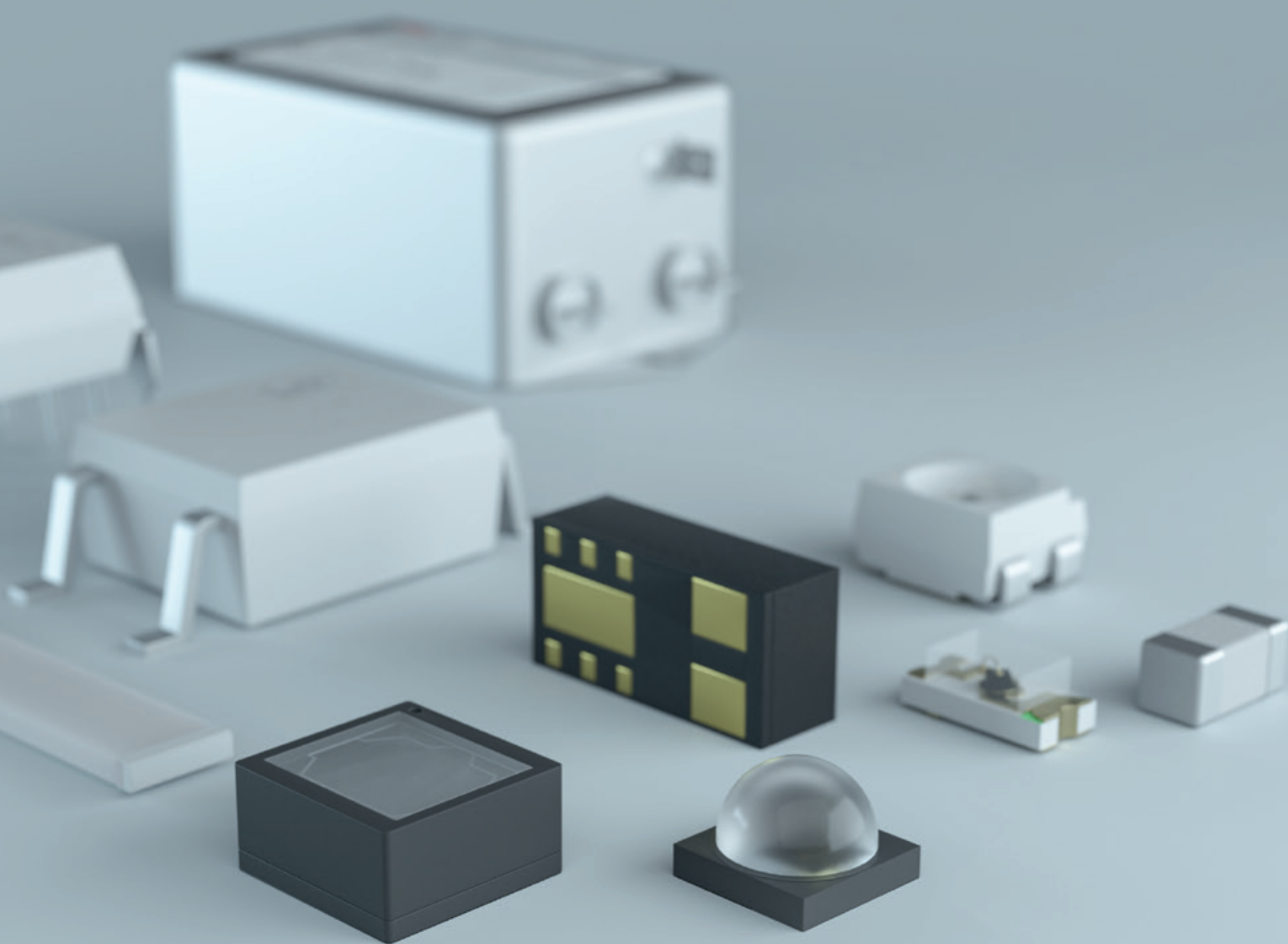


ELECTRONIC COMPONENTS 2021/2022



WÜRTH ELEKTRONIK MORE THAN YOU EXPECT

WÜRTH ELEKTRONIK MORE THAN YOU EXPECT

REDEXPERT



REDEXPERT The online platform of Würth Elektronik to select electronic and electromechanical components.

#REDEXPERT

- Online platform based on measured values
- The world's most accurate AC-loss model
- Filter settings for over 20 electrical and mechanical parameters
- Inductor simulation and selection for DC/DC converters
- Ability to compare inductance/current and temperature rise/DC current using interactive measurement curves
- Available in seven languages
- No login required
- Order free samples directly
- Direct access to product datasheets










www.we-online.com/redexpert

CONTENT

1. NEW PRODUCTS

	WE-CLFS 6 Line Filter		WL-OCDA 9 Optocoupler Darlington		WL-VCSL 12 Vertical Cavity Surface Emitting Laser
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	WE-MCA 8 SMT Multilayer Chip Antenna		WL-SIQW 11 SMT Infrared QFN LED Waterclear		MagI³C-VDMM 14 Variable Step Down MicroModule

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Information in this publication is subject to change. The process of continually improving our product range leads to changes in content. For new designs please refer to the latest data sheets on www.we-online.com or contact our technical field staff.

THE WÜRTH ELEKTRONIK

eiSos GROUP



THE WÜRTH ELEKTRONIK GROUP

Employees: 7,300
Sales: 822 Mil. Euro

WÜRTH ELEKTRONIK eiSos GROUP



PRINTED CIRCUIT
BOARDS

INTELLIGENT
POWER AND
CONTROL SYSTEMS

Passive
Components



Power Modules &
Optoelectronics



Electromechanical
Components



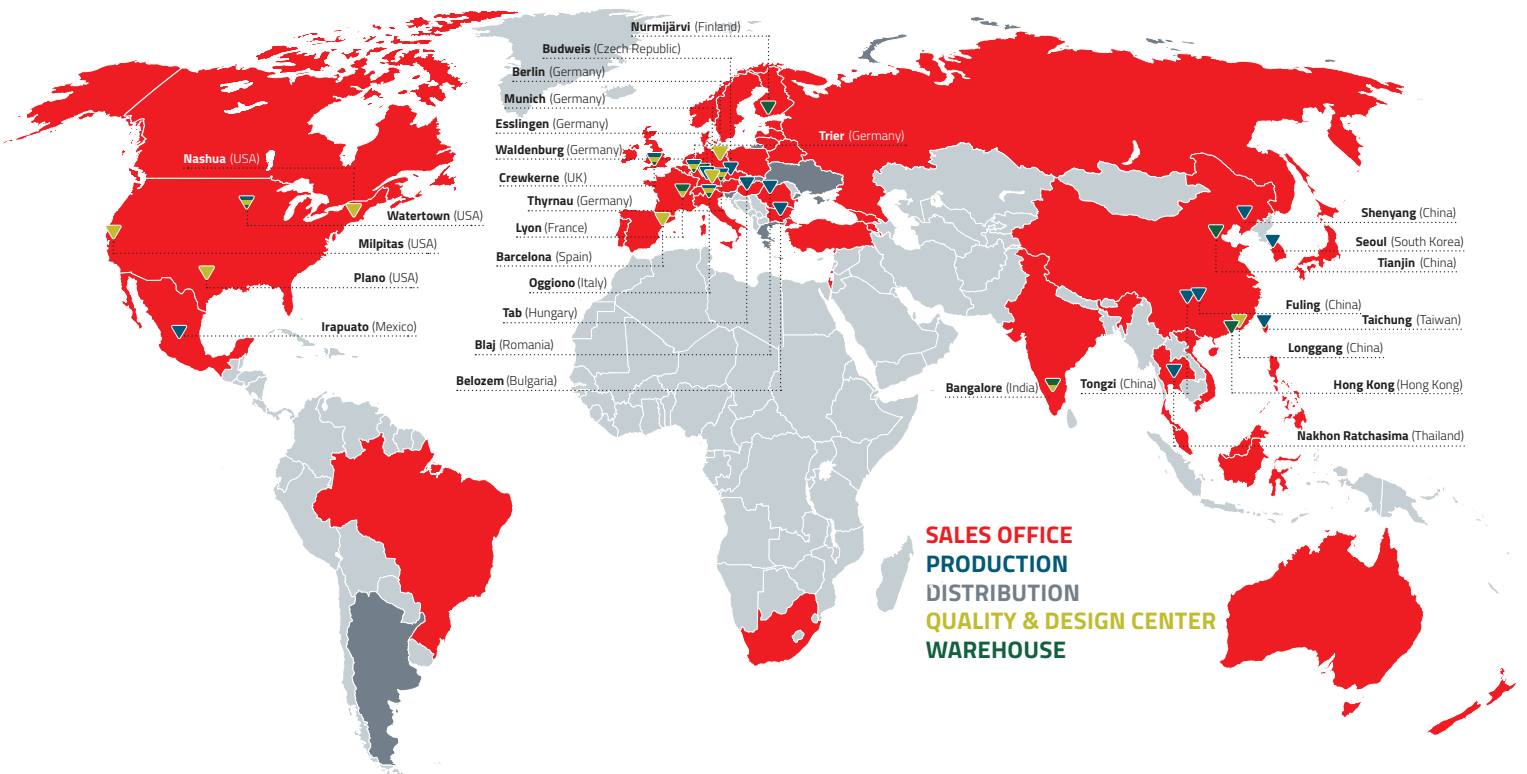
Automotive &
eMobility



Wireless Connectivity &
Sensors



GLOBALLY AVAILABLE. LOCALLY PRESENT.



MORE **THAN YOU EXPECT**



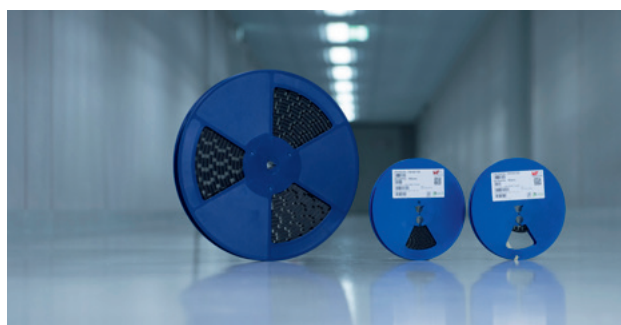
**SAY YES TO OUR FAST AND
COST-FREE DESIGN-IN SUPPORT**



**WE TAILOR THE QUANTITIES
TO YOUR NEEDS**



**ALL CATALOGUE PRODUCTS
AVAILABLE EX STOCK**



RE-REELING SERVICE



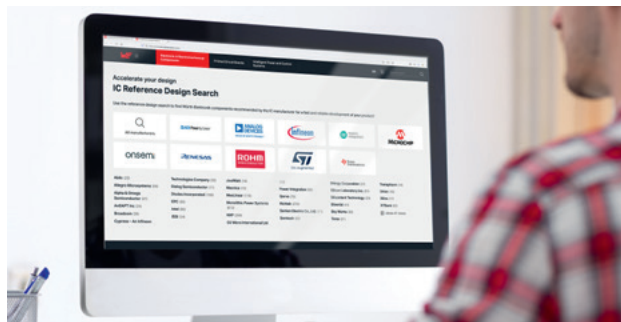
**DESIGN SEMINARS AND
WEBINARS FREE OF CHARGE**



**ONLINE DESIGN PLATFORM FOR
COMPONENT SELECTION & SIMULATION**



**DESIGN KITS WITH LIFELONG
FREE REFILL**



**REFERENCE DESIGNS OF
LEADING IC MANUFACTURERS**

WE-CLFS LINE FILTER



Characteristics

- Single-phase filter
- Broadband noise suppression in common and differential mode
- Easy assembly through faston connectors
- Fast chassis mounting
- Flammability corresponding to UL 94 V-0
- Climatic category: 25/100/21
- Certifications: cULus (UL 60939-3, CSA 22.2 No. 8), VDE (IEC/EN 60939-2). UL 60939-3 replaces UL 1283 for appliance filters

Applications

- Industrial electronics
- Switched-mode power supplies
- Telecommunications
- Household goods
- DC applications

Single stage low leakage

Order Code	I_R (A)	L (mH)	$R_{DC\ max.}$ (mΩ)	R (kΩ)	C_X (μF)	I_{Leak} (mA)	V_R (V)	$V_{L \rightarrow PE}$ (V (AC))	$V_{L \rightarrow N}$ (V (DC))	L (mm)	W (mm)	H (mm)	Version
810911001112	1.5	20	300	1000	0.1	0	250	2000	1075	64	35	29	Low Leakage
810911003112	3	10	100	1000	0.22								
810911006112	6	2.2	30	1000	0.47								
810911008112	8	2.2	20	1000	0.47								
810911010112	10	1	15	680	0.68								

Single stage advanced low leakage

Order Code	I_R (A)	L (mH)	$R_{DC\ max.}$ (mΩ)	R (kΩ)	C_X (μF)	I_{Leak} (mA)	V_R (V)	$V_{L \rightarrow PE}$ (V (AC))	$V_{L \rightarrow N}$ (V (DC))	L (mm)	W (mm)	H (mm)	Version
810912001112	1.5	20	300	1000	0.22	0	250	2000	1075	75	51.8	29	Low Leakage
810912003112	3	10	100	1000	0.33								
810912006112	6	10	50	1000	0.33								
810912008112	8	6	30	680	0.47								
810912010112	10	6	30	680	0.47								
810912012112	12	2.2	20	470	0.68								
810912014112	14	2.2	20	470	0.68								
810912020112	20	1	10	330	1								

Two stage low leakage

Order Code	I_R (A)	L (mH)	$R_{DC\ max.}$ (mΩ)	R (kΩ)	C_X (μF)	I_{Leak} (mA)	V_R (V)	$V_{L \rightarrow PE}$ (V (AC))	$V_{L \rightarrow N}$ (V (DC))	L (mm)	W (mm)	H (mm)	Version
810913006112	6	6	70	330	0.47	0	250	2000	1075	114.9	58.5	45	Low Leakage
810913010112	10	6	40	330	0.47								
810913014112	14	2.2	30	220	1								
810913020112	20	2.2	20	220	1								

I_R : Rated Current; L: Inductance; $R_{DC\ max.}$: DC Resistance max.; R: Discharge Resistance; C_X : X2-Capacitance; I_{Leak} : Leakage Current; V_R : Rated Voltage; $V_{L \rightarrow PE}$: Insulation Test Voltage L->PE; $V_{L \rightarrow N}$: Insulation Test Voltage L->N; W: Width; H: Height



WE-MK

MULTILAYER CERAMIC SMD INDUCTOR



Characteristics

- Coil integrated in a multilayer ceramic structure
- Extremely high self resonant frequency
- Inductive tolerances of $\pm 5\%$; $\pm 0.3\text{nH}$
- Inductance very stable over temperature
- Recommended solder profile: Reflow
- Operating temperature: -55°C to $+125^\circ\text{C}$

Applications

- High frequency circuits
- Bluetooth
- Wireless LAN
- Filter circuits
- Oscillators
- Pagers
- Laptops
- PCMCIA cards

New size available

0805

Order Code	L (nH)	Tol. L	Test Condition L	$Q_{\min.}$	Test Condition Q	$R_{DC \max.}$ (Ω)	I_R (mA)	f_{res} (MHz)
7447880015	1.5	$\pm 0.3\text{nH}$	100 MHz	10	100 MHz	0.1	300	4000
7447880027	2.7	$\pm 0.3\text{nH}$	100 MHz	12	100 MHz	0.1		4000
7447880047	4.7	$\pm 0.3\text{nH}$	100 MHz	12	100 MHz	0.2		3500
7447880056	5.6	$\pm 0.3\text{nH}$	100 MHz	15	100 MHz	0.23		3200
7447880068	6.8	$\pm 5\%$	100 MHz	15	100 MHz	0.25		2800
7447880082	8.2	$\pm 5\%$	100 MHz	15	100 MHz	0.28		2400
7447880110	10	$\pm 5\%$	100 MHz	15	100 MHz	0.3		2100
7447880127	27	$\pm 5\%$	100 MHz	18	100 MHz	0.55		1300
7447880133	33	$\pm 5\%$	100 MHz	18	100 MHz	0.6		1200
7447880156	56	$\pm 5\%$	100 MHz	18	100 MHz	0.75		800
7447880210	100	$\pm 5\%$	100 MHz	18	100 MHz	0.9		600
7447880212	120	$\pm 5\%$	50 MHz	13	50 MHz	1.95		500
7447880222	220	$\pm 5\%$	50 MHz	12	50 MHz	1.2		350
7447880247	470	$\pm 5\%$	50 MHz	10	50 MHz	2		200

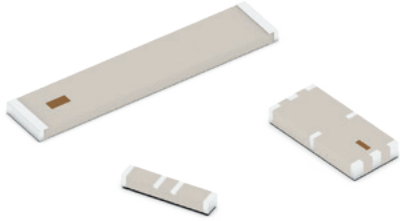
L: Inductance; Tol. L: Inductance (Tol.); Test Condition L: Inductance (Test cond.); $Q_{\min.}$: Q-Factor; Test Condition Q: Q-Factor (Test cond.); $R_{DC \max.}$: DC Resistance max.; I_R : Rated Current; f_{res} : Self Resonant Frequency



Check the complete series:
www.we-online.com/we-mk

WE-MCA

SMT MULTILAYER CHIP ANTENNA



Characteristics

- SMD multilayer chip antenna
- Extremely low profile
- Omni-directional radiation pattern
- Excellent size to performance ratio
- Smallest form factor in the industry
- Operating temperature: -40 °C to +85 °C

Applications

- IoT devices
- GSM 900
- WLAN/WiFi 2.4 & 5.5
- Bluetooth
- GPS/GNSS
- Zigbee
- LoRa 868 & 915
- LPD433

Low cost and high performance antennas

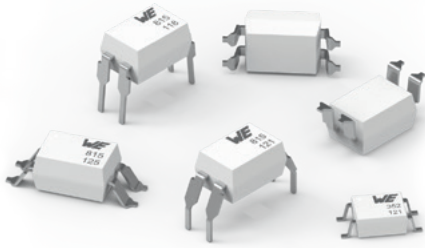
Order Code	Size	f	G _{peak} (dBi)	VSWR	Z (Ω)
74889302450	3.2 x 1.6 mm	2400-2500 MHz	0.5	2	50
74889502450	5.2 x 2.1 mm		2.5		
74889402450	7.0 x 2.0 mm		2.7		
74889102450	9.0 x 2.0 mm		3		

f: Frequency Range; G_{peak}: Peak Gain; Z: Impedance



WL-OCDA

OPTOCOUPLER DARLINGTON



Characteristics

- High isolation voltage
- Good stability of inner isolation
- Stable CTR in full operation temperature range
- Different leadframe options

Applications

- Programmable logic controllers
- Telephone/FAX
- Sequence controllers
- Measuring instrument
- Automatic vending machines

All binnings and packages available ex stock

DIP4

Order Code	Package	Input	$V_{CE\ max.}$ (V)	$I_{F\ max.}$ (mA)	Test Condition CTR	CTR _{min.} (%)	CTR _{max.} (%)	V_{ISO} (V (RMS))	Operating Temperature (°C)
141815140010	DIP 4, Standard	DC	40	60	$I_F = 1\ mA$ $V_{CE} = 2\ V$	600	7500	5000	-55 up to +110
141815141010	DIP 4, M-Type								
141815142000	DIP 4, S-Type								
141815143000	DIP 4, SL-Type								
141815144000	DIP 4, SLM-Type								

SOP4

Order Code	Package	Input	$V_{CE\ max.}$ (V)	$I_{F\ max.}$ (mA)	Test Condition CTR	CTR _{min.} (%)	CTR _{max.} (%)	V_{ISO} (V (RMS))	Operating Temperature (°C)
141355145000	SOP 4	DC	40	60	$I_F = 1\ mA$ $V_{CE} = 2\ V$	600	7500	3750	-55 up to +110
141352145000			350			1000	15000		

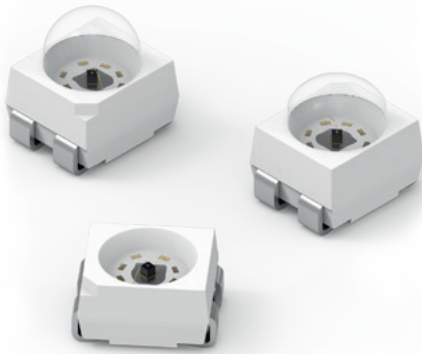
$V_{CE\ max.}$: Collector Emitter Voltage; $I_{F\ max.}$: Forward Current; Test Condition CTR: Current Transfer Ratio (Test cond.); CTR_{min.}: Current Transfer Ratio [min.]; CTR_{max.}: Current Transfer Ratio [max.]; V_{ISO} : Isolation Voltage



Check the complete series:
www.we-online.com/wl-ocda

WL-SITW

SMD INFRARED TOP LED WATERCLEAR



Characteristics

- Low energy consumption
- High reliability
- Low current requirement
- Fast switching
- IR emitter
- Standard size 3528

Applications

- Infrared sensors
- Distance measure
- Remote controls
- IR light barriers
- Smoke detectors

New PLCC 4 with
different viewing angles

3528 PLCC 4

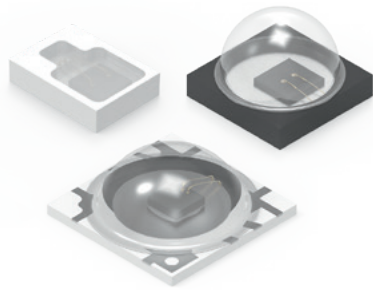
Order Code	Emitting Color	$\lambda_{\text{Peak typ.}}$ (nm)	$I_{\text{e typ.}}$ (mW/sr)	$V_{\text{F typ.}}$ (V)	Chip Technology	$2\theta_{50\% \text{ typ.}}$ (°)
15414185AA211	Infrared ■	850	40	1.5	AlGaAs	120
15414185A6011		850	60	1.5		60
15414185A3011		850	150	1.5		30
15414194AA211		940	30	1.4		120
15414194A6011		940	50	1.4		60
15414194A3011		940	120	1.4		30

$\lambda_{\text{Peak typ.}}$: Peak Wavelength [typ.]; $I_{\text{e typ.}}$: Radiant Intensity [typ.]; $V_{\text{F typ.}}$: Forward Voltage [typ.]; $2\theta_{50\% \text{ typ.}}$: Viewing Angle Phi 0° [typ.]



WL-SIQW

SMT INFRARED QFN LED WATERCLEAR



Characteristics

- High power output IR LED
- Compact size
- QuadFrame NoLead package
- Peak wavelength: 940 nm
- Low thermal resistance
- Standard soldering pad

Applications

- IR cameras
- Security cameras
- Face recognition
- Night vision
- Gaming and movement recognition

New QFN package

3535 QFN

Order Code	$\lambda_{\text{Peak typ.}}$ (nm)	$\Phi_{\text{e typ.}}$ (mW)	$V_{\text{F typ.}}$ (V)	$2\theta_{50\% \text{ typ.}}$ (°)
15435394A9040	940	700	1.7	90
15435394A9042		1300	3.2	

$\lambda_{\text{Peak typ.}}$: Peak Wavelength [typ.]; $\Phi_{\text{e typ.}}$: Radiant Flux [typ.]; $V_{\text{F typ.}}$: Forward Voltage [typ.]; $2\theta_{50\% \text{ typ.}}$: Viewing Angle Phi 0° [typ.]

3737

Order Code	$\lambda_{\text{Peak typ.}}$ (nm)	$I_{\text{e typ.}}$ (mW/sr)	$\Phi_{\text{e typ.}}$ (mW)	$V_{\text{F typ.}}$ (V)	$2\theta_{50\% \text{ typ.}}$ (°)
15437394AA540	940	150	600	1.7	150
15437394AA542		300	1200	3.2	

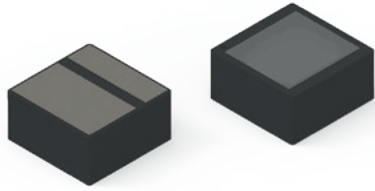
$\lambda_{\text{Peak typ.}}$: Peak Wavelength [typ.]; $I_{\text{e typ.}}$: Radiant Intensity [typ.]; $\Phi_{\text{e typ.}}$: Radiant Flux [typ.]; $V_{\text{F typ.}}$: Forward Voltage [typ.]; $2\theta_{50\% \text{ typ.}}$: Viewing Angle Phi 0° [typ.]



Check the complete series:
www.we-online.com/wl-siqw

WL-VCSL

VERTICAL CAVITY SURFACE EMITTING LASER



Characteristics

- VCSEL laser
- Wavelength: 850 & 940 nm
- High optical power
- Homogeneous radiation patterns
 - 60° x 45°
 - 110° x 85°

Applications

- Biometrical recognition
- LiDAR
- 3D recognition
- Time of flight
- Autonomous robotics
- Autonomous industry

Vertical cavity surface emitting laser

3535 Ceramic

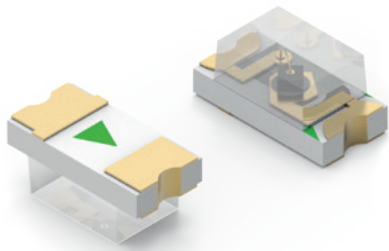
Order Code	$\lambda_{\text{Peak typ.}}$ (nm)	$\Phi_{\text{e typ.}}$ (mW)	$V_{\text{F typ.}}$ (V)	$2\theta_{50\%,X \text{ typ.}}$ (°)	$2\theta_{50\%,Y \text{ typ.}}$ (°)
159353850A6300	850	2100	2.1	60	45
159353850B1300				110	85

$\lambda_{\text{Peak typ.}}$: Peak Wavelength [typ.]; $\Phi_{\text{e typ.}}$: Radiant Flux [typ.]; $V_{\text{F typ.}}$: Forward Voltage [typ.]; $2\theta_{50\%,X \text{ typ.}}$: Viewing Angle (X-Axis) [typ.]; $2\theta_{50\%,Y \text{ typ.}}$: Viewing Angle (Y-Axis) [typ.]



WL-SMCW

MONO-COLOR CHIP LED WATERCLEAR



Characteristics

- Low energy consumption
- High reliability
- Low current requirement
- Fast switching
- No UV/IR radiation
- Wide viewing angle
- Better solderability
- Operating temperature: -40°C up to +100°C

Applications

- Backlighting for mobile and portable device keypads
- Indoor and outdoor message boards
- Flat backlighting for LCDs, switches and symbols
- Display for industrial control systems and traffic
- Miniaturized color effects
- Pedestrian mark
- Optical indicators
- Tabular backlight: LCD, telephone key-press, power-switches, display boards
- Signals and identifiers
- Backlight for automobile DVD
- Toys

Advanced series with max. operating temperature up to +100°C

0603 Advance

Order Code	Emitting Color	$\lambda_{\text{Peak typ.}}$ (nm)	$\lambda_{\text{Dom typ.}}$ (nm)	$I_{\text{V typ.}}$ (mcd)	$V_{\text{F typ.}}$ (V)	$2\theta_{50\% \text{ typ.}}$ (°)
150060SS75003	Super Red	645	630	320	1.9	140
150060RS75003	Red	630	625	530	2	
150060AS75003	Amber	610	605	350	2	
150060YS75003	Yellow	595	590	550	2	
150060VS75003	Bright Green	572	570	100	2	
150060GS75003	Green	515	525	1600	3.2	
150060BS75003	Blue	465	470	350	3.2	

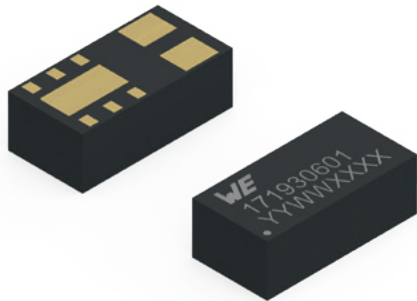
$\lambda_{\text{Peak typ.}}$: Peak Wavelength [typ.]; $\lambda_{\text{Dom typ.}}$: Dominant Wavelength [typ.]; $I_{\text{V typ.}}$: Luminous Intensity [typ.]; $V_{\text{F typ.}}$: Forward Voltage [typ.]; $2\theta_{50\% \text{ typ.}}$: Viewing Angle Phi 0° [typ.]



Check the complete series:
www.we-online.com/wl-smcw

MAGI³C-VDMM

VARIABLE STEP DOWN MICROMODULE



Characteristics

- Ultra wide input range
- Ideal for space constrained applications
- Very low profile LGA-8EP package
- Power good indicator to show V_{OUT} status
- Low conducted and radiated EMI (compliant to EN55032 class B / CISPR-32)
- 3 solder cycles supported

Applications

- Point-of-Load DC/DC applications for 24V, 18V, 15V, 12V, 9V, 5V industrial rails
- I/O interface power supply
- DSPs, FPGAs, MCUs and MPUs supply
- Supply for IoT applications
- HVAC and building control

MicroModule for 24V bus applications

Package LGA-8EP

Order Code	V_{IN} (V)	V_{OUT} (V)	I_{OUT} (A)	Version	L (mm)	W (mm)	H (mm)
171930601	3.5 - 36	1 - 6	0.3	Power Good	5	2.5	1.8

V_{IN} : Input Voltage; V_{OUT} : Output Voltage; I_{OUT} : Output Current; L: Length; W: Width; H: Height

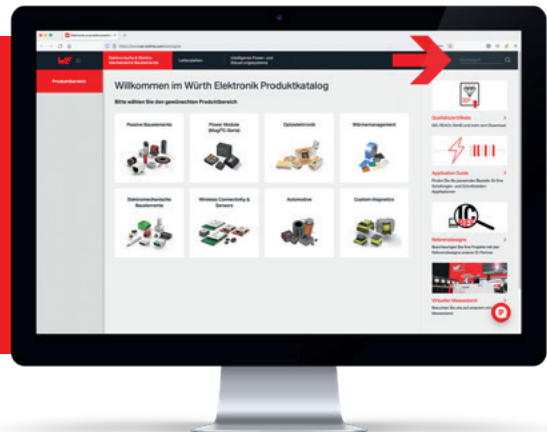


EMC COMPONENTS

HOW TO FIND DETAILED PRODUCT INFORMATION?

VISIT WWW.WE-ONLINE.COM AND SEARCH FOR PRODUCT SERIES INFORMATION, E.G.:

WE-CBF



FERRITES FOR PCB ASSEMBLY



WE-TMSB

Z @ 100 MHz: 10 ~ 1800 Ω
 I_{RZ} : 210 ~ 7500 mA
 R_{DC} : 2.95 m Ω ~ 1.91 Ω



WE-CMS

Z @ 25 MHz: 20 ~ 54 Ω
 Z @ 200 MHz: 30 ~ 83 Ω
 I_R : 17 ~ 21 A
 $R_{DC max}$: 3 m Ω



WE-CBF

Z @ 100 MHz: 5 ~ 2700 Ω
 I_{RZ} : 450 ~ 10000 mA
 $R_{DC max}$: 3 m Ω ~ 1.5 Ω



WE-SUKW

Z @ 25 MHz: 272 ~ 425 Ω
 Z @ 100 MHz: 416 ~ 580 Ω
 I_R : 5 A
 $R_{DC max}$: 11 ~ 12 m Ω



WE-CBF HF

Z @ 1 GHz: 180 ~ 1100 Ω
 I_{RZ} : 250 ~ 1300 mA
 $R_{DC typ}$: 0.13 ~ 1.2 Ω



WE-UKW

Z @ 25 MHz: 145 ~ 920 Ω
 Z @ 100 MHz: 230 ~ 1240 Ω
 I_R : 3 A



WE-MPSB

Z @ 100 MHz: 8 ~ 600 Ω
 I_{RZ} : 2100 ~ 10.500 mA
 $R_{DC typ}$: 1.0 ~ 43 m Ω



WE-MLS

Z @ 25 MHz: 115 ~ 292 Ω
 Z @ 100 MHz: 150 ~ 334 Ω
 I_R : 4 A



WE-PBF

Z @ 25 MHz: 23 ~ 65 Ω
 I_R : 14 ~ 18 A
 $R_{DC max}$: 0.4 ~ 0.9 m Ω



WE-WAFB

Z @ 10 MHz: 20 ~ 65 Ω
 Z @ 100 MHz: 70 ~ 130 Ω
 I_R : 3 ~ 6 A



WE-PF

Z_{max} : 2900 ~ 15000 Ω
 I_R : 4.5 ~ 10 A

FERRITES FOR CABLE ASSEMBLY



WE-STAR-BUENO

Z @ 25 MHz 1 turn: 120 ~ 180 Ω
 Z @ 100 MHz 1 turn: 200 ~ 350 Ω
 Cable Diameter: 2.5 - 5 ~ 4.5 - 8.5 mm



WE-STAR-TEC LFS

Z @ 1 MHz 1 turn: 20 ~ 94 Ω
 Z @ 10 MHz 1 turn: 32 ~ 65 Ω
 Cable Diameter: 3.5 - 5 ~ 22 - 25 mm



WE-STAR-TEC

Z @ 25 MHz 1 turn: 98 ~ 306 Ω
 Z @ 100 MHz 1 turn: 182 ~ 525 Ω
 Cable Diameter: 3.5 - 5 ~ 22 - 25 mm



WE-STAR-GAP

Z @ 25 MHz 1 turn: 28 ~ 35 Ω
 Z @ 500 MHz 1 turn: 345 ~ 400 Ω
 Cable Diameter: 4.5 - 8 ~ 8.5 - 12.5 mm



WE-STAR-RING

Z @ 25 MHz 1 turn: 55 ~ 83 Ω
 Z @ 100 MHz 1 turn: 110 ~ 165 Ω
 Cable Diameter: 8 ~ 27 mm



WE-STAR-FLAT

Z @ 25 MHz 1 turn: 42 ~ 97 Ω
 Z @ 100 MHz 1 turn: 101 ~ 194 Ω
 No. of Poles: 26 ~ 50



WE-STAR-CLIP

For the fixation of Snap Ferrite STAR-TEC (LFS), STAR-FIX (LFS) and STAR-GAP



WE-NCF

Z @ 25 MHz 1 turn: 48 ~ 100 Ω
 Z @ 100 MHz 1 turn: 93 ~ 200 Ω
 Cable Diameter: 7.8 ~ 26.5 mm

EMC COMPONENTS

FERRITES FOR CABLE ASSEMBLY



WE-SPLITRING

Z @ 25 MHz 1 turn: 98 ~ 306 Ω
Z @ 100 MHz 1 turn: 182 ~ 525 Ω
Cable Diameter: 3.5 - 5 ~ 25 mm



WE-SFA

Z @ 25 MHz 1 turn: 27 ~ 148 Ω
Z @ 100 MHz 1 turn: 57 ~ 267 Ω
No. of Poles: 10 ~ 64



WE-FLAT

Z @ 25 MHz 1 turn: 17 ~ 90 Ω
Z @ 100 MHz 1 turn: 42 ~ 166 Ω
Version: Snap-On with adhesive tape



WE-FLAT Ferrite for Flexible Printed Circuit Boards

Z @ 25 MHz 1 turn: 7 ~ 71 Ω
Z @ 100 MHz 1 turn: 19 ~ 130 Ω
Version: round, square



WE-FCAC

Easy fixation for flat cores on ribbon cables



WE-TOP

Z @ 25 MHz 1 turn: 25 ~ 110 Ω
Z @ 100 MHz 1 turn: 37 ~ 205 Ω
Cable diameter: 3.0 ~ 55.3 mm



WE-AFB LFS

Z @ 1 MHz 1 turn: 7.48 ~ 130 Ω
Z @ 10 MHz 1 turn: 18.8 ~ 100 Ω
Cable diameter: 0.8 ~ 17.65 mm



WE-AFB

Z @ 25 MHz 1 turn: 30 ~ 300 Ω
Z @ 100 MHz 1 turn: 45 ~ 451 Ω
Cable diameter: 3.3 ~ 17.5 mm



WE-SAFB

Z @ 25 MHz 1 turn: 20 ~ 144 Ω
Z @ 100 MHz 1 turn: 40 ~ 278 Ω
Cable diameter: 0.55 ~ 4 mm



WE-RIB

Z @ 25 MHz 1 turn: 35 ~ 126 Ω
Z @ 100 MHz 1 turn: 91 ~ 260 Ω
Cable diameter: 0.8 ~ 3.5 mm

FILTER CHOKES



WE-MI

L: 0.047 ~ 33 μH
I_B: 3 ~ 300 mA
R_{DC}: 0.15 ~ 2.1 Ω



WE-SD

L: 2 ~ 10 μH
I_B: 2.5 ~ 15 A
R_{DC}: 1.7 ~ 33 mΩ



WE-FI

L: 8.2 ~ 860 μH
I_B: 0.9 ~ 9 A
R_{DC}: 0.01 ~ 0.4 Ω



WE-CMB

L: 0.5 ~ 39 mH
I_B: 0.3 ~ 35 A
R_{DC}: 2.3 ~ 3000 mΩ
Number of Windings: 2



WE-CMBNC

L: 0.4 ~ 190 mH
I_B: 0.6 ~ 38 A
R_{DC}: 1.1 ~ 1000 mΩ
Number of Windings: 2



WE-CMB HC

L: 0.175 ~ 0.7 mH
I_B: 5 ~ 10 mA
R_{DC}: 4 ~ 15 mΩ
Number of Windings: 2



WE-CMB HV

L: 0.7 ~ 4.7 mH
I_B: 6.8 ~ 21.5 A
R_{DC}: 3.8 ~ 44 mΩ
Number of Windings: 2



WE-CMB NiZn

L: 14 ~ 110 μH
I_B: 1.5 ~ 10 A
R_{DC}: 2.7 ~ 80 mΩ
Number of Windings: 2



WE-ExB

L: 47 ~ 1000 μH
I_B: 4.5 ~ 15 A
R_{DC}: 4.6 ~ 42 mΩ
Number of Windings: 2



WE-CMBH

L: 1 ~ 20 mH
I_B: 2 ~ 15 A
R_{DC}: 7.5 ~ 230 mΩ
Number of Windings: 2

COMMON MODE CHOKES POWER LINES



WE-LF

L: 0.4 ~ 50 mH
 I_R : 0.3 ~ 6 A
 R_{DC} : 0.02 ~ 2.6 Ω
 Number of Windings: 2



WE-LF SMD

L: 0.7 ~ 47 mH
 I_R : 0.4 ~ 5.25 A
 R_{DC} : 0.03 ~ 2.6 Ω
 Number of Windings: 2



WE-TFC

L: 1.8 ~ 25 mH
 I_R : 0.25 ~ 1 A
 $R_{DC\ max}$: 0.31 ~ 3.6 Ω
 Number of Windings: 2



WE-FC

L: 1.1 ~ 43 mH
 I_R : 0.4 ~ 2.65 A
 $R_{DC\ max}$: 0.08 ~ 2.88 Ω
 Number of Windings: 2



WE-FCL

L: 3.9 ~ 100 mH
 I_R : 1.25 ~ 5 A
 R_{DC} : 50 ~ 900 m Ω
 Number of Windings: 2



WE-LPCC

L: 120 ~ 450 μ H
 I_R : 9.5 ~ 23.5 A
 $R_{DC\ max}$: 1.4 ~ 9.6 m Ω
 Number of Windings: 2

NEW



WE-FCLP

L: 6 ~ 100 mH
 I_R : 0.5 ~ 2.4 A
 R_{DC} : 220 ~ 3470 m Ω
 Number of Windings: 2



WE-TPB

L: 0.52 ~ 12 mH
 I_R : 6 ~ 24 A
 R_{DC} : 3 ~ 65 m Ω
 Number of Windings: 3



WE-TPB HV

L: 0.2 ~ 208 mH
 I_R : 7.2 ~ 46 A
 R_{DC} : 1.6 ~ 85 m Ω
 Number of Windings: 3

COMMON MODE CHOKES SIGNAL LINES



WE-CNSW

Z @ 100 MHz: 22 ~ 8000 Ω
 I_R : 90 ~ 2000 mA
 R_{DC} : 0.05 ~ 5.5 Ω
 Number of Windings: 2



WE-CNSW HF

Z @ 100 MHz: 60 ~ 120 Ω
 I_R : 280 ~ 600 mA
 R_{DC} : 220 ~ 300 m Ω
 Number of Windings: 2

NEW



WE-CMDC

Z @ 100 MHz: 700 ~ 1500 Ω
 I_R : 4.5 ~ 8 A
 R_{DC} : 6 ~ 21 m Ω
 Number of Windings: 2



WE-CCMF

f_c : 8 ~ 12 GHz
 I_R : 300 mA
 Common mode Attenuation @ 2450 MHz: 20 ~ 30 dB



WE-SLM

L: 11 ~ 470 μ H
 I_R : 300 ~ 400 mA
 R_{DC} : 0.18 ~ 0.58 Ω
 Number of Windings: 2



WE-SL1

L: 10 ~ 330 μ H
 I_R : 300 mA
 R_{DC} : 0.16 ~ 0.3 Ω
 Number of Windings: 2



WE-SL2

L: 10 ~ 20000 μ H
 I_R : 200 ~ 1700 mA
 R_{DC} : 0.06 ~ 2.6 Ω
 Number of Windings: 2



WE-SL3

L: 20 ~ 100 μ H
 I_R : 450 ~ 700 mA
 R_{DC} : 0.14 ~ 0.45 Ω
 Number of Windings: 2 ~ 3



WE-SL5

L: 120 ~ 4700 μ H
 I_R : 350 ~ 2500 mA
 R_{DC} : 0.025 ~ 0.72 Ω
 Number of Windings: 2



WE-SL5 HC

L: 5 ~ 30 μ H
 I_R : 1400 ~ 5000 mA
 R_{DC} : 0.0055 ~ 0.06 Ω
 Number of Windings: 2



WE-SL

L: 35 ~ 4700 μ H
 I_R : 0.8 ~ 2700 mA
 R_{DC} : 0.035 ~ 0.85 Ω
 Number of Windings: 2 ~ 4



WE-SCC

L: 1 ~ 1000 μ H
 I_R : 150 ~ 4750 mA
 R_{DC} : 0.01 ~ 4.3 Ω
 Number of Windings: 2



WE-UCF

L: 0.013 ~ 100 mH
 I_R : 0.15 ~ 10 A
 R_{DC} : 0.0027 ~ 8.5 Ω
 Number of Windings: 2

ESD AND SURGE PROTECTION



WE-TVS Standard Series

Operating Voltage: 3.3 ~ 24 V_{DC}
 C_{min} : 12 ~ 1650 pF
 Channels: 1 ~ 5
 Size: DFN1610-2L ~ SOT23-6L



WE-TVS High Speed

Operating Voltage: 3.3 ~ 5 V_{DC}
 C_{min} : 1 ~ 3 pF
 Channels: 2+1 ~ 4+1
 Size: SC70-6L ~ SOT23-6L



WE-TVS Super Speed

Operating Voltage: 1.2 ~ 5 V_{DC}
 C_{typ} : 0.18 ~ 0.6 pF
 Channels: 2 ~ 8
 Size: DFN1210-6L ~ MSOP-10L

EMC COMPONENTS

ESD AND SURGE PROTECTION



WE-VE

Operating Voltage: 5 ~ 26 V_{DC}
 C_{min}: 1 ~ 100 pF
 Size: 0402 - 0805



WE-VE ULC

Operating Voltage: 5 ~ 12 V_{DC}
 C_{min}: 0.2 pF
 Size: 0402 - 0603



WE-VE femtoF

Operating Voltage: 6 ~ 26 V_{DC}
 C_{typ}: 0.05 pF
 Size: 0402 - 0603



WE-VEA

Operating Voltage: 5 ~ 18 V_{DC}
 C_{typ}: 10 ~ 120 pF
 Size: 0508 - 0612



WE-VS

Operating Voltage: 2.5 ~ 60 V_{DC}
 Operating Voltage: 3.3 ~ 85 V_{AC}
 I_{peak}: 10 ~ 200 A
 W_{max}: 0.02 ~ 1.1 J
 Size: 0402 - 1206



WE-VD

Operating Voltage: 14 ~ 1000 VAC
 Operating Voltage: 18 ~ 1465 VDC
 I_{peak}: 100 ~ 10000 A
 W_{max}: 0.7 ~ 620 J
 Diameters: 5 ~ 20 mm



WE-TVSP

Operating Voltage: 5 ~ 440 VDC
 I_{peak} (10 / 100 μs): 2.5 ~ 326 A
 V_{clamp}: 9.2 ~ 713 V
 Size: DO-214AC: SMAJ
 DO-214AA: SMBJ
 DO-214AB: SMCJ, SMDJ

EMC SHIELDING SOLUTIONS



EMC Tapes

EMC tapes with copper tape, aluminum tape, conductive foam, conductive fabric



Board Level Shielding

WE-SHC & WE-SHC Seamless

Metal cabinets for board level shielding, ShieldDIY for prototyping, SMD & THT, frame & cover, one piece solution



EMI Gaskets & Grounding

WE-SECF, WE-SMGS, WE-EEL, WE-ST

SMD grounding contacts, grounding cables for earthing belts, cable shielding and metal clips



Magnetic Shielding WE-FAS,

WE-FSFS, WE-CPU

Absorber Sheets, Thermal Conductive & EMI Absorber Sheets, Flexible Ferrite Sheets, Ferrite Plates

LINE FILTERS

EXTENDED



WE-CLFS Line Filter

I_B: 1.5 ~ 20 A
 Inductance: 1 ~ 20 mH
 R_{DC}: 10 ~ 300 mΩ
 Phase: 1

D-SUB FILTER CONNECTORS



D-SUB Filter Connectors

Bent 90°, solder cup, solder pin straight, filter adapter



All EMC Components at a glance:

www.we-online.com/emc-components



Explore our application notes for EMC Components:

www.we-online.com/appnotes



Component libraries available for:

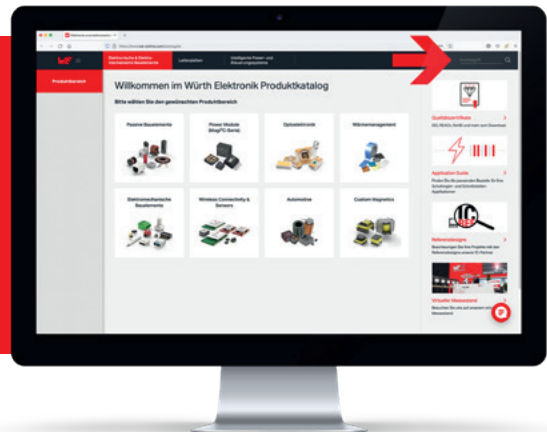
- PCB library: Altium Designer, EAGLE, Cadence OrCAD & Allegro, Zuken CAD-Star
 - S-Parameter & SPICE model: S-Parameter, LTspice, PSpice, Spectre
 - RF & microwave simulation models: Modelithics
- www.we-online.com/library

POWER MAGNETICS

























HOW TO FIND DETAILED PRODUCT INFORMATION?

VISIT WWW.WE-ONLINE.COM AND SEARCH FOR PRODUCT SERIES INFORMATION, E.G.:

WE-PD



SINGLE COIL POWER INDUCTORS

 <p>WE-PMI L: 0.11 ~ 10 µH I_{RZ}: 650 ~ 4000 mA R_{DC max}: 8.75 ~ 625 mΩ I_{SAT}: 100 ~ 5000 mA</p>	 <p>WE-MAPI L: 0.33 ~ 47 µH I_{RZ}: 0.39 ~ 9.9 A R_{DC typ}: 6 ~ 2090 mΩ I_{SAT}: 1.18 ~ 12.4 A</p>	 <p>WE-PD4 L: 0.47 ~ 10000 µH I_{RZ}: 0.07 ~ 18 A R_{DC}: 0.002 ~ 39 Ω I_{SAT}: 14.25 A</p>
 <p>WE-PMCI L: 0.24 ~ 2.2 µH I_{RZ}: 1000 ~ 5500 mA R_{DC}: 10 ~ 166 mΩ I_{SAT}: 1700 ~ 12000 mA</p>	 <p>WE-TPC L: 0.056 ~ 1500 µH I_{RZ}: 0.08 ~ 8.5 A R_{DC}: 0.0035 ~ 9 Ω I_{SAT}: 0.05 ~ 10 A</p>	 <p>WE-HCI L: 0.13 ~ 82 µH I_{RZ}: 3.5 ~ 41.5 A R_{DC}: 0.35 ~ 34.5 mΩ I_{SAT}: 4 ~ 65 A</p>
 <p>WE-GF L: 0.1 ~ 1000 µH I_{RZ}: 30 ~ 450 mA R_{DC max}: 0.32 ~ 50 Ω</p>	 <p>WE-SPC L: 0.22 ~ 100 µH I_{RZ}: 0.40 ~ 5.30 A R_{DC}: 0.014 ~ 1.133 Ω I_{SAT}: 0.68 ~ 13.5 A</p>	 <p>WE-HCC L: 0.22 ~ 10 µH I_{RZ}: 4.4 ~ 27 A R_{DC}: 1.1 ~ 38.5 mΩ I_{SAT}: 7 ~ 85 A</p>
 <p>WE-GFH L: 1.0 ~ 220 µH I_{RZ}: 160 ~ 1900 mA R_{DC}: 81 ~ 9126 mΩ</p>	 <p>WE-PD L: 0.47 ~ 2200 µH I_{RZ}: 0.2 ~ 23.5 A R_{DC}: 0.003 ~ 9.44 Ω I_{SAT}: 0.18 ~ 26.4 A</p>	 <p>WE-HCF L: 0.7 ~ 680 µH I_{RZ}: 4.8 ~ 56 A R_{DC}: 0.44 ~ 118.3 mΩ I_{SAT}: 3 ~ 125 A</p>
 <p>WE-LQ L: 1 ~ 2200 µH I_{RZ}: 0.04 ~ 1.8 A R_{DC}: 0.08 ~ 47 Ω</p>	 <p>WE-PDF L: 0.22 ~ 27 µH I_{RZ}: 4.3 ~ 19 A R_{DC}: 1.95 ~ 42.5 mΩ I_{SAT}: 3.1 ~ 32 A</p>	 <p>WE-HCFT L: 1 ~ 65 µH I_{RZ}: 17.2 ~ 75 A R_{DC}: 0.34 ~ 13.13 mΩ I_{SAT}: 8.8 ~ 125 A</p>
 <p>WE-LQS L: 0.16 ~ 10000 µH I_{RZ}: 0.1 ~ 8 A R_{DC}: 6 ~ 22800 mΩ I_{SAT}: 140 ~ 16000 mA</p>	 <p>WE-PD2SR L: 1.2 ~ 220 µH I_{RZ}: 0.67 ~ 4.85 A R_{DC typ}: 8.5 ~ 743 mΩ I_{SAT}: 0.58 ~ 6 A</p>	 <p>WE-HIDA L: 8.2 ~ 22 µH I_{RZ}: 5.7 ~ 19 A R_{DC}: 2.5 ~ 14.8 mΩ I_{SAT}: 6.5 ~ 58 A</p>
 <p>WE-LQSH L: 0.47 ~ 10 µH I_{RZ}: 0.58 ~ 4.5 A R_{DC}: 18 ~ 680 mΩ I_{SAT}: 0.95 ~ 15.5 A</p>	 <p>WE-PD2 L: 1 ~ 2200 µH I_{RZ}: 0.18 ~ 6 A R_{DC}: 0.007 ~ 4.4 Ω I_{SAT}: 0.18 ~ 11 A</p>	 <p>WE-LHMD L: 8.2 ~ 22 µH I_{RZ}: 2 ~ 7 A R_{DC}: 16 ~ 104 mΩ I_{SAT}: 13 ~ 25 A</p>
 <p>WE-LQFS L: 1.0 ~ 470 µH I_{RZ}: 0.26 ~ 4.47 A R_{DC}: 18 ~ 2336 mΩ I_{SAT}: 0.18 ~ 4.06 A</p>	 <p>WE-PD3 L: 1 ~ 1000 µH I_{RZ}: 0.19 ~ 3.9 A R_{DC}: 0.027 ~ 3.2 Ω I_{SAT}: 0.02 ~ 8 A</p>	 <p>WE-HCM L: 0.025 ~ 1.5 µH I_{RZ}: 23 ~ 70 A R_{DC}: 0.114 ~ 0.7 mΩ I_{SAT}: 8 ~ 125 A</p>

POWER MAGNETICS


SINGLE COIL POWER INDUCTORS

WE-XHMI



L: 0.18 ~ 33 μ H
 I_B : 4.7 ~ 20.0 A
 R_{DC} : 1.32 ~ 31.0 m Ω
 I_{SAT} : 7.6 ~ 58 A

WE-LHMI



L: 0.1 ~ 100 μ H
 I_B : 1 ~ 32.5 A
 R_{DC} : 0.60 ~ 500 m Ω
 I_{SAT} : 2 ~ 125 A

WE-FAMI



L: 3.0 ~ 22.0 μ H
 I_B : 3.7 ~ 14.5 A
 R_{DC} : 3.1 ~ 30.9 m Ω
 I_{SAT} : 5.7 ~ 19.7 A

WE-TI



L: 1 ~ 68000 μ H
 I_B : 0.05 ~ 8.5 A
 R_{DC} : 0.006 ~ 90.8 Ω
 I_{SAT} : 0.07 ~ 15 A

WE-TIS



L: 1.3 ~ 8200 μ H
 I_B : 0.1 ~ 8.5 A
 R_{DC} : 0.006 ~ 12.5 Ω
 I_{SAT} : 0.05 ~ 14 A

WE-SI



L: 12 ~ 1619 μ H
 I_B : 0.5 ~ 5 A
 R_{DC} : 0.008 ~ 0.7 Ω
 I_{SAT} : 0.5 ~ 6.9 A

WE-PD HV



L: 47 ~ 6800 μ H
 I_B : 0.24 ~ 1.7 A
 R_{DC} : 0.16 ~ 9.6 Ω
 I_{SAT} : 0.2 ~ 2.3 A

WE-PD2 HV



L: 560 ~ 2200 μ H
 I_B : 0.15 ~ 0.41 A
 R_{DC} : 1.77 ~ 6 Ω
 I_{SAT} : 0.2 ~ 0.41 A

WE-TI HV



L: 220 ~ 3300 μ H
 I_B : 0.25 ~ 0.9 A
 R_{DC} : 0.5 ~ 5.9 Ω
 I_{SAT} : 0.27 ~ 1.3 A

DUAL COIL POWER INDUCTORS

WE-EHPI



L₁: 7 ~ 25 μ H
 L_2 : 10000 ~ 70000 μ H
 R_{DC1} : 0.085 ~ 0.2 Ω
 R_{DC2} : 42 ~ 205 Ω

WE-TDC



L: 0.33 ~ 22 μ H
 I_B : 0.7 ~ 4.5 A
 R_{DC} : 0.0111 ~ 0.435 Ω

WE-DD



L: 1.3 ~ 470 μ H
 I_B : 0.3 ~ 8.6 A
 R_{DC} : 0.011 ~ 1.4 Ω

WE-DCT



L: 0.091 ~ 100 μ H
 I_B : 1.1 ~ 14.5 A
 R_{DC} : 2.8 ~ 265 m Ω
 I_{SAT} : 1.1 ~ 14.5 A

WE-CFWI




L: 0.8 ~ 10 μ H
 I_B : 11.5 ~ 28 A
 R_{DC} : 1.6 ~ 13.9 m Ω
 I_{SAT} : 14.25 A

WE-DPC



L: 1 ~ 100 μ H
 I_B : 0.35 ~ 4.5 A
 R_{DC} : 25 ~ 1990 m Ω
 I_{SAT} : 14.25 A

WE-MTCI



L₁: 10 ~ 33 μ H
 L_2 : 22.5 ~ 297 μ H
 R_{DC1} : 349 ~ 1466 m Ω
 R_{DC2} : 408 ~ 3758 m Ω

WE-DPC HV



L: 1 ~ 47 μ H
 I_B : 0.6 ~ 2.9 A
 R_{DC} : 32 ~ 840 m Ω

WE-TDC HV



L: 4.7 ~ 33 μ H
 I_B : 0.75 ~ 2.45 A
 R_{DC} : 85 ~ 700 m Ω


WE-MCRI



L: 1 ~ 47 μ H
 I_B : 1.5 ~ 17 A
 R_{DC} : 4.5 ~ 312 m Ω


WIRELESS POWER TRANSMISSION

EXTENDED WE-WPCC Wireless Power Transmitter Coil




L: 2.8 ~ 24 μ H
 Q : 30 ~ 220
 I_B : 2.0 ~ 18 A
 R_{DC} : 10 ~ 255 m Ω

EXTENDED WE-WPCC Wireless Power Array




L: 6.4 ~ 12.5 μ H
 μ HQ: 100 ~ 145
 I_B : 8.0 ~ 10.0 A
 R_{DC} : 38 ~ 56 m Ω

EXTENDED WE-WPCC Wireless Power Receiver Coil



L: 1.4 ~ 47.0 μ H
 Q : 10 ~ 50
 I_B : 0.40 ~ 5.0 A
 R_{DC} : 0.08 ~ 1200 Ω


WE-WPCC WPT / NFC Combination Coil



L: L1 = 6.3 ~ 24 μ H
 L2 = 0.7 ~ 1.6 μ H
 Q : Q1 = 19 ~ 125
 Q2 = 47 ~ 82
 I_B : IR1 = 6 ~ 7.5 A
 IR2 = 2.6 ~ 50 A
 R_{DC} : RDC1 = 0.048 ~ 0.4 Ω
 RDC2 = 0.03 ~ 0.1 Ω

PFC CHOKES

WE-PFC



L: 150 ~ 1800 μ H
 I_B : 0.3 ~ 3.0 A
 R_{DC1} : 78 ~ 1550 m Ω
 R_{DC2} : 140 ~ 1200 m Ω

HIGH PERFORMANCE	1:1 HIGH VOLTAGE
CONSUMER	1:1 HIGH CURRENT
LOW PROFILE	HIGH VOLTAGE
HIGH CURRENT	1:N MULTI TURNS RATIO
SEPIC	THT INDUCTORS
CLASS D	ALL PURPOSE

POWER TRANSFORMERS



WE-FLEX

suitable for all switch mode power supply topologies like: Buck-Converter, Boost-Converter, SEPIC-Converter, Flyback-Converter, Forward-Converter and Push-Pull-Converter



WE-UNIT

U_i: 85 ~ 265 Vac
U_{O1}: 5 ~ 24 V
I_{O1}: 0.13 ~ 2.0 A



WE-FLEX+

suitable for all switch mode power supply topologies like: Buck-Converter, Boost-Converter, SEPIC-Converter, Flyback-Converter, Forward-Converter and Push-Pull-Converter



WE-GDT

L: 260 ~ 650 µH
R_{DC1}: 520 ~ 1200 mΩ
R_{DC2}: 150 ~ 600 mΩ
R_{DC3}: 170 ~ 600 mΩ



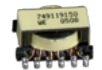
WE-FLEX HV

suitable for all switch mode power supply topologies like: Buck-Converter, Boost-Converter, SEPIC-Converter, Flyback-Converter, Forward-Converter and Push-Pull-Converter



WE-GDTI

L: 735 ~ 1800 µH
R_{DC1}: 1000 ~ 1600 mΩ
R_{DC2}: 600 ~ 1300 mΩ
R_{DC3}: 650 ~ 1300 mΩ



WE-PoE

suitable for Power over Ethernet ICs



WE-CST

for Switch Mode Power Supply and AC current detection



WE-PoE+

Compliant with the 30W PoE+ objectives of IEEE802.3at

Suitable for PoE+ powered devices



WE-AGDT

Input Voltage: 9 - 18 - 18 - 36 V
Output Unipolar: 15 - 20 V
Output Bipolar: +15 / -4 V
Interwinding Capacitance: 6.8 pF
Total Output Power: Up to 6 W



WE-PoEH

- PoE and PoE+ powered devices
- Flyback or Forward Transformer
- designed for 12 V, 24 V or 48 V input of Switching Mode Power Supply



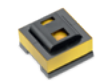
WE-FB

for LT3573, LT3751, LT3574, LT3575, LT3748



WE-UOST

U_i: 85 ~ 265 V_{ac}
U_{O1}: 5 ~ 24 V
I_{O1}: 0.56 ~ 3.0 A



WE-LLCR

U_i: 360 ~ 400 V_{dc}
U_o: 12, 24 or 48 V_{dc}
P: 150, 200 or 250 W



All Power Magnetic Components at a glance:

www.we-online.com/power-magnetics



Explore our application notes for Power Magnetics:

www.we-online.com/appnotes



Component libraries available for:

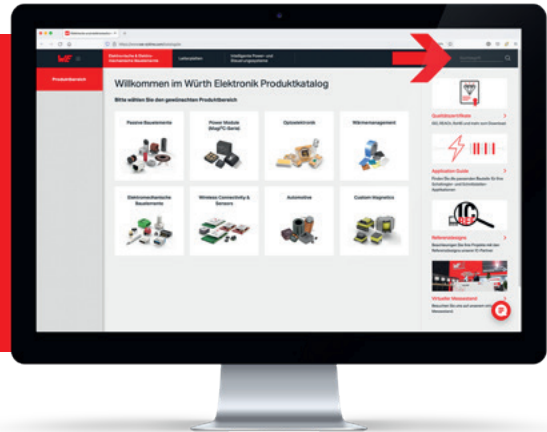
- PCB library: Altium Designer, EAGLE, Cadence OrCAD & Allegro, Zuken CAD-Star
 - S-Parameter & SPICE model: S-Parameter, LTSpice, PSpice, Spectre
 - RF & microwave simulation models: Modelithics
- www.we-online.com/library

SIGNAL & COMMUNICATIONS

HOW TO FIND DETAILED PRODUCT INFORMATION?

VISIT WWW.WE-ONLINE.COM AND SEARCH FOR PRODUCT SERIES INFORMATION, E.G.:

WE-ASI



AS-INTERFACE INDUCTOR



WE-ASI

L: 3 ~ 18.0 mH
 I_R : 0.08 ~ 0.5 A
 R_{DC} : 2.9 ~ 57.7 Ω

LAN TRANSFORMERS



WE-LAN

Data rate: 10/100/1000/2.5G/5GBASE-T
 Ports: 1~4
 Temp. Range: -40 up to +125 °C
 PoE: PoE (up to 2 A per center tap)



WE-LAN 10G

Data rate: 10GBASE-T
 Ports: 1
 Temp. Range: -40 up to +85 °C
 PoE: PoE (up to 1.5 A per center tap)



WE-LAN AQ

Data rate: 10/100/1000BASE-T
 Ports: 1
 Temp. Range: -40 up to +85 °C
 PoE: PoE (up to 720 mA per center tap)

EXTENDED



WE-RJ45 LAN

Data rate: 10/100/1000BASE-T
 Ports: 1x1 - 1x2 - 2x4
 Temp. Range: -40 up to +85 °C
 PoE: PoE (up to 1 A per center tap)



WE-RJ45 LAN 10G

Data rate: 10GBASE-T
 Ports: 1
 Temp. Range: -40 up to +85 °C
 PoE: 350 ~ 1000 mA



WE-STST

Data rate (Standard Ethernet): 10/100/1000/10GBASE-T
 Data rate (Single Pair Ethernet): 10/100/1000BASE-T1
 Temp. Range: -40 up to +105 °C
 PoE: PoE (up to 600 mA)

NEW



WE-LANMX

Data rate: 10/100BASE-T
 Code: D
 Temp. Range: -40 up to +85 °C
 PoE: non-PoE

FILTER SOLUTIONS



WE-EPLE

USB-A connector with integrated circuit protection device and EMI noise reduction

RF INDUCTORS



WE-KI

L ($\pm 2\%$ or $\pm 5\%$): 1 ~ 1800 nH
 Q: 15 ~ 60
 SRF: 188 ~ 12500 MHz
 I_R : 100 ~ 1360 mA
 Sizes: 0402, 0603, 0805, 1008



WE-KI HC

L ($\pm 2\%$): 1 ~ 390 nH
 Q: 18 ~ 46
 SRF: 880 ~ 16000 MHz
 I_R : 170 ~ 2300 mA
 Sizes: 0402, 0603



WE-RFI

L ($\pm 5\%$): 0.47 ~ 47 μ H
 Q: 15 ~ 45
 SRF: 17 ~ 375 MHz
 I_R : 45 ~ 500 mA
 Sizes: 0805, 1008



WE-RFH

L ($\pm 5\%$): 0.56 ~ 10 μ H
 Q: 15 ~ 45
 SRF: 40 ~ 415 MHz
 I_R : 300 ~ 760 mA
 Sizes: 1008



WE-TCI

L (± 0.1 nH or 2 %): 1 ~ 22 nH
 Q: 8 ~ 13
 SRF: 2800 ~ 9000 MHz
 I_R : 90 ~ 700 mA
 Sizes: 0201, 0402

EXTENDED



WE-MK

L ($\pm 2\%$ or $\pm 5\%$): 1 ~ 470 nH
 Q: 8 ~ 12
 SRF: 300 ~ 10000 MHz
 I_R : 110 ~ 470 mA
 Sizes: 0201, 0402, 0603, 0805



WE-CAIR

L ($\pm 2\%$ or $\pm 5\%$): 1.65 ~ 538 nH
 Q: 100 ~ 140
 SRF: 0.49 ~ 12.5 GHz
 I_R : 1.5 ~ 4 A
 Sizes: 1322, 1340, 3136, 3168, 4248, 5910



WE-AC HC

L ($\pm 20\%$): 22 ~ 146 nH
 Q_{typ} : 163 ~ 280
 S_{RFtyp} : 332 ~ 867 MHz
 I_R : 19 ~ 40 A
 Sizes: 1010, 1212

SIGNAL FILTERS



WE-LPF

Low-Pass Filter
 Frequency Range: 902 ~ 5875 MHz
 Sizes: 0603, 0805



WE-BPF

Band-Pass Filter
 Frequency Range: 2400 ~ 5920 MHz
 Sizes: 0805, 1008

BALUN



WE-BAL

Balun
 Frequency Range: 2400 ~ 5875 MHz
 Sizes: 0603, 0805

ANTENNAS

EXTENDED



WE-MCA

Multilayer Chip Antenna
 Frequency Range: 423 ~ 5875 MHz



All Signal & Communications
 Components at a glance:
www.we-online.com/signal-com



Explore our application notes for
 Signal & Communications:
www.we-online.com/appnotes



Component libraries available for:

- PCB library: Altium Designer, EAGLE, Cadence OrCAD & Allegro, Zuken CAD-Star
- S-Parameter & SPICE model: S-Parameter, LTspice, PSpice, Spectre
- RF & microwave simulation models: Modelithics

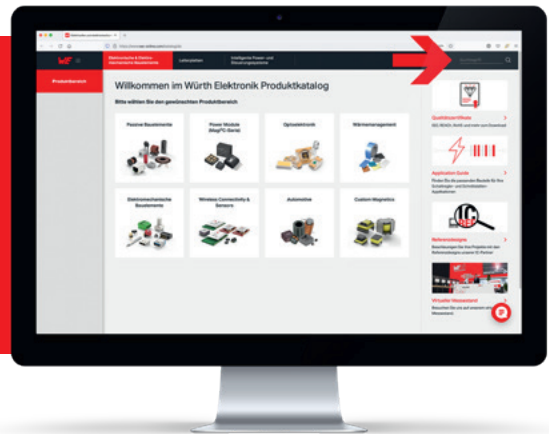
www.we-online.com/library

QUARTZ & OSCILLATORS

HOW TO FIND DETAILED PRODUCT INFORMATION?

VISIT WWW.WE-ONLINE.COM AND SEARCH FOR PRODUCT SERIES INFORMATION, E.G.:

WE-XTAL



QUARTZ CRYSTALS



WE-XTAL

Frequency: 1.8432 – 50 MHz
 Tolerance: $\pm 7 - \pm 50$ ppm
 Stability: $\pm 10 - \pm 100$ ppm
 Load Capacitance: 5 – 30 pF
 Size: 1.2 x 1.0 mm – 13.4 x 4.9 mm



WE-XTAL (Watch)

Frequency: 32.7680 kHz
 Load Capacitance: 4 pF – 12.5 pF
 Size: 1.2 x 1.0 mm – 9.5 x 2.54 mm

CRYSTAL OSCILLATORS



WE-SPXO

Frequency: 32.768 kHz,
 3.6864 – 156.25 MHz
 Stability: ± 25 ppm – ± 100 ppm
 Supply Voltage: 1.8 V – 5.0 V
 Output Logic: CMOS, HCMOS,
 HCMOS/TTL, LVDS, LVPECL
 Size: 2.0 x 1.6 mm – 7.0 x 5.0 mm



All Frequency Products at a glance:
www.we-online.com/frequency-products



Component libraries available for:

- PCB library: Altium Designer, EAGLE, Cadence OrCAD & Allegro, Zuken CAD-Star
- S-Parameter & SPICE model: S-Parameter, LTspice, PSpice, Spectre
- RF & microwave simulation models: Modelithics

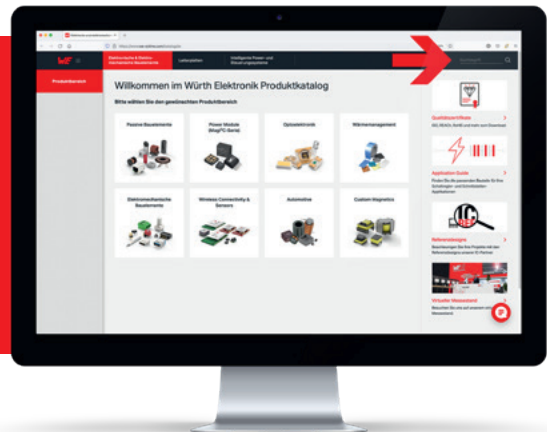
www.we-online.com/library

CAPACITORS

HOW TO FIND DETAILED PRODUCT INFORMATION?

VISIT WWW.WE-ONLINE.COM AND SEARCH FOR PRODUCT SERIES INFORMATION, E.G.:

WCAP-ATG8



ALUMINIUM ELECTROLYTIC CAPACITORS RADIAL THT

WCAP-ATG8
General Purpose +85 °C
C: 0.1 – 33000 µF
UR: 10 – 400 V_{DC}
Temp.: -40 °C or -25 °C up to +85 °C
Endurance: 2000 h

WCAP-ATG5
General Purpose +105 °C
C: 0.1 – 18000 µF
U_R: 10 – 400 V_{DC}
Temp.: -40 °C or -25 °C up to +105 °C
Endurance: 2000 h

WCAP-AT1H
Long Life
C: 6.8 – 3300 µF
U_R: 10 – 450 V_{DC}
Temp.: -40 °C or -25 °C up to +105 °C
Endurance: 5000 – 10000 h

WCAP-ATET
High Temperature +125 °C
C: 0.47 – 1000 µF
U_R: 10 – 350 V_{DC}
Temp.: -40 °C or -25 °C up to +125 °C
Endurance: 1000 – 2000 h

WCAP-ATLI
Low Impedance
C: 4.7 – 6800 µF
U_R: 10 – 100 V_{DC}
Temp.: -55 °C up to +105 °C
Endurance: 2000 – 5000 h

WCAP-ATUL
Low Leakage & Long Life
C: 22 – 4700 µF
U_R: 10 – 100 V_{DC}
Temp.: -40 °C up to +105 °C
Endurance: 4000 – 10000 h

WCAP-ATLL
Long Life
C: 0.47 – 6800 µF
U_R: 10 – 50 V_{DC}
Temp.: -55 °C up to +105 °C
Endurance: 3000 – 10000 h

ALUMINIUM ELECTROLYTIC CAPACITORS V-CHIP SMT

WCAP-ASLI
Low Impedance
C: 0.1 – 6800 µF
UR: 6.3 – 100 V_{DC}
Temp.: -55 °C up to +105 °C
Endurance: 2000 h

WCAP-ASLL
Low Impedance & Long Life
C: 1.0 – 6800 µF
U_R: 6.3 – 450 V_{DC}
Temp.: -55 °C or -40 °C up to +105 °C
Endurance: 2000 – 5000 h

WCAP-ASLU
Low Leakage Current
C: 0.1 – 330 µF
U_R: 6.3 – 63 V_{DC}
Temp.: -40 °C up to +85 °C
Endurance: 1000 – 2000 h

WCAP-ASNP
Non-Polar
C: 0.1 – 560 µF
U_R: 6.3 – 50 V_{DC}
Temp.: -40 °C up to +85 °C
Endurance: 2000 h

WCAP-AS5H
Long Life
C: 0.1 – 1000 µF
U_R: 6.3 – 50 V_{DC}
Temp.: -40 °C up to +105 °C
Endurance: 5000 h

ALUMINIUM ELECTROLYTIC CAPACITORS SNAP-IN

WCAP-AIG8
General Purpose +85 °C
C: 47 – 6800 µF
UR: 63 – 450 V_{DC}
Temp.: -40 °C or -25 °C up to +85 °C
Endurance: 2000 h

WCAP-AIE8
Long Life
C: 68 – 6800 µF
U_R: 63 – 450 V_{DC}
Temp.: -40 °C or -25 °C up to +105 °C
Endurance: 3000 h

WCAP-AIG5
General Purpose +105 °C
C: 33 – 10000 µF
U_R: 63 – 450 V_{DC}
Temp.: -40 °C or -25 °C up to +105 °C
Endurance: 2000 h

WCAP-AI3H
Long Life
C: 68 – 10000 µF
U_R: 63 – 450 V_{DC}
Temp.: -40 °C or -25 °C up to +105 °C
Endurance: 3000 h

CAPACITORS

ALUMINIUM POLYMER CAPACITORS RADIAL THT



WCAP-PTG5
General Purpose +105 °C
C: 39 – 2000 μ F
 U_R : 6.3 – 25 V_{DC}
Temp.: -55 °C up to +105 °C
Endurance: 2000 h



WCAP-PTHR
Low ESR & High Voltage
C: 10 – 150 μ F
 U_R : 35 – 100 V_{DC}
Temp.: -55 °C up to +105 °C
Endurance: 2000 h



WCAP-PTHT
High Temperature +125 °C
C: 22 – 2000 μ F
 U_R : 6.3 – 50 V_{DC}
Temp.: -55 °C up to +125 °C
Endurance: 2000 h



WCAP-PT5H
Long Life
C: 22 – 2000 μ F
 U_R : 6.3 – 35 V_{DC}
Temp.: -55 °C up to +105 °C
Endurance: 5000 h

ALUMINIUM POLYMER CAPACITORS V-CHIP SMT



WCAP-PSLC
Large Capacitance
C: 10 – 2000 μ F
 U_R : 6.3 – 100 V_{DC}
Temp.: -55 °C up to +105 °C
Endurance: 2000 h



WCAP-PSLP
Low Profile
C: 4.7 – 390 μ F
 U_R : 6.3 – 100 V_{DC}
Temp.: -55 °C up to +105 °C
Endurance: 2000 h



WCAP-PSHP
High Ripple Current
C: 6.8 – 1200 μ F
 U_R : 6.3 – 100 V_{DC}
Temp.: -55 °C up to +105 °C
Endurance: 2000 – 5000 h

ALUMINIUM POLYMER CAPACITORS H-CHIP SMT



WCAP-PHGP
General Purpose
C: 100 – 560 μ F
 U_R : 2 – 6.3 V_{DC}
Temp.: -55 °C up to +105 °C
Endurance: 2000 h



WCAP-PHLE
Low ESR
C: 100 – 560 μ F
 U_R : 2 – 6.3 V_{DC}
Temp.: -55 °C up to +105 °C
Endurance: 2000 h



WCAP-PHSE
Super Low ESR
C: 330 – 560 μ F
 U_R : 2 – 2.5 V_{DC}
Temp.: -55 °C up to +105 °C
Endurance: 2000 h

ALUMINIUM POLYMER CAPACITORS H-CHIP SMT



WCAP-CSGP
General Purpose
C: 0.5 pF – 100 μ F
 U_R : 6.3 – 100 V_{DC}
Ceramic: NPO, X7R, X5R



WCAP-CSMH
Mid and High Voltage
C: 10 pF – 470 nF
 U_R : 200 – 3,000 V_{DC}
Ceramic: NPO, X7R



WCAP-CSRF
High Frequency
C: 0.2 pF – 33 pF
 U_R : 25 – 50 V_{DC}
Ceramic: NPO



WCAP-CSST
Soft Termination
C: 220 pF – 2.2 μ F
 U_R : 16 – 2,000 V_{DC}
Ceramic: X7R

DC FILM CAPACITORS



WCAP-FTBP Boxed Type
Metallized Polypropylene
C: 33 nF – 6.8 μ F
 U_R : 160 – 630 V_{DC}
Pitch: 7.5 / 10.0 / 15.0 / 22.5 / 27.5 mm
Dielectric: Polypropylene



WCAP-FTBE Boxed Type
Metallized Polyester
C: 10 nF – 6.8 μ F
 U_R : 100 – 1,000 V_{DC}
Pitch: 7.5 / 10.0 / 15.0 / 22.5 / 27.5 / 37.5 mm
Dielectric: Polyester



WCAP-STSC
Standard Cylindrical
C: 3 – 50 F
 U_R : 2.7 V_{DC}
Temp.: -40 °C up to +65 °C

DC FILM CAPACITORS



WCAP-FTXX X2-Capacitors

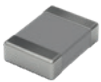
C: 5.6 nF – 6.8 μF
U_g: 310 V_{AC}
Pitch: 7.5 / 10.0 / 12.5 / 15.0 / 22.5 /
27.5 / 37.5 mm
Safety class: X2



WCAP-FTX2 X2-Capacitors

C: 5.6 nF – 6.8 μF
U_g: 275 V_{AC}
Pitch: 7.5 / 10.0 / 12.5 / 15.0 / 22.5 /
27.5 / 37.5 mm
Safety class: X2

SMT-CHIP



WCAP-CSSA Safety Capacitors

C: 33 pF – 4.7 nF
U_g: 250 V_{AC}
Ceramic: NPO, X7R
Safety class: X1 / Y2, X2



All Capacitors at a glance
www.we-online.com/capacitors



Explore our application notes for
Capacitors:
www.we-online.com/appnotes



Component libraries available for:

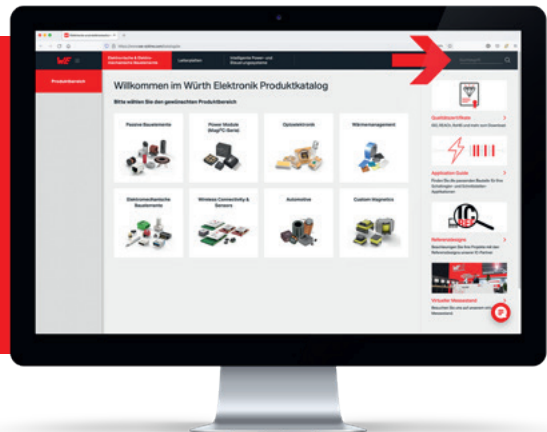
- PCB library: Altium Designer, EAGLE, Cadence OrCAD & Allegro, Zuken CAD-Star
- S-Parameter & SPICE model: S-Parameter, LTspice, PSpice, Spectre
- RF & microwave simulation models: Modelithics
www.we-online.com/library

RESISTORS

HOW TO FIND DETAILED PRODUCT INFORMATION?

VISIT WWW.WE-ONLINE.COM AND SEARCH FOR PRODUCT SERIES INFORMATION, E.G.:

WRIS-PSMB



METAL PLATE RESISTORS

WRIS-PSMB

Enhanced Current Sensing

R: 5 mΩ – 10 mΩ
 R_{Tol} : ±1 %
 P: 0.33 W up to 1 W
 TCR: ±100 ppm/°C
 Temp.: -55 °C up to +155 °C



THICK FILM RESISTORS

WRIS-KSKE

General Purpose Current Sensing

R: 50 mΩ – 10 Ω
 R_{Tol} : ±1 %
 P: 0.125 W up to 1 W
 TCR: ±100 / +200 / +250 / +300 ppm/°C
 Temp.: -55 °C up to +155 °C



WRIS-PSMC

High Power Current Sensing

R: 2 mΩ – 10 mΩ
 R_{Tol} : ±1 % / ±5 %
 P: 2 W
 TCR: ±100 ppm/°C
 Temp.: -55 °C up to +155 °C



WRIS-KWKB

High Power

R: 2.2 Ω – 18 kΩ
 R_{Tol} : ±1 % / ±5 %
 P: 0.75 W up to 2 W
 TCR: ±200 ppm/°C
 Temp.: -55 °C up to +155 °C



WRIS-PWMC

High Power Current Sensing

R: 1 mΩ – 5 mΩ
 R_{Tol} : ±1 %
 P: 3 W up to 6 W
 TCR: ±100 ppm/°C
 Temp.: -55 °C up to +170 °C



WRIS-KWKH

High Power Current Sensing

R: 100 mΩ – 620 mΩ
 R_{Tol} : ±1 % / ±5 %
 P: 1 W
 TCR: +200 / +250 / +350 ppm/°C
 Temp.: -55 °C up to +155 °C



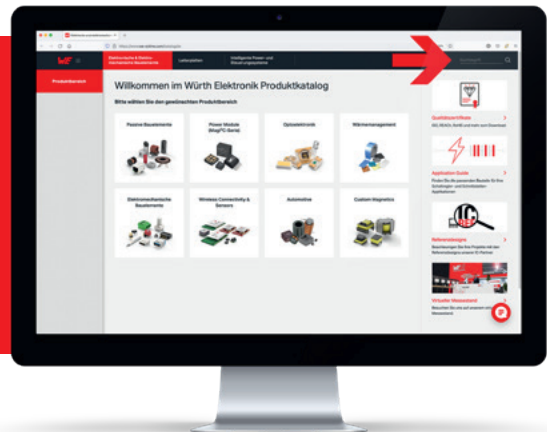
All resistors at a glance:
www.we-online.com/resistors

OPTOELECTRONICS

HOW TO FIND DETAILED PRODUCT INFORMATION?

VISIT WWW.WE-ONLINE.COM AND SEARCH FOR PRODUCT SERIES INFORMATION, E.G.:

WL-SMCC



VISIBLE LEDS

CHIP LEDS



WL-SMCC SMD Mono-color Chip LED Compact

Size: 0402, 0603
 $\lambda_{\text{DOM typ}}$: 470 – 630 nm
 $I_V \text{ typ}$: 50 – 800 mcd
 $V_F \text{ typ}$: 2.0 – 3.2 V
 Emitting color: Super Red, Red, Amber, Yellow, Bright Green, Green, Blue

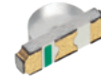
CHIP LEDS



WL-SBCW SMD Bi-color Chip LED Waterclear

Size: 0606, 1210
 $\lambda_{\text{DOM typ}}$: 520 – 630 nm
 $I_V \text{ typ}$: 30 – 560 mcd
 $V_F \text{ typ}$: 2 – 3.2 V
 Emitting color: Super Red/Bright Green, Yellow/Bright Green, Red, Green

CHIP LED SIDE VIEW



WL-SMSW SMD Mono-color Side view Waterclear

Size: 0603, 3014, 1204
 $\lambda_{\text{DOM typ}}$: 470 – 624 nm
 $I_V \text{ typ}$: 50 – 600 mcd
 $V_F \text{ typ}$: 2 – 3.4 V
 Emitting color: Red, Yellow, Bright Green, Green, Blue

WL-SBCC SMD Bi-Color Chip LED Compact



Size: 0603
 $\lambda_{\text{DOM typ}}$: 570 – 625 nm
 $I_V \text{ typ}$: 30 – 60 mcd
 $V_F \text{ typ}$: 2 V
 Emitting color: Red/Bright Green

WL-SFCW SMD Full-color Chip LED Waterclear



Size: 0606, 0805, 1206, 1210
 $\lambda_{\text{DOM typ}}$: 470 – 624 nm
 $I_V \text{ typ}$: 70 – 360 mcd
 $V_F \text{ typ}$: 1.9 – 3.3 V
 Emitting color: Red, Green, Blue

WL-SBSW SMD Bi-color Side view Waterclear



Size: 1204
 $\lambda_{\text{DOM typ}}$: 525 – 624 nm
 $I_V \text{ typ}$: 30 – 160 mcd
 $V_F \text{ typ}$: 2 – 3.3 V
 Emitting color: Red/Bright Green, Red/Green

WL-SFCC SMD Full-color Chip LED Compact



Size: 0404
 $\lambda_{\text{DOM typ}}$: 470 – 621 nm
 $I_V \text{ typ}$: 50 – 180 mcd
 $V_F \text{ typ}$: 2 – 2.8 V
 Emitting color: Red, Green, Blue

WL-SFCD SMD Full-color Chip LED Diffused



Size: 0606, 0805, 1210
 $\lambda_{\text{DOM typ}}$: 470 – 624 nm
 $I_V \text{ typ}$: 70 – 900 mcd
 $V_F \text{ typ}$: 2 – 3.3 V
 Emitting color: Red, Green, Blue

WL-SFSW SMD Full-color Side view Waterclear



Size: 1204
 $\lambda_{\text{DOM typ}}$: 465 – 622 nm
 $I_V \text{ typ}$: 140 – 850 mcd
 $V_F \text{ typ}$: 2 – 3 V
 Emitting color: Red, Green, Blue

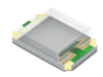
EXTENDED

WL-SMCW SMD Mono-color Chip LED Waterclear



Size: 0603, 0805, 1206
 $\lambda_{\text{DOM typ}}$: 470 – 630 nm
 $I_V \text{ typ}$: 40 – 1600 mcd
 $V_F \text{ typ}$: 1.9 – 3.2 V
 Emitting color: Super Red, Red, Amber, Yellow, Bright Green, Green, Blue

WL-SBCD SMD Bi-color Chip LED Diffused



Size: 0606, 0805
 $\lambda_{\text{DOM typ}}$: 573 – 624 nm
 $I_V \text{ typ}$: 60 – 18 mcd
 $V_F \text{ typ}$: 2 – 3.3 V
 Emitting color: Red, Super Red, Green, Bright Green, Yellow

WL-SMCD SMD Mono-color Chip LED Diffused



Size: 0603
 $\lambda_{\text{DOM typ}}$: 470 – 630 nm
 $I_V \text{ typ}$: 60 – 430 mcd
 $V_F \text{ typ}$: 2.0 – 3.2 V
 Emitting color: Super Red, Red, Yellow, Bright Green, Green, Blue

OPTOELECTRONICS

VISIBLE LEDs

CHIP LED REVERSE MOUNT

WL-SMRW SMD Mono-color Reverse mount Waterclear



Size: 1205 (rectangular),
1206 (rectangular, cylindrical, dome)
 $\lambda_{\text{DOM typ}}$: 470 – 630 nm
 $I_V \text{ typ}$: 30 – 2200 mcd
 $V_F \text{ typ}$: 2 – 3.3 V
Emitting color: Super Red, Red, Amber,
Yellow, Bright Green, Green, Blue

WL-SMRD SMD Mono-color Reverse mount Diffused



Size: 1205
 $\lambda_{\text{DOM typ}}$: 470 – 624 nm
 $I_V \text{ typ}$: 40 – 200 mcd
 $V_F \text{ typ}$: 2 – 3.3 V
Emitting color: Red, Yellow, Bright
Green, Green, Blue

WL-SBRW SMD Bi-color Reverse mount Waterclear



Size: 1205
 $\lambda_{\text{DOM typ}}$: 470 – 624 nm
 $I_V \text{ typ}$: 45 – 285 mcd
 $V_F \text{ typ}$: 2 – 3.3 V
Emitting color: Red/Green, Red/Bright
Green, Red/Blue, Yellow/Bright Green

WL-SFRW SMD Full-color Reverse mount Waterclear



Size: 1205, 1206
 $\lambda_{\text{DOM typ}}$: 470 – 624 nm
 $I_V \text{ typ}$: 70 – 280 mcd
 $V_F \text{ typ}$: 2 – 3.3 V
Emitting color: Red, Green, Blue

TOP LED

EXTENDED

WL-SMTW SMD Mono-color TOP LED Waterclear



Size: 2214, 3020, 2835, 3528, 5050
 $\lambda_{\text{DOM typ}}$: 465 – 636 nm
 $I_V \text{ typ}$: 70 – 3500 mcd
 $V_F \text{ typ}$: 2 – 3.2 V
Emitting color: Super Red, Red, Amber,
Yellow, Bright Green, Green, Blue

WL-SMTD Mono-color TOP LED Diffused



Size: 3528
 $\lambda_{\text{DOM typ}}$: 470 – 630 nm
 $I_V \text{ typ}$: 3500 – 30000 mcd
 $V_F \text{ typ}$: 2.4 – 3.2 V
Emitting color: Super Red, Red,
Yellow, Green, Blue

WL-SBTW SMD Bi-color TOP LED Waterclear



Size: 3528
 $\lambda_{\text{DOM typ}}$: 470 – 625 nm
 $I_V \text{ typ}$: 60 – 260 mcd
 $V_F \text{ typ}$: 2 – 3.2 V
Emitting color: Red/Blue, Red/Bright
Green, Yellow/Blue, Yellow/Bright Green

WL-SFTW SMD Full-color TOP LED Waterclear



Size: 3528, 5050
 $\lambda_{\text{DOM typ}}$: 470 – 625 nm
 $I_V \text{ typ}$: 230 – 1700 mcd
 $V_F \text{ typ}$: 2 – 3.2 V
Emitting color: Red, Green, Blue

WL-STFD SMD Full-color TOP LED Diffused



Size: 1616, 2022, 2828, 3535
 $\lambda_{\text{DOM typ}}$: 470 – 625 nm
 $I_V \text{ typ}$: 400 – 1900 mcd
 $V_F \text{ typ}$: 2 – 3.2 V
Emitting color: Red, Green, Blue

WHITE LEDs

TOP LED

EXTENDED

WL-SWTP SMD White Top view PLCC



Size: 3014, 3022, 3030, 5630
CCT: 2700 – 6000 K
 $\Phi_V \text{ typ}$: 7 – 39 lm
 $V_F \text{ typ}$: 2.8 – 3.2 V
Emitting color: Sunrise, Warm White,
Moonlight, Daylight, Cool White

HIGH POWER CERAMIC

WL-SWTC SMD White Top view Ceramic LED



Size: 3535
CCT: 4000 – 6000 K
 $\Phi_V \text{ typ}$: 121 – 135 lm
 $V_F \text{ typ}$: 3.2 V
Emitting color: Moonlight, Daylight,
Cool White

ULTRAVIOLET LEDs

HIGH POWER CERAMIC

WL-SUMW SMD Ultraviolet Ceramic Waterclear



Size: 3535
 λ_{Peak} : 275 – 405 nm
 I_e : 1.5 – 1100 mW
 $V_F \text{ typ}$: 3.5 – 6.5 V

THT ROUND

WL-TMRW THT Mono-color Round Waterclear



Size: 3 mm (with/without stopper)
5 mm (with/without stopper)
 $\lambda_{\text{DOM typ}}$: 470 – 623 nm
 $I_V \text{ typ}$: 1500 – 15000 mcd
 $V_F \text{ typ}$: 1.9 – 3.4 V
Emitting color: Red, Yellow, Green, Blue

WL-TMRC THT Mono-color Round Color



Size: 3 mm (without stopper)
5 mm (without stopper)
 $\lambda_{\text{DOM typ}}$: 470 – 645 nm
 $I_V \text{ typ}$: 30 – 500 mcd
 $V_F \text{ typ}$: 2 – 3.2 V
Emitting color: Red, Super Red, Yellow,
Bright Green, Blue

HIGH POWER CERAMIC

WL-SMDC SMD Mono-color Ceramic LED Waterclear



Size: 3535
 $\lambda_{\text{DOM typ}}$: 460 – 625 nm
 $\Phi_V \text{ typ}$: 25 – 85 lm
 $V_F \text{ typ}$: 2 – 3.4 V
Emitting color: Red, Yellow, Green, Blue

WL-SMDC Mono-color Ceramic LED Waterclear Horticulture



Size: 3535
 $\lambda_{\text{DOM typ}}$: 450 – 730 nm
 $\Phi_V \text{ typ}$: Radiant 240 – 600 mW
 $V_F \text{ typ}$: 1.8 – 3.2 V
Emitting color: Far Red, Hyper Red,
Deep Blue

INFRARED

PHOTODIODES

INFRARED EMITTER

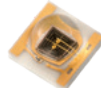
CHIP LED

HIGH POWER CERAMIC

CHIP TOP VIEW



WL-SICW SMD Infrared Chip LED Waterclear
 Size: 0402, 0603, 0805, 1206
 $\lambda_{\text{Centroid}}$: 850, 940 nm
 $I_{\text{E typ}}$: 0.8 – 2 mW/sr
 $V_{\text{F typ}}$: 1.2 – 1.4 V



WL-SIMW SMD Infrared Ceramic Waterclear
 Size: 3535
 $\lambda_{\text{Centroid}}$: 850, 940 nm
 $I_{\text{E typ}}$: 220 – 350 mW/sr
 $V_{\text{F typ}}$: 1.9 – 2.2 V



WL-SDCB SMT Photodiode Chip Black
 Size: 0805, 1206
 λ_{Peak} : 940 nm
 $I_{\text{P typ}}$: 1.8 μA
 $I_{\text{D max}}$: 10 nA

CHIP LED SIDE VIEW

HIGH POWER QFN

CHIP SIDE VIEW



WL-SISW SMD Infrared Sideview LED Waterclear
 Size: 0402, 1002, 1104, 1106, 1206
 $\lambda_{\text{Centroid}}$: 850, 940 nm
 $I_{\text{E typ}}$: 1 – 11 mW/sr
 $V_{\text{F typ}}$: 1.2 – 1.6 V



EXTENDED
WL-SIQW Infrared QFN LED Waterclear
 Size: 2720, 3535, 3737
 $\lambda_{\text{Centroid}}$: 850, 940 nm
 $I_{\text{E typ}}$: 125 – 800 mW/sr
 $V_{\text{F typ}}$: 1.8 – 3.2 V



WL-SDSB SMT Photodiode Sideview Black
 Size: 1002, 1104
 λ_{Peak} : 940 nm
 $I_{\text{P typ}}$: 2.5 μA
 $I_{\text{D max}}$: 10 nA

CHIP LED REVERSE MOUNT

THT INFRARED ROUND

THT ROUND



WL-SIRW SMD Infrared Reverse mount Waterclear
 Size: 1206 (dome)
 $\lambda_{\text{Centroid}}$: 850, 940 nm
 $I_{\text{E typ}}$: 5 – 20 mW/sr
 $V_{\text{F typ}}$: 1.2 – 1.4 V



WL-TIRW THT Infrared Round Waterclear
 Size: 3 mm (without stopper)
 5 mm (without stopper)
 $\lambda_{\text{Centroid}}$: 845, 940 nm
 $I_{\text{E typ}}$: 30 – 85 mW/sr
 $V_{\text{F typ}}$: 1.3 – 1.5 V



WL-TDRW THT Photodiode Round Waterclear
 Size: 3 mm (without stopper)
 5 mm (without stopper)
 λ_{Peak} : 940 nm
 $I_{\text{P typ}}$: 28 μA
 $I_{\text{D max}}$: 30 nA

TOP LED

THT INFRARED ROUND COLOR

WL-TDRB THT Photodiode Round Black



EXTENDED
WL-SITW SMD Infrared TOP LED Waterclear
 Size: 3528
 $\lambda_{\text{Centroid}}$: 845, 940 nm
 $I_{\text{E typ}}$: 5 – 70 mW/sr
 $V_{\text{F typ}}$: 1.4 – 1.5 V



WL-TIRC THT Infrared Round Color
 Size: 3 mm (without stopper)
 5 mm (without stopper)
 $\lambda_{\text{Centroid}}$: 845, 940 nm
 $I_{\text{E typ}}$: 30 – 85 mW/sr
 $V_{\text{F typ}}$: 1.2 – 1.4 V



Size: 3 mm (without stopper)
 5 mm (without stopper)
 λ_{Peak} : 940 nm
 $I_{\text{P typ}}$: 31 μA
 $I_{\text{D max}}$: 30 nA



All Optoelectronic Components at a glance:
www.we-online.com/optoelectronic



Explore our application notes for Optoelectronics:
www.we-online.com/appnotes

OPTOELECTRONICS

PHOTOTRANSISTORS

CHIP TOP VIEW



**WL-STCW SMT Phototransistor
Chip Waterclear**
Size: 0603, 0805, 1206
 λ_{Peak} : 940 nm
 $I_{\text{CE, p. typ.}}$: 1.6 mA
 $I_{\text{CEO, Dark max.}}$: 100 nA



**WL-STCB SMT Phototransistor
Chip Black**
Size: 0603, 1206
 λ_{Peak} : 940 nm
 $I_{\text{CE, p. typ.}}$: 1.2 mA
 $I_{\text{CEO, Dark max.}}$: 100 nA

PLCC TYPE



**WL-STTW SMT Phototransistor
Top Waterclear**
Size: 3528
 λ_{Peak} : 940 nm
 $I_{\text{CE, p. typ.}}$: 3.1 mA
 $I_{\text{CEO, Dark max.}}$: 100 nA



**WL-STTB SMT Phototransistor
Top Black**
Size: 3528
 λ_{Peak} : 940 nm
 $I_{\text{CE, p. typ.}}$: 2.8 mA
 $I_{\text{CEO, Dark max.}}$: 100 nA

OPTOCOUPLER

WL-OCPT Optocoupler Phototransistor

Package: Series 814/817 DIP 4
Series 354/356/357 SOP4
Series 101x LSOP4
CTR: 50 – 600 %
Viso: 3750 – 5000 V



NEW

WL-OCDA Optocoupler Darlington

Package: Series 352/355 SOP4,
Series 815 DIP4
CTR: 600-15000 %
Viso: 3750 – 5000 V



CHIP SIDE VIEW



**WL-STSW SMT Phototransistor
Sideview Waterclear**
Size: 1104
 λ_{Peak} : 940 nm
 $I_{\text{CE, p. typ.}}$: 2.5 mA
 $I_{\text{CEO, Dark max.}}$: 100 nA



**WL-STSB SMT Phototransistor
Chip Black**
Size: 1002
 λ_{Peak} : 940 nm
 $I_{\text{CE, p. typ.}}$: 1 mA
 $I_{\text{CEO, Dark max.}}$: 100 nA

THT ROUND



**WL-TTRB THT Phototransistor
Round**
Size: 3 mm, 5 mm
 λ_{Peak} : 940 nm
 $I_{\text{CE, p. typ.}}$: 10 mA
 $I_{\text{CEO, Dark max.}}$: 100 nA



**WL-TTRW THT Phototransistor
Round Waterclear**
Size: 3 mm, 5 mm
 λ_{Peak} : 850 nm
 $I_{\text{CE, p. typ.}}$: 15 mA
 $I_{\text{CEO, Dark max.}}$: 300 nA

LASER

EXTENDED

WL-VCSL Vertical Cavity Surface Emitting Laser

Size: 3535
 λ_{Peak} : 850 – 940 nm
 Φ_V typ.: 1900 – 2100 mW
 V_F typ.: 2 – 2.1 V



CHIP REVERSE MOUNT



**WL-STRB SMT Phototransistor
Reverse mount Black**
Size: 1206 (dome)
 λ_{Peak} : 940 nm
 $I_{\text{CE, p. typ.}}$: 4.4 mA
 $I_{\text{CEO, Dark max.}}$: 100 nA

7 SEGMENTS DISPLAY



WL-S7DS
 $\lambda_{\text{Dom typ.}}$: 570 – 635 nm
 I_q typ.: 21 – 38 mcd
 V_F typ.: 2 V
Emitting Color: Bright Green,
Super Red



WL-T7DS
 $\lambda_{\text{Dom typ.}}$: 572 – 635 nm
 I_q typ.: 38 – 46 mcd
 V_F typ.: 2 – 2.2 V
Emitting Color: Bright Green,
Super Red



Component libraries available for:

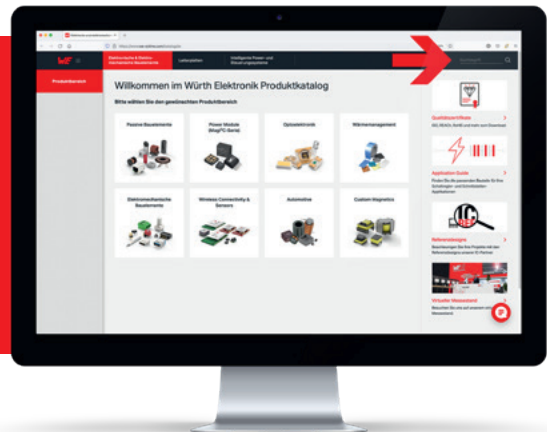
- PCB library: Altium Designer, EAGLE, Cadence OrCAD & Allegro, Zuken CAD-Star
 - S-Parameter & SPICE model: S-Parameter, LTspice, PSpice, Spectre
 - RF & microwave simulation models: Modelithics
- www.we-online.com/library

POWER MODULES

HOW TO FIND DETAILED PRODUCT INFORMATION?

VISIT WWW.WE-ONLINE.COM AND SEARCH FOR PRODUCT SERIES INFORMATION, E.G.:

MagI³C-VDMM



VARIABLE STEP DOWN REGULATOR MODULES

MagI³C-VDRM Variable Step Down Regulator Modules



V_{in} : 2.95 – 50 V
 V_{out} : 0.8 – 24 V
 I_{out} : 1 – 6 A
 Switching Frequency: 0.2 – 2 MHz

LED STEP DOWN HIGH CURRENT MODULES

MagI³C-LDHM LED Step Down High Current Modules



V_{in} : 4.5 – 60 V
 $N_{LED,max}$: 16 ($V_F = 3.2V$)
 I_{out} : 0.3 – 0.45 A
 Switching Frequency: 0.8 MHz

VARIABLE ISOLATED SIP MODULES

MagI³C-VISM Variable Isolated SIP Modules



V_{in} : 8 – 42 V
 V_{out} : 3.3 – 6 V
 P_G : 1 W
 $V_{isolation}$: 2000 V

VARIABLE STEP DOWN MICROMODULES

MagI³C-VDMM Variable Step Down Micro-Modules



V_{in} : 2.5 – 36 V
 V_{out} : 0.6 – 6 V
 I_{out} : 0.3 – 1.2 A
 Switching Frequency: 2.25 – 4 MHz

FIXED ISOLATED SIP MODULES

MagI³C-FISM Fixed Isolated SIP Modules



V_{in} : 2.91 – 26.4 V
 V_{out} : 5 – 15 V
 P_G : 1 W
 $V_{isolation}$: 1000 – 4000 V

FIXED STEP DOWN REGULATOR MODULES

MagI³C-FDSM Fixed Step Down Regulator Modules



V_{in} : 4.75 – 42 V
 V_{out} : 3.3 – 12 V
 I_{out} : 0.5 – 1 A
 Switching Frequency: 0.3 – 0.7 MHz



All Power Modules at a glance:
www.we-online.com/power-mod



Explore our application notes for Power Modules:
www.we-online.com/appnotes



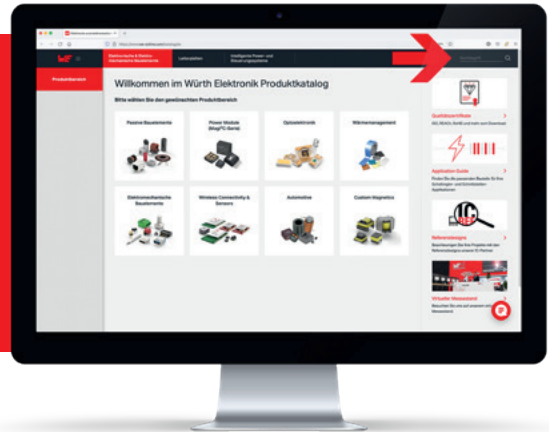
Component libraries available for:
 Altium Designer, EAGLE
www.we-online.com/library

THERMAL MANAGEMENT

HOW TO FIND DETAILED PRODUCT INFORMATION?

VISIT WWW.WE-ONLINE.COM AND SEARCH FOR PRODUCT SERIES INFORMATION, E.G.:

WE-TGF



WE-TTT



WE-TTT Thermal Transfer Tape

Length: 25 m
Width: 8 - 50 mm
Height: 0.2 mm
Thermal Conductivity: 1 W/(m*K)

WE-TINS



WE-TINS Thermally Conductive Insulator Pad

Length: 60 - 300 mm
Width: 60 - 300 mm
Height: 0.23 - 0.25 mm
Thermal Conductivity: 1.6 - 3.5 W/(m*K)

WE-TGS



WE-TGS Thermal Graphite Sheet

Length: 100 - 297 mm
Width: 100 - 210 mm
Height: 37 µm
Thermal Conductivity: 1800 W/(m*K)

WE-TGF



WE-TGF Thermal Gap Filler Pad

Length: 100 - 200 mm
Width: 100 - 400 mm
Height: 0.5 - 5 mm
Thermal Conductivity: 2 - 6 W/(m*K)

WE-PCM



WE-PCM Thermal Phase Changing Material

Length: 100 - 400 mm
Width: 100 - 300 mm
Height: 0.2 mm
Thermal Conductivity: 1.6 - 5 W/(m*K)

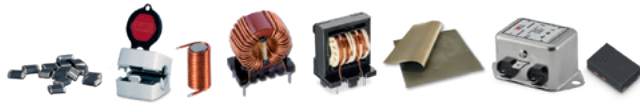
WE-TGFG



WE-TGFG Thermal Gap Filler Pad

Length: 15 - 45 mm
Width: 15 - 20 mm
Height: 1.5 - 20 mm
Thermal Conductivity: 400 W/(m*K)

ELECTRONIC & ELECTROMECHANICAL COMPONENTS



EMC Components



Power Magnetics



Signal & Communications



Quartz & Oscillators



Capacitors



Resistors



Automotive Standard Products



Optoelectronics



Power Modules



Wireless Connectivity & Sensors



Connectors



Fuseholders



Switches



Assembly Technique



REDCUBE Terminals

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- Samples free of charge
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- Design kits with lifelong free refill
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- Seminars and webinars free of charge
- Reference designs of leading IC manufacturers
- Worldwide technical sales force and field application engineers on site

