

FEATURES :

- 10W DIL Package
- 4:1 Wide Input Voltage Range
- High Efficiency Up to 91%
- Regulated Output Types
- No Minimum Load Required
- Over Power and Short Circuit Protection
- Operating Temperature: -40°C to +89°C (Without Derating)
- UL94V-0 Package Material
- UL/cUL/IEC/EN 62368-1 approved, CB-Report, CE Marking
- EMC standard of EMI EN55032:2015 approved
- EMC standard of EMS EN55035:2017 approved
- EMC standard of Canadian ICES-003 issue7(2020) approved
- EMC standard of 47CFR FCC Part 15 subpart B approved

YUAN DEAN SCIENTIFIC



DC-DC Converter

YLB10 SERIES

10Watt

1600Vdc Isolated

4 : 1 Input Voltage Range

Single Output

1" X 1" Package

Specifications typical at TA=25°C, nominal input voltage and rated output current unless otherwise specified

Selection Guide

Part Number	Input Voltage Range	Input Current (5Vin/12Vin)		Output Voltage	Output Current	Efficiency (5Vin/12Vin)	Maximum capacitor Load
		No-Load	Full-Load				
		Vdc	mA (typ)				
YLB10-05S05	4.5-18	20 / 15	2247 / 936	5	2000	89 / 89	3400
YLB10-05S12	4.5-18	20 / 15	2246 / 926	12	833	89 / 90	590
YLB10-05S15	4.5-18	20 / 15	2223 / 916	15	667	90 / 91	390
YLB10-05S24	4.5-18	25 / 20	2200 / 927	24	417	91 / 90	220

Part Number

YLB / A 10 / B - 05 / C S / D 05 / E

- A: Series
- B: Output Power
- C: Input Voltage
- D: Single
- E: Output Voltage



www.yds.com.tw



TEL : 886-6-3842899 FAX : 886-6-3843288
E-MAIL : ydsweb@yds.com.tw

Rev: 0 2022/06/30

Input Specifications

Parameters	Conditions	Min	Typ	Max	Units	
Input Voltage	All Models	4.5		18	Vdc	
Input Surge Voltage (100 ms max.)	All Models	-0.7		25	Vdc	
Start-up Voltage	All Models			4.5	Vdc	
Under Voltage Shutdown	All Models		3.5		Vdc	
Start-up Time	Constant Resistive Load, Nominal Vin	Power-up	30		ms	
		Remote ON/OFF	30			
Input Filter	All Models		Internal Pi type			
Remote ON/OFF (Ctrl PIN Refer To -Vin PIN)	Positive Logic	DC/DC ON	Open or 3.5 Vdc - 12 Vdc			
		DC/DC OFF	Short or 0 Vdc - 1.2 Vdc			
	Input Current of Ctrl PIN		-0.5		0.5	mA
	Remote Off Input Current			3.5		

Output Specifications

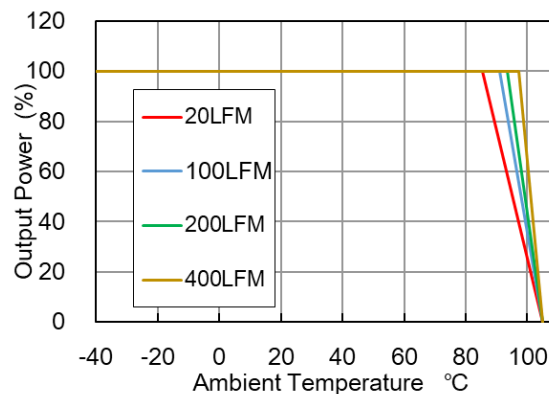
Parameters	Conditions	Min	Typ	Max	Units
Voltage Tolerance	100% Load	-2		+2	%
Line Regulation	Vin(min) to Vin(max) @100% Load	-0.2		+0.2	%
Load Regulation	0% Load to 100% Load	-0.5		+0.5	%
Ripple & Noise (BW=20MHz)	With an 0.47uF MLCC	15Vout & 24Vout		150	mVp-p
		5Vout & 12Vout		100	
Transient Response Setting Time	25% Load Step Change		300	500	us
Transient Response Deviation	25% Load Step Change	-5	±3	+5	%
Temperature Coefficient		-0.02		+0.02	%/°C
Output Power Protection	% of Io, Hiccup mode, Auto-recovery	120	150	180	%
Short Circuit Protection	Continuous [Hiccup Mode], Auto-Recovery				
Over Voltage Protection	5Vout		6.2		Vdc
	12Vout		15		
	15Vout		18		
	24Vout		30		

General Specifications

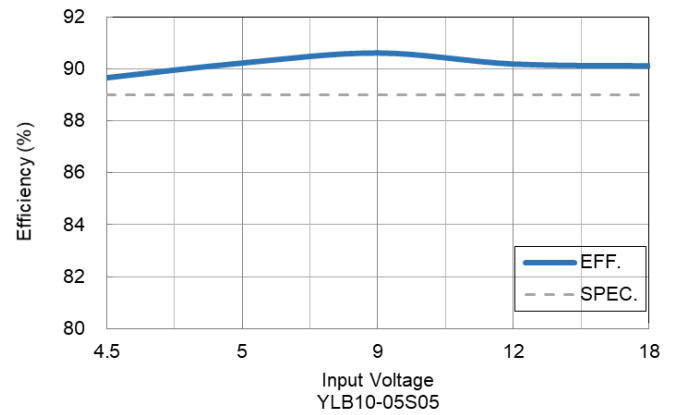
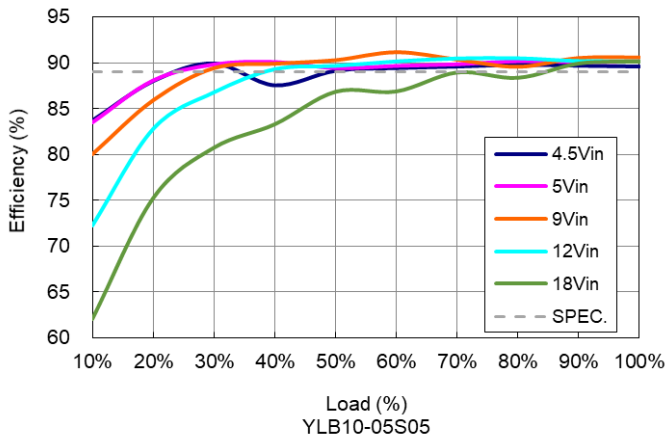
Parameters	Conditions	Min	Typ	Max	Units
Isolation Voltage	Input to Output (60sec)	1600			Vdc
	Input (Output) To Case (60sec)	1000			Vdc
Isolation Resistance	500Vdc	1000			MΩ
Isolation Capacitance	100kHz, 1V			2200	pF
Switching Frequency	100% Load, Nominal Input		200		KHz
Operating Ambient Temperature (Power Derating See Derating Graph)	Nominal Vin, 100% Load	YLB10-05S05, YLB10-05S12	-40	85.5	°C
		YLB10-05S15		87.4	
		YLB10-05S24		89.4	
Thermal Impedance	20LFM		15.8		°C/W
	100LFM		11.3		
	200LFM		9.2		
	400LFM		6.3		
Maximum Case Temperature				105	°C
Storage Temperature		-55		125	°C
Humidity	Non-Condensing	5		95	%
Cooling			Natural Convection		
Case Material			Copper		
Potting Material			Silicone (UL94-V0)		
MTBF	MIL-HDBK-217F@25°C (calculated)		1,468,837		Hours
Weight			17.2		g
Dimensions			25.4 x 25.4 x 10.6		mm

Temperature Derating Graph

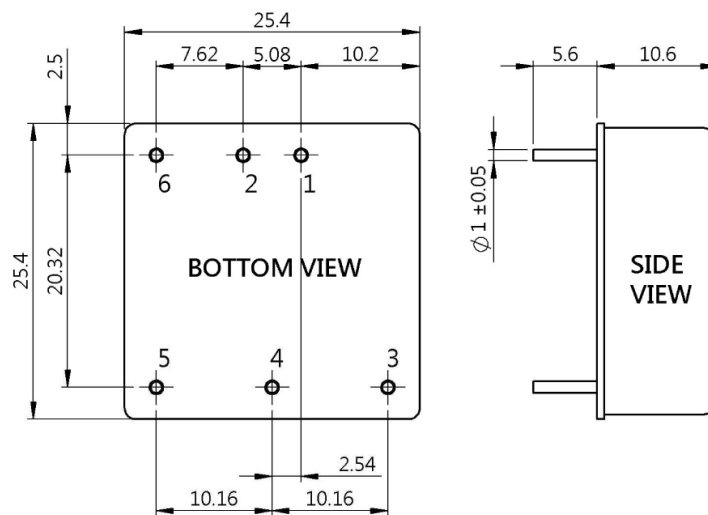
YLB10-05S05



Characteristic Curve



Dimensions



Unit : mm
Tolerance : XX.X \pm 0.5 , XX.XX \pm 0.25

PIN Assignment

Pin	1	2	3	4	5	6
Single	+Vin	-Vin	+Vout	Trim	-Vout	Ctrl
Diameter	1.0mm [0.04"]	1.0mm [0.04"]	1.0mm [0.04"]	1.0mm [0.04"]	1.0mm [0.04"]	1.0mm [0.04"]