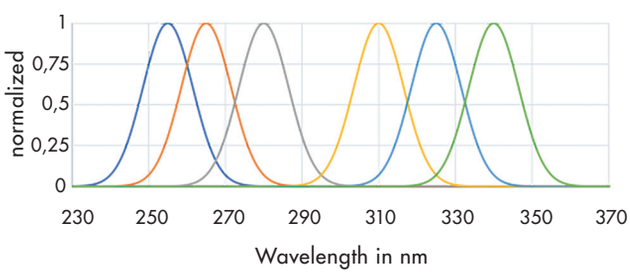
EPIGAP OSA

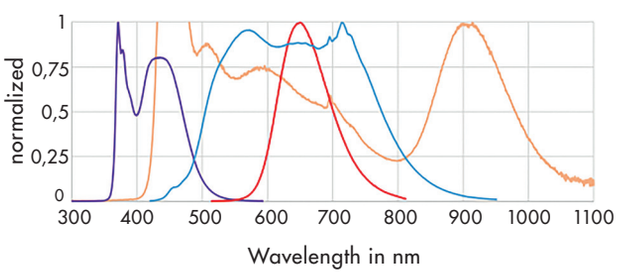
product line UV-emitters and broadband-SMDs / conversion technology

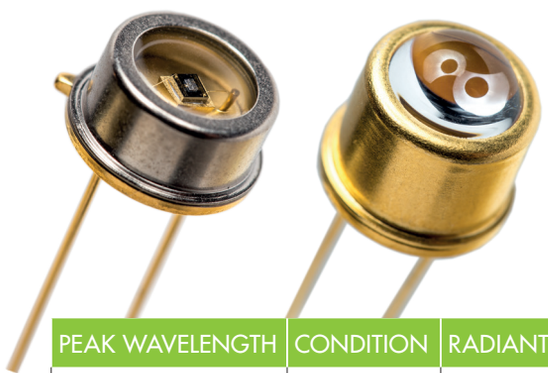


- Production of UV-THT components in-house
- Lifetime of more than 10.000 hours
- Hermetically sealed TO-package with flat window or lens
- High efficiency and reliability
- RoHS and REACH conform

- In-house product line of high power SMD types
- Our core competence in adjusting emission with phosphors
- Optical encapsulant with flat potting or lens
- Broad spectrum up to 500 nm
- Footprint from 3.5 mm to 6.0 mm
- RoHS and REACH conform







PEAK WAVELENGTH	CONDITION	RADIANT POWER
255 nm	@ 20 mA	1,25 mW
265 nm	@ 20 mA	1,35 mW
275 nm	@ 20 mA	2,20 mW
310 nm	@ 20 mA	1,00 mW
325 nm	@ 20 mA	1,50 mW
340 nm	@ 20 mA	1,30 mW

APPLICATIONS

- Multi- & hyperspectral imaging
- Nutritional status of plants
- Pressure marks on fruits
- Thermal dislocation on PCBs
- Medical imaging

SPECIFICS

- High FWHM
- Reproducible spectrum
- Insensitive to temperature change
- No warm-up times
- No thermal load to object

EPIGAP OSA

Contact for information: Mr. Große · **phone:** +49 7452 6007-953 · **e-mail:** p.grosse@endrich.com

IEWS



WIRELESS DATA COLLECTION WITH NEOCORTEC MESH NETWORK

With great pleasure we announce that we are now working with NeoCortec as our new supplier for Wireless Mesh Network modules. NeoCortec is located in Denmark with great support and great products.

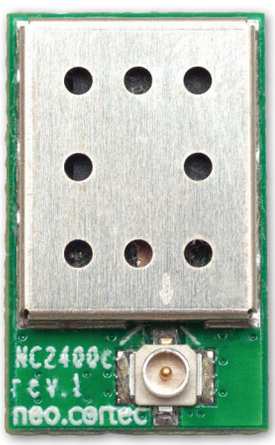
As a first example of the usage, endrich already created some NeoMesh sensor boards in combination with our IoT Board concept – the CityBox. The main focus of NeoCortec is their Mesh network based on the self developed Mesh protocol usable in 868 MHz, 915 MHz or 2.5 GHz. Use cases usually are sensor networks to collect various sensor data over mid to long distances and send them to a datalogger or to a cloud system.

The NeoMesh is especially simple to build, integrate, change and expand (easy scalability). The self-healing and dynamic protocol is easy to maintain, long lasting and there are no hidden costs for licenses or alliances.
In field tests it was possible to establish the network within 2 hours and connect multiple devices into the Mesh network.

More can be found on our booth on Embedded World where we will show some endrich IoT products including the NeoCortec 868 MHz modules.



NC1000



NC2400

SUPPLIER SUMMARY

- Founded 2008 in Copenhagen Denmark
- Manufacturing in Thailand
- Innovator and supplier of Ultra Low Power Wireless Mesh Networks solutions
- Core technology patented in major markets

APPLICATIONS

- Smart Buildings
- Smart City
- Industrial Automation
- Agriculture

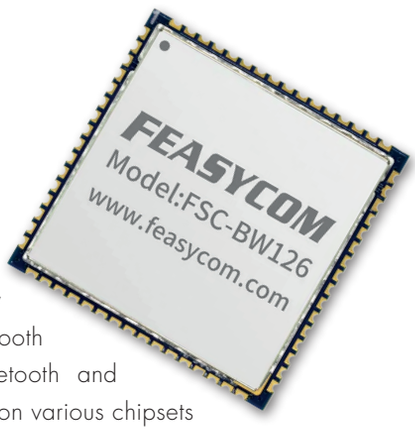
FEATURES

- Real time dynamic mesh network
- 868 MHz, 915 MHz or 2.5 GHz
- Up to 65000 nodes
- Typically 7 years of lifetime on two AA batteries
- 15 channel frequency hopping
- Low package loss

neo.cortec

Contact for information: Mr. Kattenbusch · **phone:** +49 7452 6007-976 · **e-mail:** j.kattenbusch@endrich.com

COST EFFECTIVE BLUETOOTH AND WIFI MODULES BY FEASYCOM





Feasycom offers a huge variety of Bluetooth low energy, Bluetooth Dual Mode, WiFi and Bluetooth and WiFi combo modules. Based on various chipsets like Nordic Semiconductor, Dialog, TI, Silicon labs and many more the spectrum is huge. Further different options with or without onboard antenna are given.

The latest module and one of the few on the market is based on the Nordic nRF53840 chipset. The part number FSC- BT634 with only 10 x 11.9 x 2.0 mm and integrated antenna is now available. Supporting the up-to-date standard IEEE 802.11ax WiFi Feasycom offers the suitable module FSC-BW236. Samples of different modules are now available at endrich including evaluation boards.

According to various market researches Bluetooth and WiFi or also WLAN are the biggest growing technologies in IoT. Advantages like easy smartphone access, local networks, and easy integration speak for themselves. Because of this market growth we added a new supplier – Shenzhen Feasycom Co., Ltd – or short Feasycom, for Bluetooth and WiFi Modules to our portfolio.

FEATURES FSC-BT634	FEATURES FSC-BW126
Bluetooth 5.3	IEEE 802.11 ax & BT 5.2
Long range support	SMT mount module
2 Mbps	$V_{BAT:}$ 3.0 - 3.6 V (I_{peak} 2A)
Advertising extensions	V_{DDIO}: 1.7 - 3.6 V
+ 8 dBm Tx power	External Antenna
-95 dBm sensitivity	2 x 2 MIMO up to 1200 Mbps

APPLICATIONS

- Industrial IoT
- Health Care
- Smart Home
- Smart Industries

SUPPLIER SUMMARY

- More than 10 years experience
- Located in Shenzhen
- More than 30 engineers
- ISO9001, ISO14001, IATF16949 certified

FEASYCOM

Contact for information: Mr. Kattenbusch · **phone:** +49 7452 6007-976 · **e-mail:** j.kattenbusch@endrich.com

IEWS

DEVELOPMENT OF CITILED COB FALCON TYPE-F

lighting LEDs that have addressed the unevenness of lighting

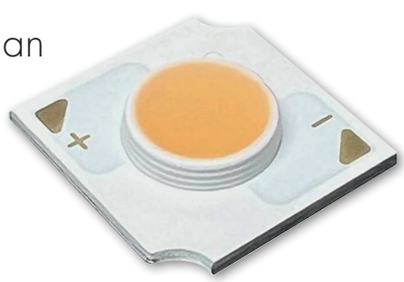
Citizen Electronics Co., has developed new LED packages for lighting, "CITILED COB Series Type-F." This new product has greatly improved "the quality of light" of the irradiated area by addressing problems such as the generation of a yellow ring, which has been an obstacle in using LEDs for luminaires.

Development of lighting LEDs has tended to focus on improvement of functions such as brightness and luminous efficacy. However, demand for "quality of light," uniform lighting without unevenness, which is used for space lighting such as in hotels, restaurants and museums, is increasing.

This new product CITILED COB Series Type-F meets such needs in the market.

- Samples are available
- Massproduction for CLL703 has already started

CITILED COB Series Version4 Type-F with an Improved Irradiated Area



Product's Lineup

PACKAGE	OUTLINE DIMENSION [MM]	LES [MM]	DIE CONFIGU-RATION	90 CRI MIN.				97 CRI TYP.		
				27	30	35	40	27	30	40
CLL7A3	□13.5	φ 4.2	0403	(O)	(O)	(★)	(★)	(O)	(O)	(★)
CLL7A3	□13.5	φ 4.2	1201	(O)	(O)	(★)	(★)	(O)	(O)	(★)
CLL703	□13.5	φ 6	1202	(O)	(O)	★	★	(O)	(O)	★
CLL713	□19	φ 8.5	1204	(O)	(O)	(★)	(★)	(O)	(O)	(★)

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

Representative specifications

PRODUCT CODE	ELECTRO-OPTICAL CHARACTERISTICS								Absolute Max. Rating
	CRI	CCT	forward current [mA]	Voltage Typ. [V]	Input power Typ. [W]	Luminous flix Typ. [lm]	Efflacy Typ. [lm/W]	Thermal resistance Rj-c °C/W]	forward current [mA]
CLL703-1202E1-273H5XB-H01	90 min.	2700 K	350	36.5	12.8	1,288	101	1.7	600
CLL703-1202E1-303H5XB-H01	90 min.	3000 K	350	36.5	12.8	1,360	106	1.7	600
CLL703-1202E1-273H7XA-H01	97 typ.	2700 K	350	36.5	12.8	1,136	89	1.7	600
CLL703-1202E1-303H7XA-H01	97 typ.	3000 K	350	36.5	12.8	1,216	95	1.7	600

CITIZEN

Contact for information: Mr. Große · **phone:** +49 7452 6007-953 · **e-mail:** p.grosse@endrich.com

DEVELOPMENT OF CITILED COB FALCON TYPE-F

Characteristics

1. Realization of uniform lighting

In our conventional models, generation of a yellow ring, which is caused by characteristics of LED light, and color unevenness have been problems. This new product has solved the problems after review of the materials and structure of light source while limiting the loss of luminous flux to the minimum. It can realize uniform lighting without unevenness and without using an optical lens specially designed for the product.

2. Reduction in cost of developing an exclusive part

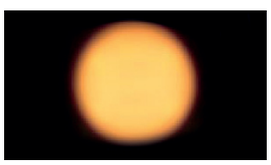
Development period and materials cost for developing an exclusive lens that addresses the unevenness of light in conventional products can be drastically reduced.

3. Expresses a beautiful space

The unevenness of light is remedied not only in the irradiated area but also in the lighted space, thus the product is ideal for hotels, restaurants and museums where harmony is important. At the same time, reduction of glare, which often happens with outdoor lighting, can be expected as the evenness of the brightness of the light surface is improved.

Surface area when powered on

New model

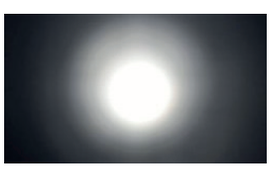


Conventional model

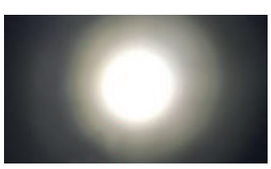


Irradiated area

New model



Conventional model



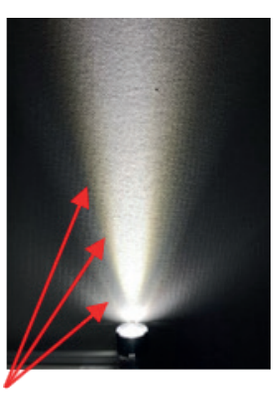
yellow ring

Irradiation against a wall

New model



Conventional model



Unevenness of color

Contact for information: Mr. Große · **phone:** +49 7452 6007-953 · **e-mail:** p.grosse@endrich.com

CITIZEN

HEADQUARTERS

endrich Bauelemente Vertriebs GmbH
P.O.Box 1251 · 72192 Nagold, Germany

T +49 7452 6007-0
E endrichnews@endrich.com
www.endrich.com

SALES OFFICES IN EUROPE

France
Paris:
T +33 1 86653215
france@endrich.com

Lyon:
T +33 1 86653215
france2@endrich.com

Spain
Barcelona:
+34 93 2173144
spain@endrich.com

Bulgaria
Sofia:
bulgaria@endrich.com

Austria & Slovenia
Gmunden:
+43 1 6652525
austria@endrich.com

Romania
Timisoara:
romania@endrich.com

Hungary
Budapest:
T +36 1 2974191
hungary@endrich.com

Switzerland – Novitronic
Zurich:
T +41 44 30691-91
info@novitronic.ch

If you no longer wish the endrich news by mail, please write an e-mail to newsletter@endrich.com

Certified acc. to ISO 9001:2015 / 14001:2015

Mitglied im FBDi Fachverband Bauelemente Distribution e.V.