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endrich NEWS

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Immigration – ein unbewältigtes Problem!


Wolfgang Endrich

Von 1940 bis 1945 lebte ich mit meinen Eltern im Sudetenland, der heutigen Tschechischen Republik. Nach Kriegsende waren die sogenannten „Reichsdeutschen" mehr als unbeliebt und wurden vertrieben. In Westdeutschland angekommen, wurden Ostflüchtlinge auf Gemeinden verteilt. Der Empfang in den westdeutschen Gemeinden, die plötzlich auf eigenen Wohnraum verzichten mussten, war nicht herzlich. Es gab damals die sogenannte "Wohnungsbewirtschaftung", d.h. alle freistehenden Zimmer wurden beschlagnahmt und mit Flüchtlingen besetzt.

Da der Staat aber kaum finanzielle Mittel hatte, wurde der sogenannte „Lastenausgleich" erfunden, d.h., jeder Hausbesitzer bekam eine Zwangshypothek auf sein Haus gedrückt - völlig gleichgültig, ob er dem zustimmte oder nicht. Der erste „SOLI".

Deutschland wurde damals durch drei Militärregierungen in den drei Zonen (englisch, französisch und amerikanisch) verwaltet. Mehr als zwölf Millionen Menschen wurden innerhalb weniger Monate aus den früheren deutschen Reichsgebieten in Polen und der Tschechei umgesiedelt. Da die Menschen aus der Zeit der Diktatur gelernt hatten, klaglos öffentliche Verordnungen hinzunehmen, konnte sich ein Assimilierungsprozess langsam, aber doch erfolgreich in den Gemeinden durchsetzen. Heute haben wir das Problem mit Immigranten, die aus blanker Not und um ihren teils fürchterlichen Lebensbedingungen zu entfliehen, eine neue Heimat suchen. Die Sprachprobleme und vor allem unser Paragraphendschungel behindert das Sesshaft-Werden extrem. Unter diesen Menschen, die gezwungenermaßen bei uns Schutz und Heimat suchen, gibt es viele Ärzte, Rechtsanwälte, Handwerker, auch einfache Arbeiter und sie würden uns helfen, den derzeitigen Mangel an Arbeitskräften erheblich zu lindern.

Erschwert wird die Eingliederung zweifelsohne durch die fehlenden Deutschkenntnisse und die teilweise kulturellen Unterschiede. Warum ist es nicht möglich, jeden frisch Eingewanderten einen Crash Kurs in Deutsch sowie über unser Rechtssystem, unsere Sitten, Werte und Gebräuche verpflichtend besuchen zu lassen?

Da sie sich entschieden haben, ihre Heimat zu verlassen und ein neues Leben in einem sicheren demokratischen Land zu beginnen, wäre dies zumutbar. Die Folgen der Immigration bringen unseren Staat in eine finanziell extreme Situation. Wir müssen für diese Menschen unser Steuergeld einsetzen, um Ihr Leben anfangs zu finanzieren. Die meisten würden dies lieber durch eigener Hände Arbeit selbst verdienen.

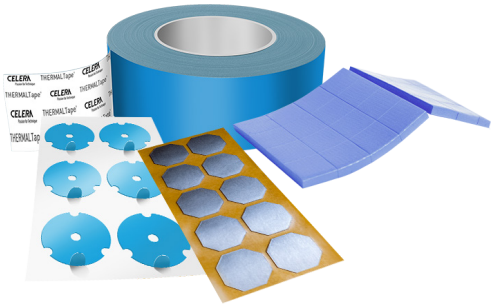
Der Staat bekäme Lohnsteuer, er hätte die Sozialabgaben in den Sozialkassen und wir hätten mit Sicherheit mehr zufriedene neue Bürger. Die Babyboomer gehen in Rente und es gibt derzeit nicht genügend Neugeborene. Wir werden ein Volk der Alten ohne Immigration. Ich frage mich, wo bleibt der Verstand unserer gewählten Vertreter, um endlich zu verstehen, dass wir ohne die Immigranten ein Problem in Zukunft haben werden, das wir nur durch Integration dieser neuen Bürger lösen können. Wollen wir ein Deutschland mit Altersheimen ohne Pflegekräfte und Fabriken ohne Arbeiter?

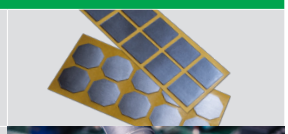
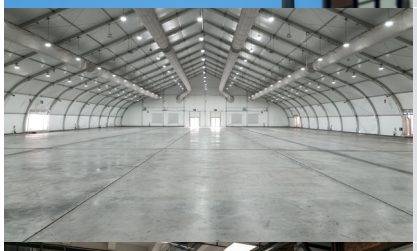
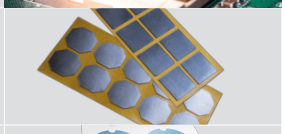
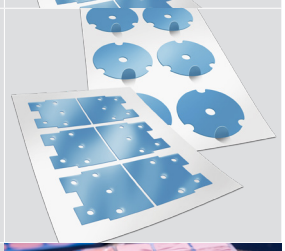
Mit freundlichen Grüßen, Wolfgang Endrich

THERMAL INTERFACE MATERIALS FOR LED APPLICATIONS

Celera has the most suitable solution for the thermal profile of your application.

Overheating at LED junction point is the main responsible for failures associated with durability, reliability and luminous performance. Celera has a wide family of solutions in thermal Interfaces to ensure the appropriate thermal management of LED Fixtures and Luminaires.



YOUR APPLICATION	THE CHALLENGES	OUR SOLUTIONS	
	Very high thermal load generated by super high/high power LED packages	**FlexGRAF** Thermally conductive graphite sheets	
		FORMAPad Form-in-place gap pads	
	High/mid thermal load generated by high/mid power LED packages	**FlexGRAF** Thermally conductive graphite sheets	
		THERMALTape Thermally conductive double sided tapes	
	PCB attachment to aluminum profile and mid/low thermal load generated by LED packages	**THERMALTape** Thermally conductive double sided tapes	
	Very high/high thermal load generated by COB packages and low clamping force between PCB and heat sink	**COOLPad** Low compression silicon pad	
		FORMAPad Form-in-place gap pads	

CELERA Passion for Technique

Contact for information: Mr. Reichardt · **phone:** +49 7452 6007-914 · **e-mail:** p.reichhardt@endrich.com

NEWS

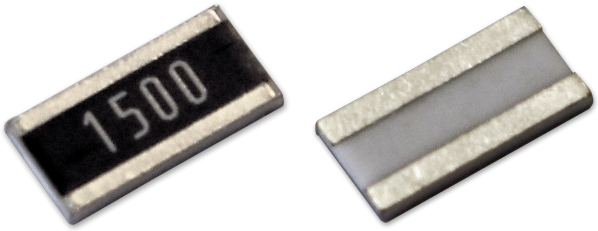
WCF SERIES WIDE TERMINAL CHIP R

WCF series is a lineup of high rated power and compact size chip resistor from Prosperity Dielectrics Co. (PDC). During operation, resistors generate heat within the resistive element (P=I^2*R). The rated power of a chip resistor is determined by its capacity to efficiently dissipate this heat to both the PCB and the surrounding environment. The heat dissipation capability is, among other factors, contingent upon the ratio of the chip size to the terminal area. A comparison of two resistors of identical chip size reveals that the resistor with wide side terminals exhibits superior heat dissipation compared to the resistor with short side terminals.

This phenomenon conveys various advantages to the resistor:

1. Increased power density without requiring additional PCB space.
2. Reduced PCB space through the utilization of smaller resistor package sizes or a decreased number of components.
3. Augmented safety margin and diminished aging effects.

In applications subjected to a wide ambient operating temperature range, careful consideration is essential when using larger chip sizes of resistors. This caution arises from the disparity in the Coefficient of Thermal Expansion (CTE) between the resistor and PCB, which can induce mechanical stress and lead to terminal cracks after prolonged usage. Generally, chip resistors with wide side terminals facilitate downsizing, mitigating the risk of terminal cracks. Even in larger sizes, resistors with wide side terminals exhibit increased robustness against stress induced by CTE due to their larger soldering area.



Series	L(mm)	W(mm)	T(mm)	Size Code	Rated Power (70deg.C.)	Max. RCWV	Avail. TCR	Avail Tol.	Resistance value Range
WCF06	1.60 ± 0.20	3.20 ± 0.20	0.6 ± 0.15	0612	1 W	200 V	+/– 100 ppm +/– 200 ppm	+/– 1 % +/– 5 %	1 Ohm – 1Meg. Ohm
WCF25	3.10 ± 0.20	6.30 ± 0.20	0.6 ± 0.15	1225	2 W	200 V	+/– 100 ppm +/– 200 ppm	+/– 1 % +/– 5 %	1 Ohm – 1Meg. Ohm

APPLICATIONS

- Power supplies
- Industrial application (e.g. for ECU boards)
- Automotive (e.g. for xEV Inverter)
- General purpose applications

FEATURES

- High power rating to 2 W and compact size
- High reliability and high precision (1 %)
- Compatible with wave and reflow soldering
- Suitable for lead free soldering
- Meet AEC-Q200, RoHS compliant & Halogen Free

PSA PASSIVE SYSTEM ALLIANCE INPAQ TECHNOLOGY CO., LTD.

Contact for information: Mr. Krasic · **phone:** +49 7452 6007-969 · **e-mail:** i.krasic@endrich.com

ULTRA-HIGH RANGING FREQUENCY LASER SENSOR BASED ON VCSEL

Industries have put forward new requirements on ranging distance and accuracy. If the deviation cannot be controlled within a certain range, or the measured distance cannot meet the actual needs, the related works will not be able to carry out smoothly, even cause irreparable loss.

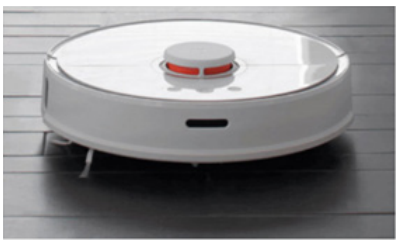
As a supplier of, Brightlaser laser sensors provides a serie of laser ranging products from several meters to tens of kilometers.

Laser sensor series LiDAR of Bright Laser adopts independent intellectual DTOF (Direct Time Of Flight: measures the time between the sending of an optical pulse and the arrival of the reflected light pulse).

Technology and high-performance high-pulse power VCSELs (vertical-cavity surface-emitting lasers: are superior to LEDs when it comes to short switching times and a narrow optical spectrum—making them the best choice for time-of-flight (ToF) applications).

Devices and high-quality optical design, advanced optomagnetic design and high-performance, high-precision timing circuit, high measurement frequency, small size, and realization of 360° two-dimensional scanning of distance; the infrared high-power pulsed VCSEL laser is used, which is invisible to the naked eye and safe for the human eye, and has strong antiinterference ability. It can be widely used in sweeper/robot navigation and obstacle avoidance.

As well known, ranging frequency directly determines whether robot be able to generate a map quickly and accurately. Brightlaser's scanning and ranging sensor uses high-quality VCSEL light source and algorithm system. The ranging frequency is adjustable and has two options, up to 14000 times per second. It is an incredibly competitive product in the industry, on account of cost-efficiency and high-performance.

TRAFFIC FLOW DETECTION	ROBOT APPLICATION	LASER RANGE FINDER SENSOR A4
		

BRIGHTLASER

Contact for information: Mr. Kamwa · **phone:** +49 7452 6007-6637 · **e-mail:** a.kamwa@endrich.com

NEWS

APPLICATIONS UP TO 100m

- Sweeper navigation and obstacle avoidance
- Environmental scanning and 3D modelling
- Obstacle detection and evasion of security
- Regional security
- Robot navigation
- Vehicle ADAS

APPLICATIONS MORE THAN 100M

- Traffic light control
- Positioning sensing
- Electrical cable monitoring
- Dam deformation monitoring
- Hill slope monitoring
- Range monitoring
- Traffic flow monitoring
- Stuff position monitoring

As well known, ranging frequency directly determines whether robot be able to generate a map quickly and accurately. Brightlaser's scanning and ranging sensor uses high-quality VCSEL light source and algorithm system. The ranging frequency, up to 14000 times per second. It is an incredibly competitive product in the industry, optical communication and transportation.

LS-0905D-150M-ED-XA4
range 150m 200-1000Hz

LS-0905B-600M-AM-CA2
range 1-600m

LS-0905B-001K-AM-CA2
range 1-1000m 5Hz

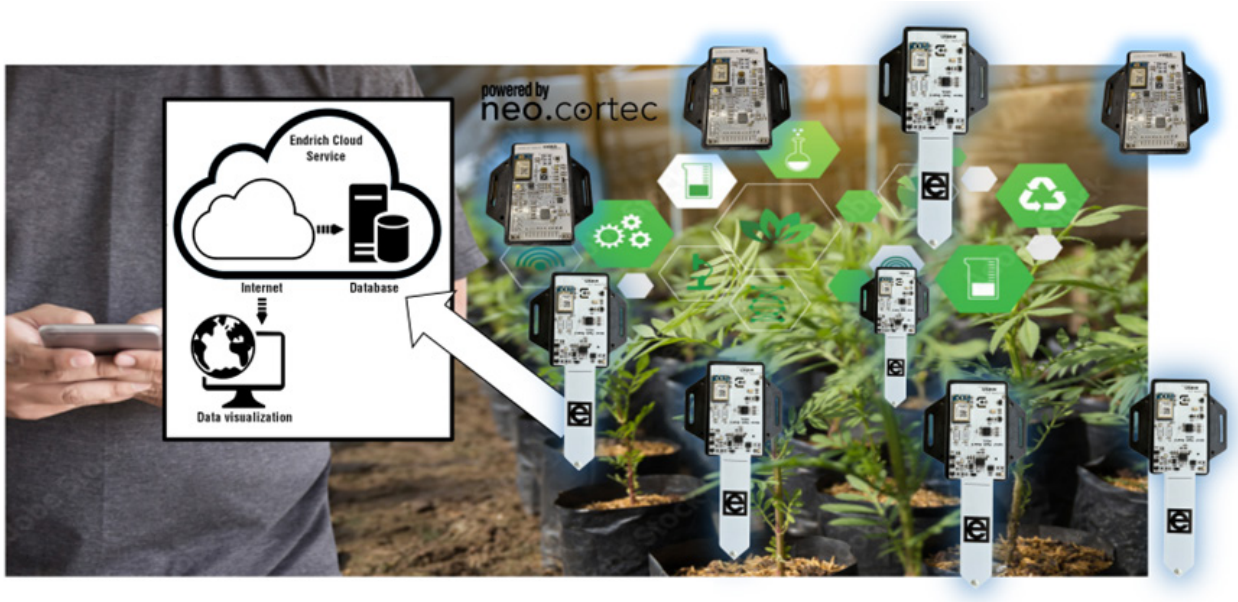
LS-06XXC-0X0M-Am-EA6
635nm Range 60m 5-10Hz

Single Line Scanning Lidar
LS-0940H-00XM-AC-FX9

BRIGHTLASER

Contact for information: Mr. Kamwa · **phone:** +49 7452 6007-6637 · **e-mail:** a.kamwa@endrich.com

SOIL MOISTURE MEASUREMENT USING AD-HOC LOCAL NETWORK AND NB-IOT TECHNOLOGY.

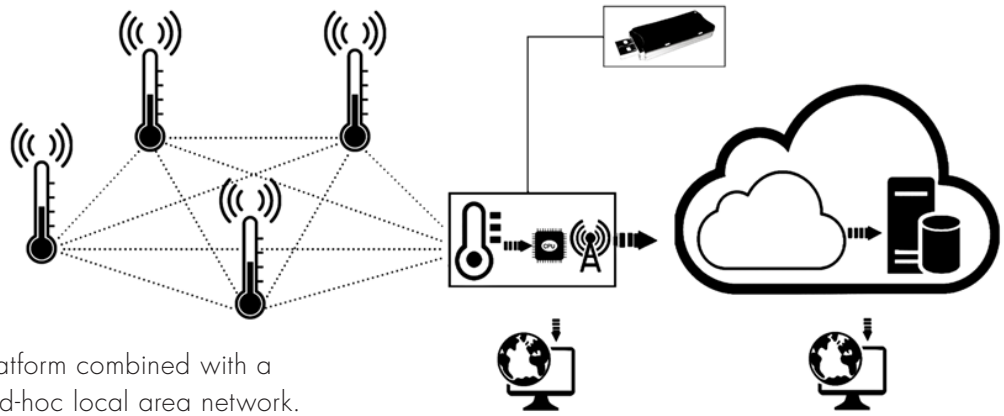


An interesting field of use

Soil moisture detection is one of the key elements of environmental monitoring and agricultural and horticultural IoT solutions. It involves measuring the amount of water in the top layer of soil, which directly affects plant growth, irrigation strategies and our water conservation efforts. A variety of methods are used to detect soil moisture, from traditional techniques such as gravimetric measurements to modern technologies such as capacitance sensing or TDR (TDR). Accurate soil moisture sensing helps optimize irrigation schedules, prevent over- or under-watering, promote sustainable farming, and ultimately increase agricultural productivity while minimizing water wastage. Supplementing traditional sensors and control electronics with modern wireless communication units and integrating the IoT is a popular and interesting task, which really makes sense if we want to get an idea of the soil moisture conditions in large plantations using computational methods from the data of many sensors. During his business trip to South America this summer, the author spoke with representatives of several companies where the lack of coverage of cultivated areas with telecommunication services makes it impossible or uneconomical to use, for example, smart sensors with a direct sensor-cloud connection (GSM, SAT, etc.). In such cases, a solution may be to organize the soil moisture sensors into an ad-hoc wireless network that uses renewable energy sources, uses low consumption modems, which can cover a large area, and provide this network with a single connection to the Internet to promote cost-effectiveness. The used gateway (one piece) can be a device operating in a property with Internet connection on the edge of the area, a gateway with SAT connection, which is organically integrated into the smart sensor mesh network.

Contact for information: Mr. Riggio · **phone:** +49 7452 6007-31 · **e-mail:** s.riggio@endrich.com

NEWS

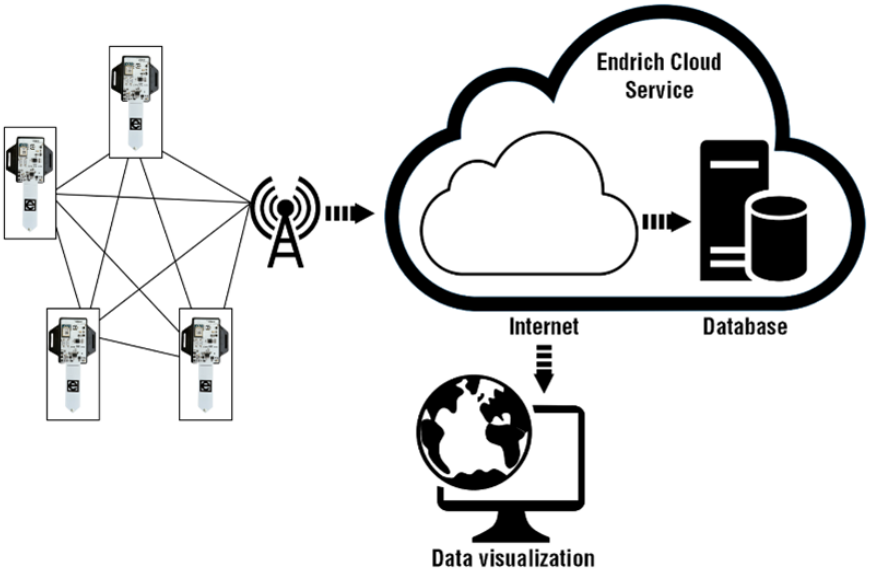


The E-IOT platform combined with a low-power ad-hoc local area network.

In this case, we call for a low-consumption ad-hoc local sensor network solution, for example, in our case we can use the NeoCortec Neo.Mesh protocol presented earlier. A large number of smart sensors can be connected with ultra-low power consumption to a local, sub-GigaHertz wireless network, where a single data concentrator/gateway with an Internet connection takes care of delivering the data to the Cloud DB via the cellular network, for example using LTE-M or NB-IoT, even with satellite or wired connection. This modular sensor network infrastructure offers multi-point-to-point communication to the cloud through the LPLAN-LPWAN/WAN gateway. In our previous article, we described the characteristics of this communication technology in detail, and now we would like to write about the concept that was newly developed for agricultural tasks

E-IoT wireless soil moisture transmitter

As an experiment, we created a sensor that works on the capacitive principle, which transmits a signal proportional to the moisture of the topmost layer of the soil through the neo.mesh network. As we discussed earlier, the "mesh" of sensors placed outdoors at a distance of up to a hundred meters from each other is suitable for covering relatively large areas due to the applicability of a large number (thousands) of nodes without the data being lost, since each sensor also acts as a repeater and finds the data at the same time the way to the target gateway. During the day, the integrated solar panel provides energy for the electronics of each node, while at night, the rechargeable battery ensures continuous operation.

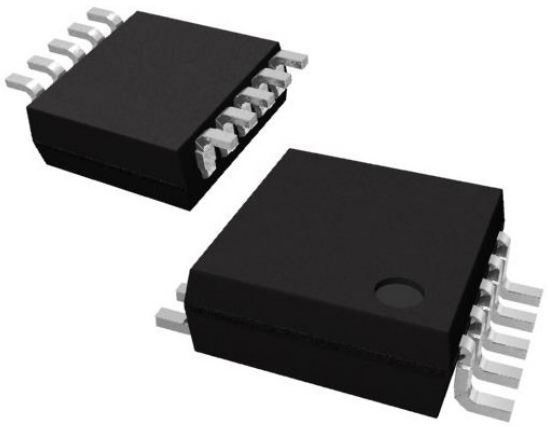


NJW1871A-T1 MOSFET DRIVE SWITICHING REGULATOR IC

The NJW1871A is a MOSFET drive switching regulator IC designed for boost/flyback converters with a wide operating voltage range from 4.5V to 40V. Its internal N-channel MOSFET driver circuit ensures high-efficiency driving, making it ideal for applications requiring high output currents. This IC is equipped with protection features, including pulse-by-pulse overcurrent detection to limit the switching current during overload, with automatic recovery in the event of load anomalies. In addition, its support for high transmit frequency enables avoidance of AM band noise and facilitates the use of small inductors. Overall, the NJW1871A is suitable for boost/flyback applications such as automotive and industrial equipment.

APPLICATIONS

- Consumer Electronics
- Industrial Instruments
- Boost converter for small to middle range power supplies



FEATURES

- Input Voltage Range from 4,5V to 40V
- Operating Temperature Range from -40°C to 125°C
- Supply Current: Typ. 1200 µA / Max. 1700 µA
- Standby Current: 10 µA/ Max. 20 µA
- Output Voltage Accuracy: ± 1/2 %
- Oscillator Frequency: 1000kHz to 2000kHz
- Package: MSOP10(VSP10)
- Current Mode Control / PWM Control
- Standby Function
- Soft Start (Fixed 20ms typ.)
- Over Current Protection (Hiccup)
- Over Voltage Protection
- Thermal Shutdown

Contact for information: Mr. Kinn · **phone:** +49 7452 6007-963 · **e-mail:** d.kinn@endrich.com

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

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

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

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

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