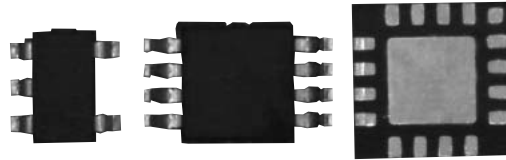


WHITE LED DRIVERS

W series



SUMMARY

White LED driver “W series”, these are driver ICs for the purpose of activating white LEDs used for backlight illumination in LCDs found in handheld electronic devices, such as mobile phones and PDAs.

The “W Series” includes not only driver ICs used simply for lighting up white LEDs, but also includes a type that can individually activate 4 separate LEDs and a type that can divide 6 LEDs into groups and activate them, making these ideal products for powering handheld electronic devices.

FEATURES

- Environmentally friendly “RoHS compliant” (Lead-Free and Halogen-Free)
- Low-cost
- Power efficiency greater than 80%
- Small size and extremely low-profile package 5, 6pin SOT-23, TDFN, QFN
- Compatible pinout with conventional white LED drivers LTC/SC

PRODUCT FAMILY

- In-car panel lighting
W-510
- Photoflashes
W-6134, W-5612
- LCD and keypad backlighting for handheld electronic devices
W-52, W-57, W-6137, W-6237, W-6238,
W-5200/5200-5, W-5604, W-5606,
W-5614, W-5616, W-5626, W-5636

■ PART NUMBER DESIGNATION

W - XXXX XXXX - XTX

Product number

Package

Package	Code
SOIC	W
MSOP	ZI
SOT-23	TD ^{※1}
	TDI ^{※2}
TDFN	HV2
QFN	HV3 ^{※3}
	HV4 ^{※4}

Form of packaging

T1 : Taping (1000 pcs./reel)
T2 : Taping (2000 pcs./reel)
T3 : Taping (3000 pcs./reel)

Lead finish^{※5}

Blank : Matte-tin
G : NiPdAu

Taping code and quantity

Package	Taping quantity (pcs./reel)		
	T1	T2	T3
SOIC	○		
MSOP			○
SOT23			○
TDFN (3x3)		○	
QFN (3x3)		○	
QFN (4x4)		○	

※1 : The relevant products are W-6137, W-6237, W-6238.

※2 : The relevant products are W-52, W-57, W-5200-5.

※3 : The relevant products are W-5636.

※4 : The relevant products are W-5604, W-5606, W-5616, W-5626.

※5 : The product of NiPdAu is W-6238.

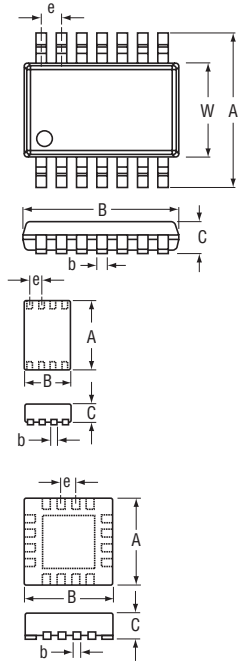
■ LIST OF PART NUMBERS

Type for boosting	Product number	Maximum no. of LEDs	Input voltage (V)	Output current (mA)	Efficiency (%)	Package
Boost regulator	W-52	4	2.0 - 7.0	40	83	6-SOT-23
	W-57	4	2.5 - 7.0	40	85	5-SOT23
	W-6134	3/2 ch	2.8 - 4.2	250/ch	85	12-TDFN (3x3 mm)
	W-6137	5	2.2 - 5.5	30	87	5-SOT23
	W-6237	8	2.8 - 5.5	40	87	5-SOT23
	W-6238	10	- 5.5	30	87	5-SOT23
Charge pump regulator	W-5200 W-5200-5	6	2.7 - 4.5	100	80	8-MSOP 6-SOT23
	W-5604	4	3.0 - 5.5	30/ch	93	QFN16 (4x4 mm)
	W-5606	6	3.0 - 5.5	30/ch	80	QFN16 (4x4 mm)
	W-5612	2	3.0 - 5.5	150/ch	90	12-TDFN (3x3 mm)
	W-5614	4	3.0 - 5.5	30/ch	91	12-TDFN (3x3 mm)
	W-5616	6	3.0 - 5.5	30/ch	91	QFN16 (4x4 mm)
	W-5626	6	3.0 - 5.5	32/ch	91	QFN16 (4x4 mm)
W-5636	6	2.5 - 5.5	32/ch	92	QFN16 (3x3 mm)	
Driver for display	W-510	10	3.0 - 5.5	50/ch	—	SOIC20

W series WHITE LED DRIVERS

PACKAGE DIMENSIONS

(Unit : mm)



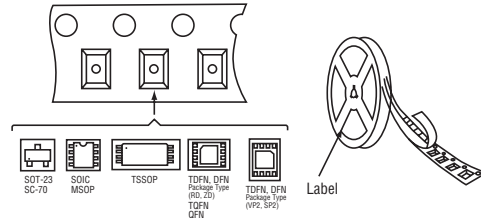
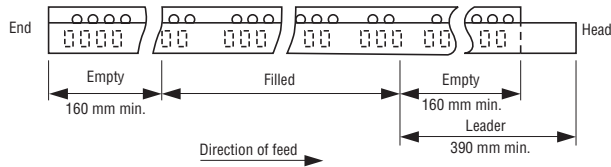
● MSOP/SOT-23/SOIC

Package	No. of pins	A (max/min)	B (max/min)	W (max/min)	C (max/min)	b (max/min)	e
MSOP	8	5.00/4.80	3.10/2.90	3.10/2.90	0.95/0.75	0.38/0.28	0.65
SOT-23	5	2.80	2.90	1.60	1.0 (max)	0.45/0.30	0.95
SOIC	20	10.65/10.00	13.0/12.60	7.60/7.40	2.65/2.35	0.51/0.33	1.27

● TDFN/QFN

Package	No. of pins	A (max/min)	B (max/min)	W (max/min)	C (max/min)	b (max/min)	e
TDFN (3x3)	12	3.10/2.90	3.10/2.90	—	0.80/0.70	0.30/0.18	0.45
QFN16 (3x3)	16	3.10/2.90	3.10/2.90	—	0.80/0.70	0.28/0.18	0.5
QFN16 (4x4)	16	4.10/3.90	4.10/3.90	—	0.80/0.70	0.37/0.25	0.65

TAPING PACKAGING SPECIFICATIONS

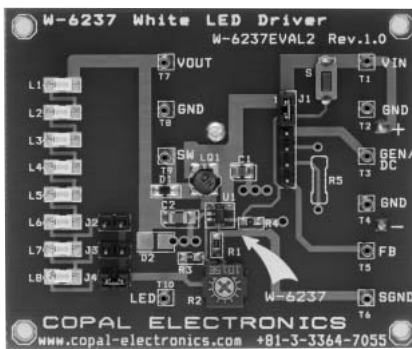


EVALUATION BOARDS

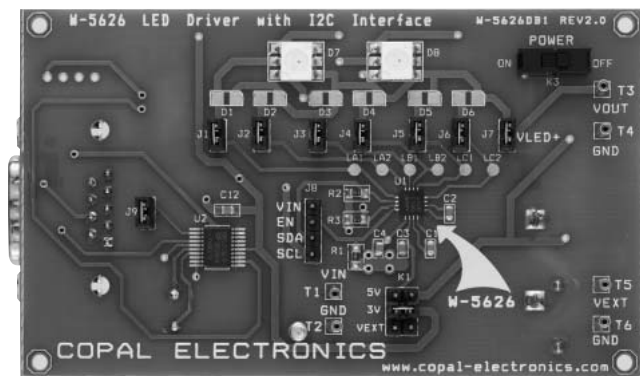
Below are the evaluation boards and demonstration boards that enable the evaluation of various devices in your design phase. By using these boards, the time that our customers spend on development evaluations may be shortened.

Evaluation boards

W-6237EVAL2



W-5626DB1



Application Notes, Design Notes

No.	Title
AN12	W-52 Demonstration board for white LED drivers W-52DB1
AN14	W-52 Evaluation board for white LED drivers W-52EVAL1
AN15	W-5200 Demonstration board for DC/DC converters W-5200DB1
AN17	W-57 Evaluation board for white LED drivers W-57EVAL1
AN20	W-5604 Evaluation board for white LED drivers W-5604EVAL1
AN21	W-5200 Demonstration board for DC/DC LED converters W-5200DB2
AN22	W-510 Demonstration board for 10-LEDs driver W-510DB1
AN23	W-5606 Evaluation board for white LED drivers : W-5606EVAL1
AN24	W-6237 Evaluation board for high voltage white LED drivers : W-6237EVAL2
AN26	W-6137 Evaluation board for white LED drivers : W-6137EVAL1
AN29	W-5614 Evaluation board for 1-wire LED drivers : W-5614EVAL1
AN30	W-5626 Evaluation and demo board for 6-channel LED drivers : W-5626DB1
AN31	W-5612 Evaluation board for camera flash LED drivers : W-5612EVAL1
AN32	W-6238 Evaluation board for 10-LED boost converter : W-6238EVAL1
AN33	W-5636 Evaluation and demo board 6-channel and 4-mode LED drivers : W-5636DB1
DN9	W-57 Inductance value and efficiency of white LED drivers