

DIO8650B

Single Stage Flyback & PFC Controller With Primary Side Control For LED Lighting

Features

- Primary side control eliminates the opto-coupler
- Valley turn-on of the primary MOSFET to achieve lower switching losses
- Power factor >0.95 @230VAC
- THD $< 10\%$ @230VAC
- Reliable short LED and Open LED protection
- Quick start up: $<500\text{ms}$
- Low start up current: $15\mu\text{A}$ typical
- Package: SOT23-6, SOIC-8

Descriptions

The DIO8650B is a single stage Flyback and PFC controller targeting at LED lighting applications.

The DIO8650B is a primary side controller without applying any secondary feedback circuit for low cost, and drives the Flyback converter in the quasi-resonant mode to achieve higher efficiency.

The DIO8650B keeps the Flyback converter in constant on time operation to achieve high power factor.

This chip adopts special design to achieve quick start up and reliable protection for safety requirement.

Applications

- LED Lighting

Block Diagram

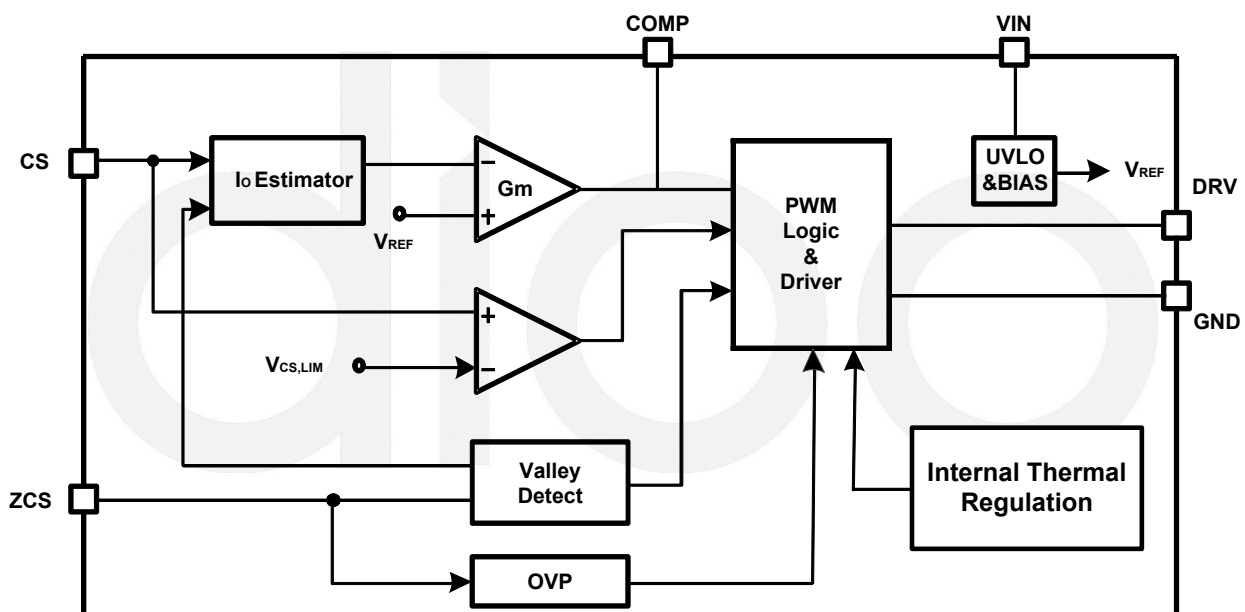


Figure1 Block Diagram



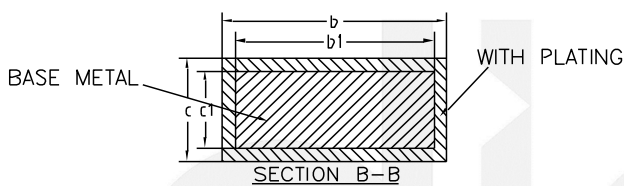
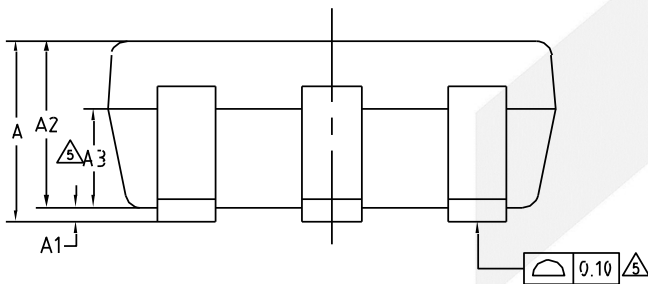
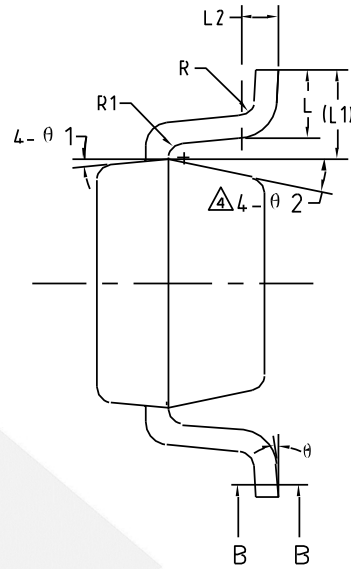
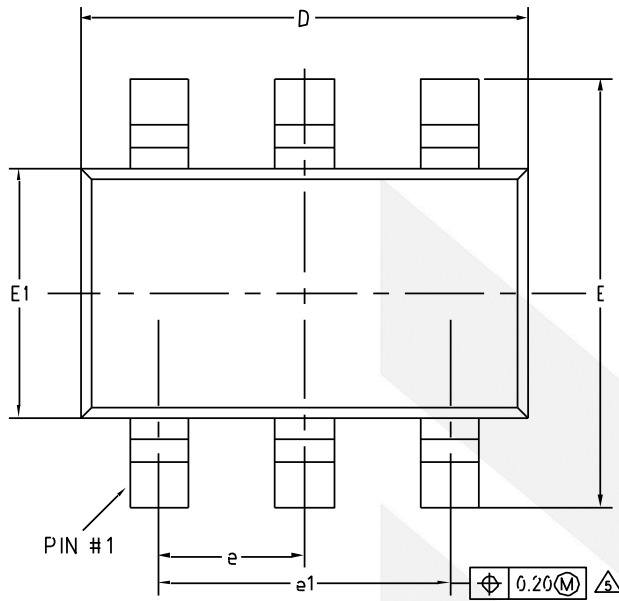
DIO8650B

Ordering Information

Order Part Number	Top Marking		T _A	Package	
DIO8650BCST6	YW6B	Green	-40 to +85°C	SOT23-6	Tape & Reel, 3000
DIO8650BCS8	DIO8650B	Green	-40 to +85°C	SOIC-8	Tape & Reel, 2500

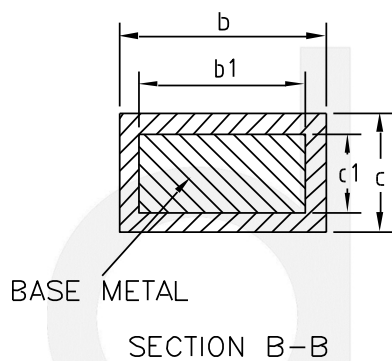
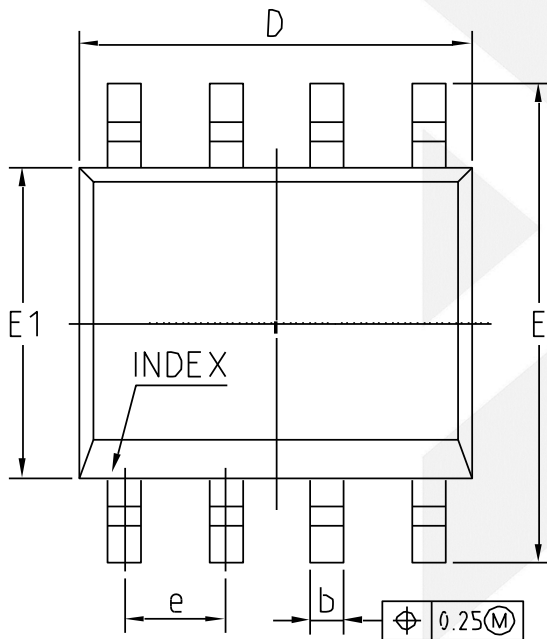
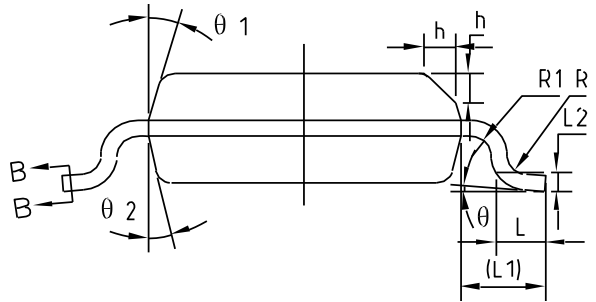
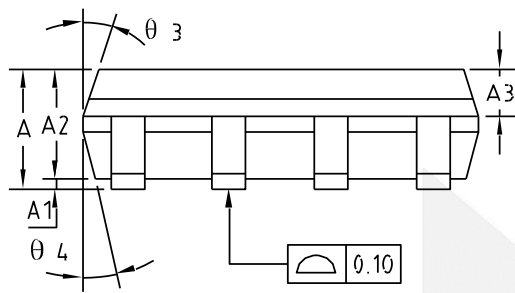
Single Stage Flyback & PFC Controller With Primary Side Control For LED Lighting

Physical Dimensions: SOT-23-6



COMMON DIMENSIONS (UNITS OF MEASURE=MILLIMETER)			
Symbol	MIN	NOM	MAX
A	-	-	1.25
A1	0	-	0.15
A2	1.00	1.10	1.20
A3	0.60	0.65	0.70
b	0.36	-	0.50
b1	0.36	0.38	0.45
c	0.14	-	0.20
c1	0.14	0.15	0.16
D	2.826	2.926	3.026
E	2.60	2.80	3.00
E1	1.526	1.626	1.726
e	0.90	0.95	1.00
e1	1.80	1.90	2.00
L	0.35	0.45	0.60
L1	0.59REF		
L2	0.25BSC		
R	0.10	-	-
R1	0.10	-	0.25
θ	0°	-	8°
θ1	3°	5°	7°
θ2	6°	-	14°

Physical Dimensions: SOIC-8



COMMON DIMENSIONS (UNITS OF MEASURE=MILLIMETER)			
Symbol	MIN	NOM	MAX
A	1.35	1.55	1.75
A1	0.10	0.15	0.25
A2	1.25	1.40	1.65
A3	0.50	0.60	0.70
b	0.38	-	0.51
b1	0.37	0.42	0.47
c	0.17	-	0.25
c1	0.17	0.20	0.23
D	4.80	4.90	5.00
E	5.80	6.00	6.20
E1	3.80	3.90	4.00
e	1.27BSC		
L	0.45	0.60	0.80
L1	1.04REF		
L2	0.25BSC		
R	0.07	-	-
R1	0.07	-	-
h	0.30	0.40	0.50
θ	0°	-	8°
θ1	15°	17°	19°
θ2	11°	13°	15°
θ3	15°	17°	19°
θ4	11°	13°	15°

CONTACT US

Dioo is a professional design and sales corporation for high-quality and performance analog semiconductors. The company focuses on industry markets, such as, cell phone, handheld products, laptop, and medical equipment and so on. Dioo's product families include analog signal processing and amplifying, LED drivers and charger IC. Go to <http://www.dioo.com> for a complete list of Dioo product families.

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DIOO:

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