



Zywyn Corporation LED Display Drivers Updated Presentations












Product Features Snapshot

Part Number	Driver Type	Input Voltage Range	# of LEDs Driven	Total Output Current	LED Open/Short Protection	Dimming Control	Switching Frequency	Efficiency	Package Type	Green Package (Pb-free & RoHS)	Availability
ZD3313	Inductorless, No-Charge-Pump, 4 Channel Current Sinks	+4.5V to +16V	Depends on application	4-Channel @80mA/Ch	No	Yes	Proprietary	>95%	8-MSOP		<i>NOW</i>
ZD3315	Inductorless, No-Charge-Pump, 4 Channel Current Sinks	+4.5V to +16V	Depends on application	4-Channel @150mA/Ch	No	Yes	Proprietary	>95%	2x3 8-DFN		<i>NOW</i>
ZD1680	Step-Up LED Controller with 6-Channel Input/Output Current Sinks, Single-ISET, OVP and Auxiliary Gate Drive	+3.3V to +26.5V	Depends on application	5W/15W 6-Ch @50mA/Ch	Yes	Yes	Proprietary	>90%	28-EP-TSSOP 5x5 32-VQFN		<i>NOW</i>
ZD832	TransformerFree™ AC-DC LED Driver	85~240 VAC	30~100	Up to 30mA	No	Yes	Proprietary	>90%	20-EP-TSSOP		<i>NOW</i>
ZD850	High Power AC-DC HB LED Driver	4VAC~16VAC on VAC1/VAC2 5VDC~24VDC on VAC1/VAC2 5VDC~16VDC on HVCC/PGND	1~3 1~5 1~3	Up to 350mA Up to 800mA Up to 1.5A	No	Yes	Proprietary	>90%	16-EP-TSSOP		<i>NOW</i>





Design Wins Success – LED Drivers

Customers	P/N#	Application
	ZD3315LED	RGB/WLED LED bars for arcade game machines
	ZD1680LEY	LED light bars for industrial lighting
	ZD3315LED	LED light bar for cosmetic beauty and health lighting machines
	ZD3315LED	WLED LED bars for lighting
	ZD1680LEY	100W~120W HB LED street lamp lighting
	ZD850LEY	MR16 LED lamps
	ZD3315LED	WLED light bar for LCD panel BLU for Home Networking
Mobile Compia	ZD3202LEU	WLED BLU for portable PDA
	ZD1937LB5	WLED BLU for MP3 player
 Mikroelektronika	ZD1680LEY	WLED lighting for ticketing terminal for bus depots





Design Wins Success – 3W MR16 LED Lamps with ZD850



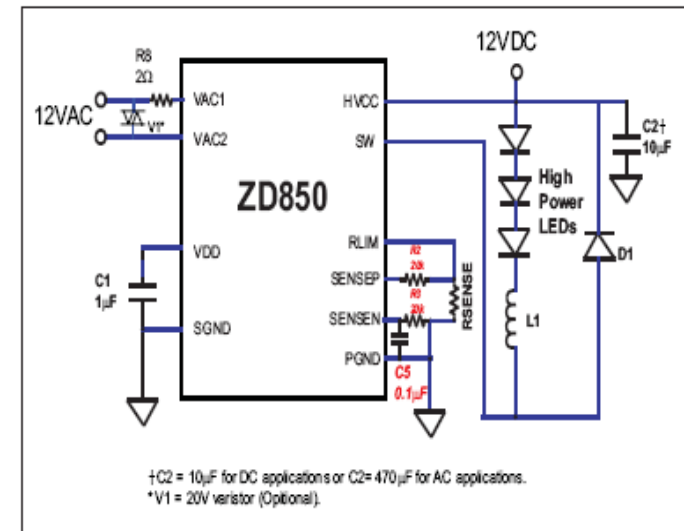
3W MR16 LED Lamp, Pure White



3W MR16 LED Lamp, Warm White

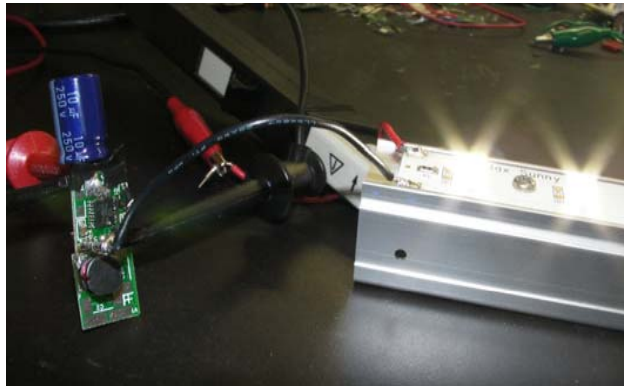


Typical Application





In Applications – 3W~10W T4/T5/T8 LED Light Tubes with ZD850



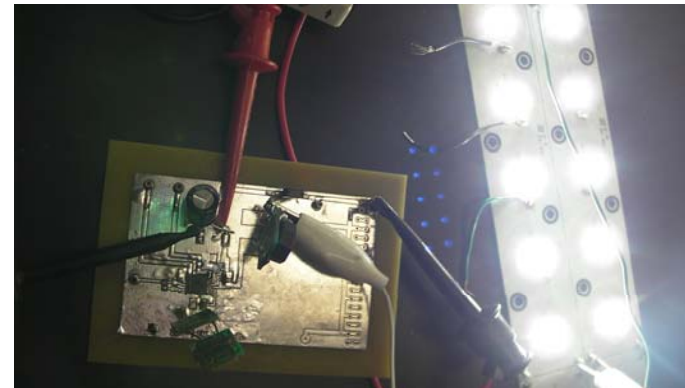
**3W T5 LED Light Bar
(7x3, 360mA, 24VDC)**



**10W T4 LED Light Tube
(6x27, 580mA, 24VDC)**



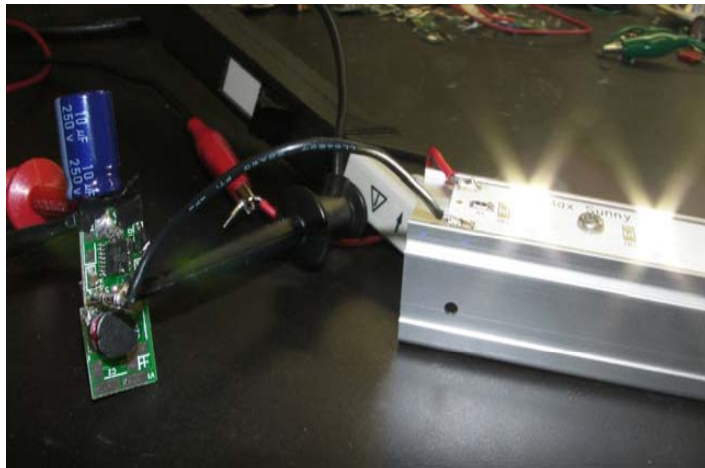
**4W LED Signal Light
(2x26, 520mA, 9VDC)**



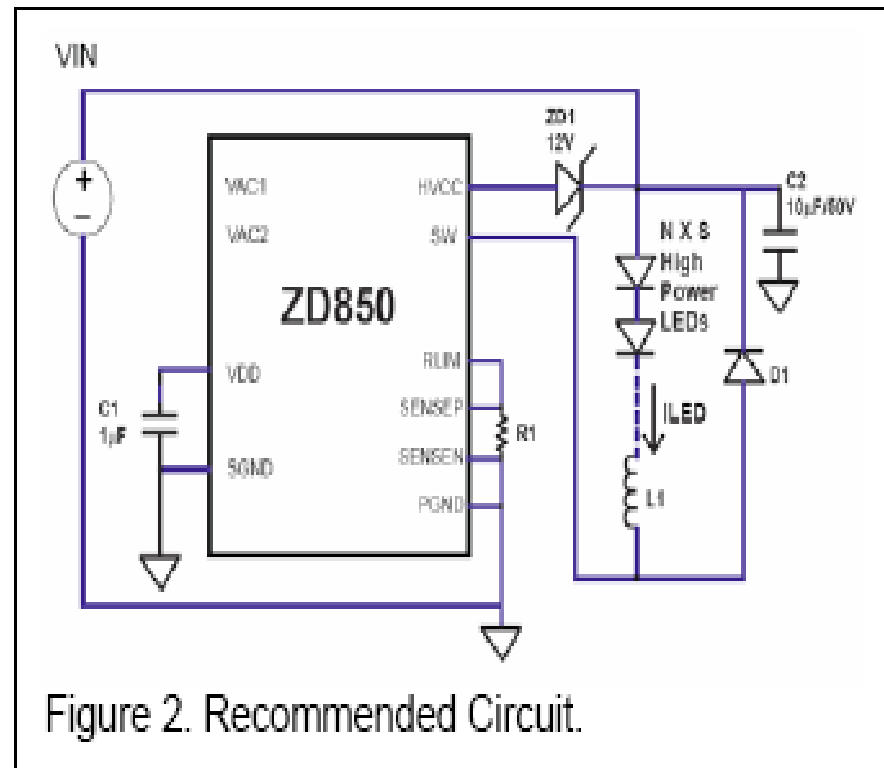
**10W LED Light Bar
(5x2, 700mA, 20VDC)**



③ In Applications Example – Driving 3W T5 LED Light Tubes with ZD850

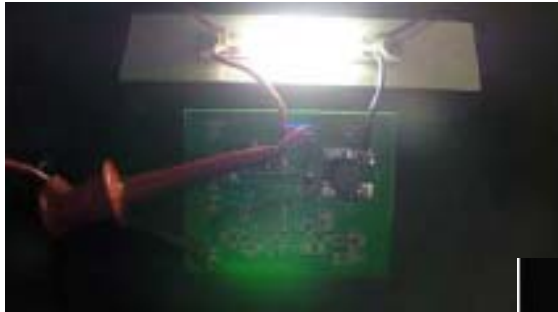


**3W T5 LED Light Bar
(7x3, 360mA, 24VDC)**





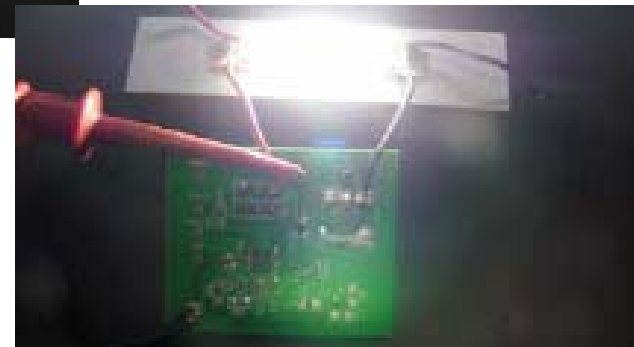
In Applications – 3W, 4W, 7W Driving Citizen CitiLEDs with ZD850



**Driving
Citizen CL-L102-C3N-B
3W CitiLED**



**Driving
Citizen CL-L251-MC4N1
4W CitiLED**



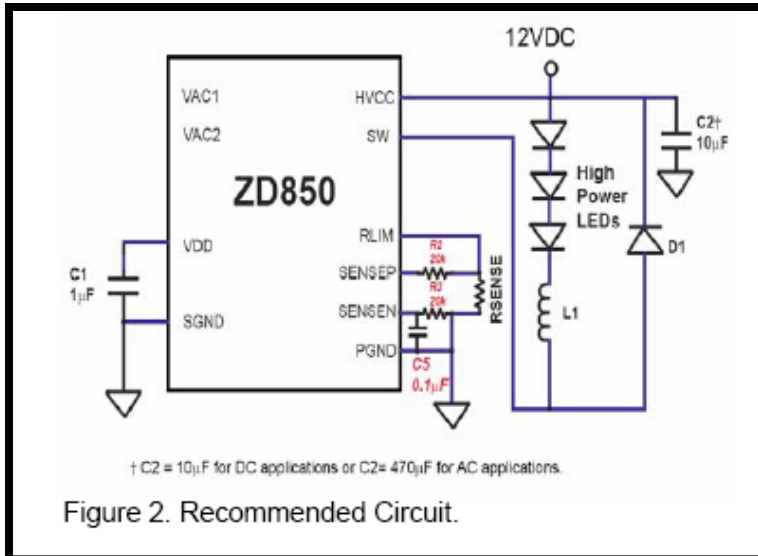
**Driving
Citizen CL-L102-C7N
7W CitiLED**



In Applications – Driving 3W Citizen CitiLEDs with ZD850



Driving
Citizen CL-L102-C3N-B
3W CitiLED



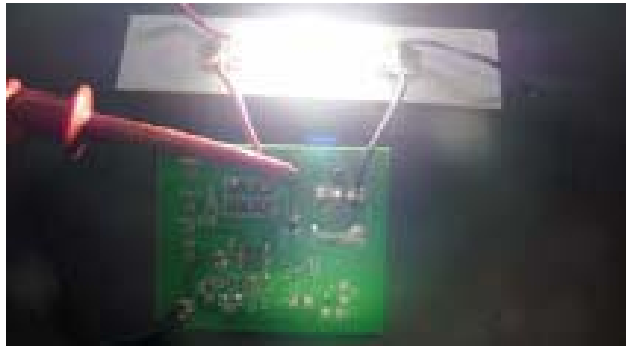
Bill of Materials (CL-L102-C3N-B, ILED = 350mA)

Item	Quantity	Location	Part
1	1	C1	1µF/16VDC
2	1	C2	10µF/50VDC
3	1	C5	0.1µF/16VDC
4	1	RSENSE	0.56Ω
5	1	R2	20kΩ
6	1	R3	20kΩ
7	1	D1	STPS0540Z
8	1	U1	ZD850LEY
9	1	HVCC	CL-L102-C3N-B
10	1	L1	SRR1208-221

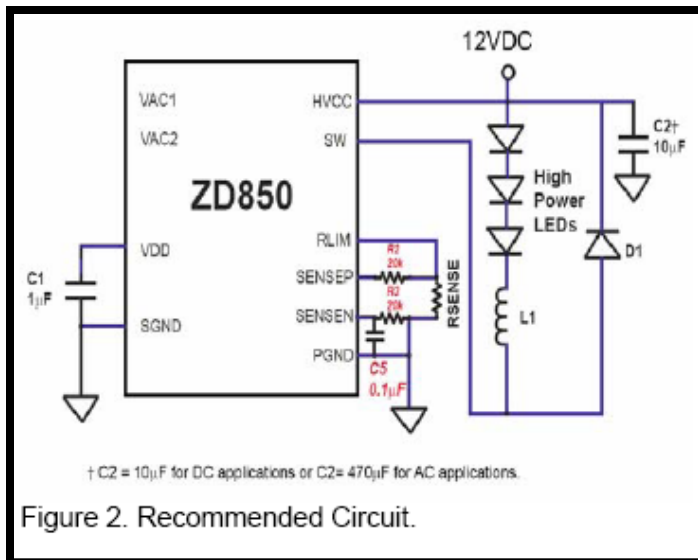




In Applications – Driving 7W Citizen CitiLEDs with ZD850



Driving
Citizen CL-L102-C7N
7W CitiLED



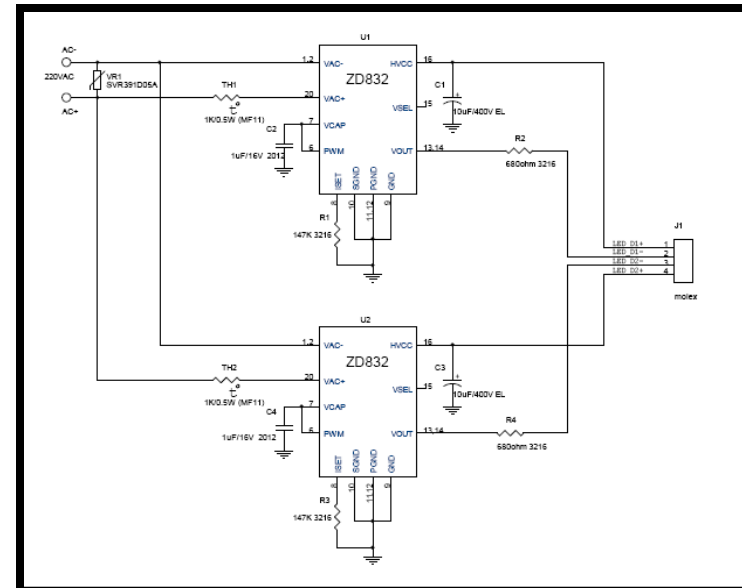
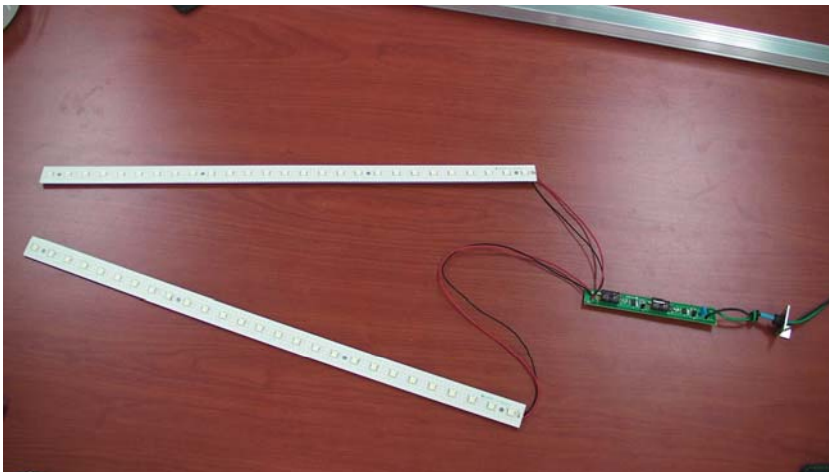
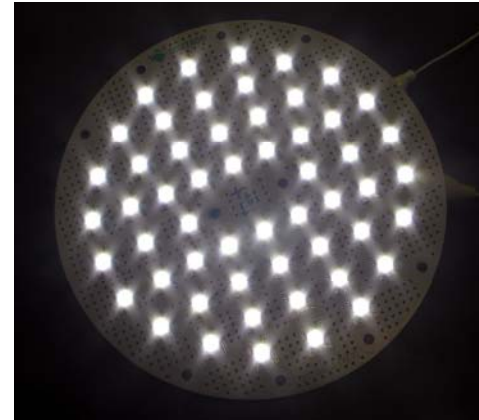
Bill of Materials (CL-L102-C7N, ILED = 700mA)

Item	Quantity	Location	Part
1	1	C1	1µF/16VDC
2	1	C2	10µF/50VDC
3	1	C5	0.1µF/16VDC
4	1	RSENSE	0.28Ω
5	1	R2	20kΩ
6	1	R3	20kΩ
7	1	D1	STPS0540Z
8	1	U1	ZD850LEY
9	1	HVCC	CL-L102-C7N
10	1	L1	SRR1208-101



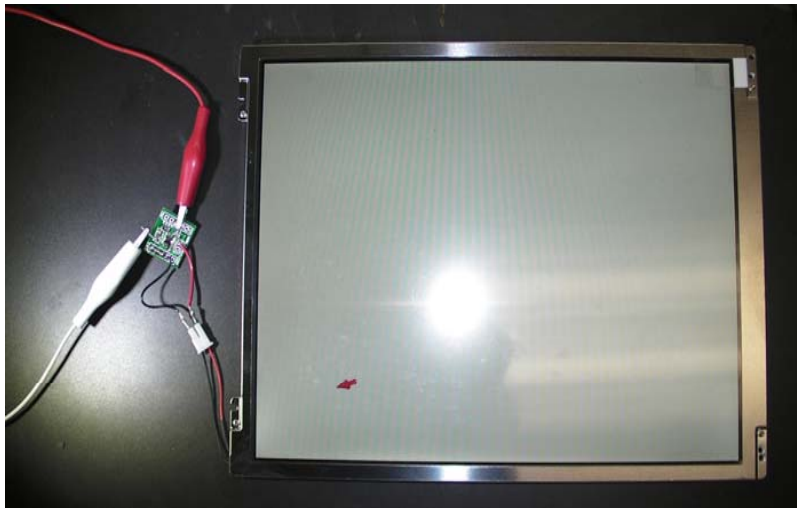


In Applications – 8W T8 LED Light Bar with ZD832





In Applications – 7", 10.1", 10.2" LCD Panel LED BLU with ZD3315



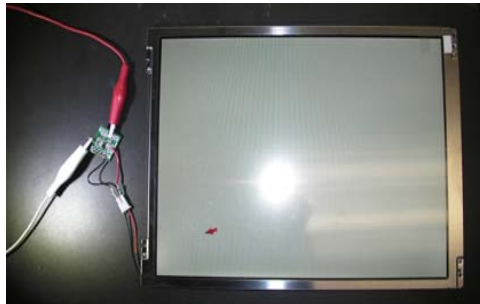
Supports LED BLU for:

- ✓ PrimeView PD104SLF 10.1" LCD Panel
- ✓ AU Optronics A101VW01 10.1" LCD Panel
- ✓ CPT CLAA102NA0ACW 10.2" LCD Panel
- ✓ Innolux A102-03-TT-31 10.2" LCD Panel

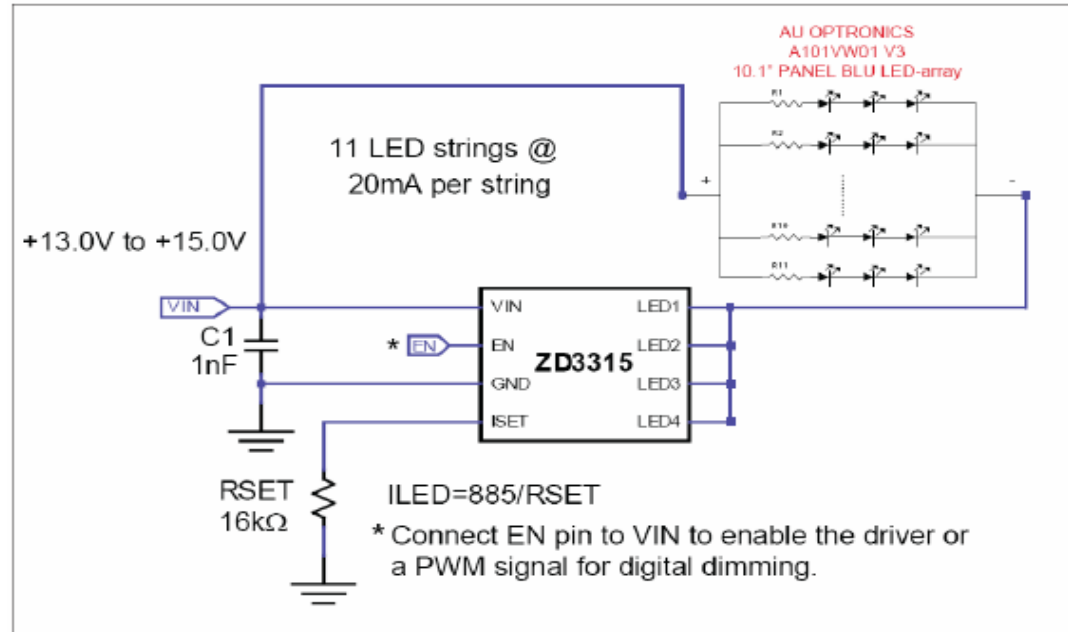


In Applications – Driving 10.1” LCD Panel LED BLU with ZD3315

AU OPTRONICS A101VW01 V3 10.1” color TFT-LCD driven by one unit of ZD3315LED.



**AU Optronics A101VW01
10.1” LCD Panel**



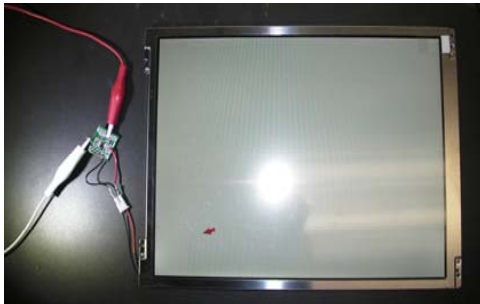
Bill of Materials

Item	Quantity	Location	Part
1	1	C1	1nF
2	1	RSET	16kΩ
3	1	U1	ZD3315LED
4	1	LED1~4	A101VW01 V3 BLU



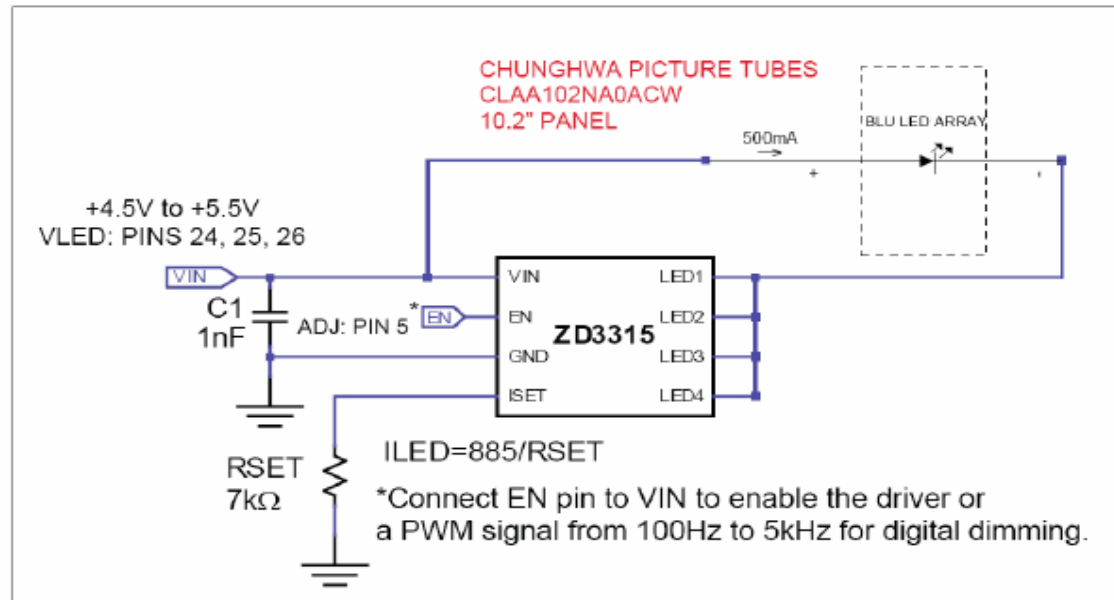


In Applications – Driving 10.2" LCD Panel LED BLU with ZD3315



**CPT CLAA102NA0ACW
10.2" LCD Panel**

CPT CLAA102NA0ACW 10.2" TFT-LCD module driven by one unit of ZD3315LED.



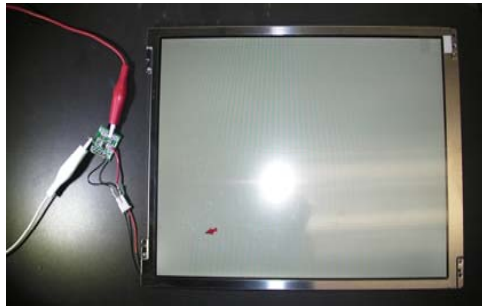
Bill of Materials

Item	Quantity	Location	Part
1	1	C1	1nF
2	1	RSET	14.16kΩ
3	1	U1	ZD3315LED
4	1	LED1~4	CLAA102NA0ACW BLU



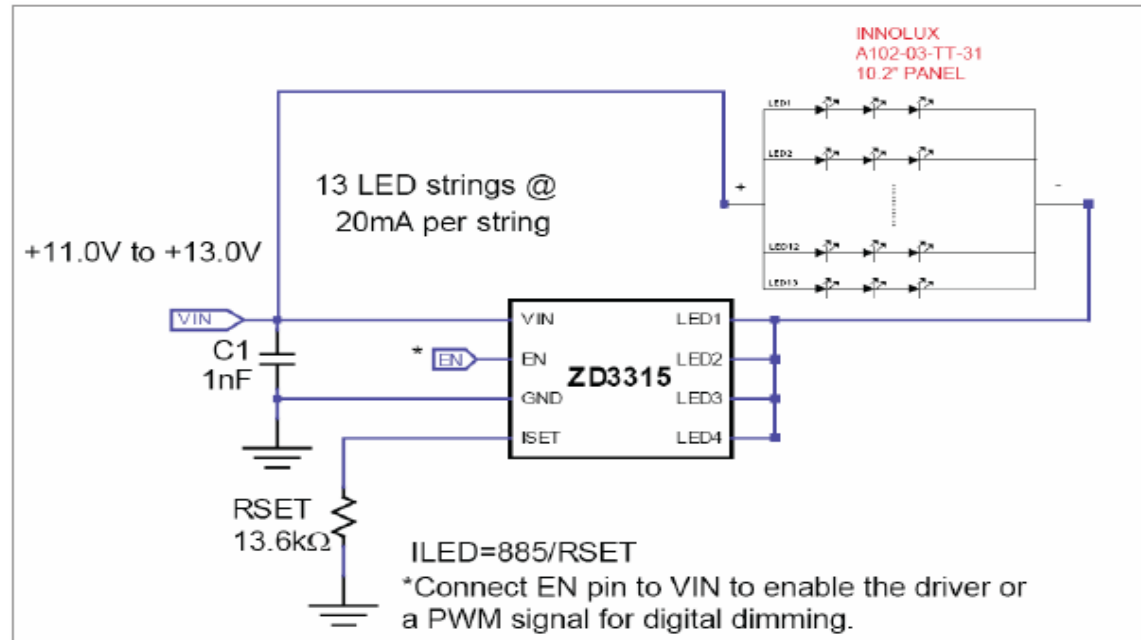


In Applications – Driving 10.2” LCD Panel LED BLU with ZD3315



**Innolux A102-03-TT-31
10.2” LCD Panel**

INNOLUX A102-03-TT-31 10.2” TFT-LCD module driven by one unit of ZD3315LED.



Bill of Materials

Item	Quantity	Location	Part
1	1	C1	1nF
2	1	RSET	13.6kΩ
3	1	U1	ZD3315LED
4	1	LED1~4	A102-03-TT-31 BLU





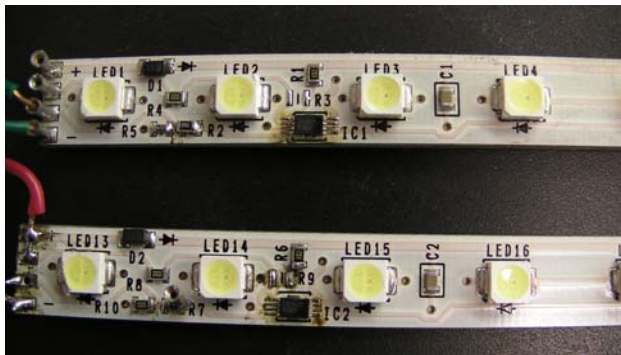
In Applications – LED Lighting with ZD3315



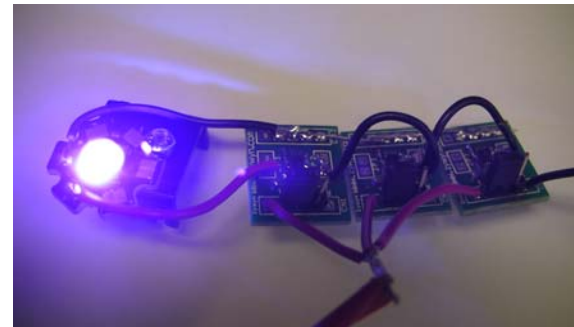
Arcade Gaming and Signage
LED Lighting
With ZD3315



Bio-Organic LED Lighting with ZD3315



LED light bar for Imaging,
Signage and BLU
With ZD3315



Dental Blue
LED Lighting
With ZD3315

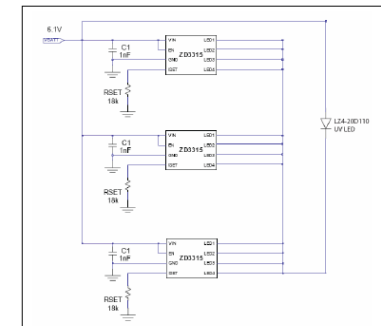
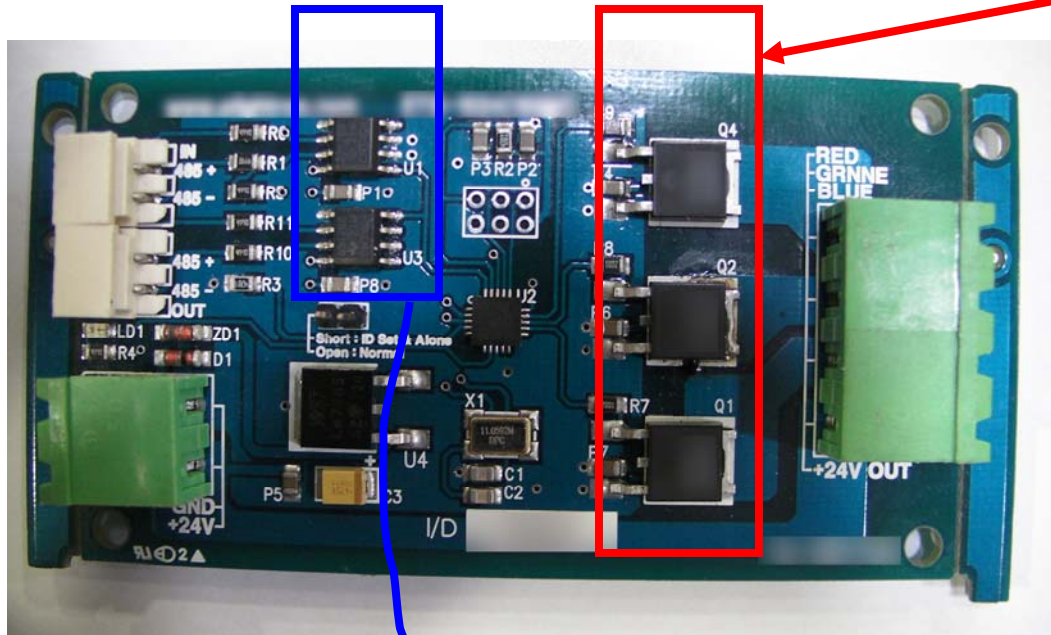


FIGURE 2. Schematic of Test Circuit used for life test.



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In Applications – Example LED Lighting Control with ZD3315/ZD1680 and ZT485 Interface



➤ LED Driver section can use multiple ZD3315 devices, depending on ILED required driving current.

➤ Controlling communication protocol can use the low cost standard RS485 interface.



Design Wins Success – LED Street Lamps Life-Testing with ZD1680

