

# BlueCube™ – LX3i

## 3W Power Module

### Universal Input, AC/DC Converter

*Isolated / Compact / Eco-friendly*



Synergistic Technology  
Solutions, Inc.



#### Description

BlueCube power modules are highly integrated and fully encapsulated offline board-mount converters ideally suited for main and auxiliary power requirements in appliance, industrial and consumer product applications.

The LX3i isolated series delivers 3 Watts at 5 to 24 Volts from universal AC input and is an immediate drop-in power solution requiring no additional external circuitry.

#### Product Highlights

- Board-mount, compact AC-DC converter
- Low cost single component solution
- Fully integrated, no external circuitry
- Universal AC input (85-265 Vac)
- High Voltage DC input (100-350 Vdc)
- Single output voltage (5V to 24V range)
- Optimized design for minimal pcb footprint
- Fully protected: over voltage, over power, over temperature & short circuit protection
- Meets UL/CSA & EN product safety reqts
- Meets EN 55014, Class B, FCC Part 15, B
- Extremely energy efficient design
  - ◆ Meets US & Int'l Energy Star regulations
  - ◆ Meets California CEC requirements
  - ◆ No-load consumption <500 mW

#### ELECTRICAL SPECIFICATIONS

##### INPUT

Voltage range	85 - 265 Vac (50/60Hz)
Surge withstand	3KV, L-N
Inrush current	< 30A @ 265 Vac
Leakage current	< 250 µA @ 50/60 Hz 265 Vac input

##### OUTPUT

Voltage range	5 to 24 V (family range)
Voltage accuracy	± 5%
Line / load regulation	± 5%
Minimum load	0%
No-load consumption	< 500 mW @ 265 V
Ripple	< 1% output voltage
Noise	< 1% output voltage
Efficiency	Meet CEC
Hold-up time	> 5mS @ 90 Vac input
Input-Output isolation	3750 Vac

##### PROTECTION

Over power	Hiccup mode, auto-recovery
Over voltage	Hiccup mode, auto-recovery
Over current	Hiccup mode, auto-recovery
Over temperature	Hysteretic
Short circuit	Hiccup mode, indefinite (auto-recovery)

##### ENVIRONMENT

Operating temperature	-20 to 70°C
Storage temperature	-40 to 85°C
Humidity	0 to 95%, non-condensing
MTBF	> 100,000 h @ 25°C

##### MECHANICAL

Dimension – L x W x H	1.80 x 0.92 x 1.07 in. (45.5 x 23.5 x 27.3 mm)
Case material	Polycarbonate blue (flammability to UL94V-0)
Weight	1.60 ounces (45 grams)
Cooling	Free air convection

##### EMC

EMI (conducted & radiated emissions)	Meet EN 55014 FCC Part 15 Class B
EMS (noise immunity)	Meet EN 55024

##### SAFETY

Agency	UL 1310 recognized UL File: E310433
--------	-------------------------------------

All specifications valid at 120 Vac input and +25°C unless otherwise stated

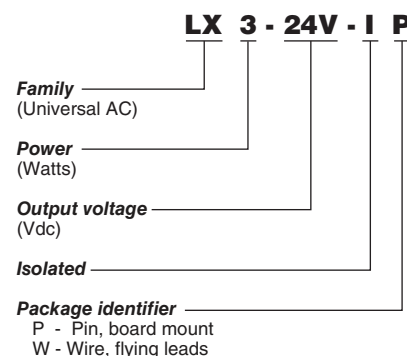
#### Applications

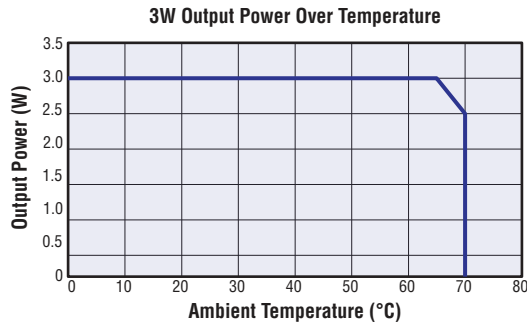
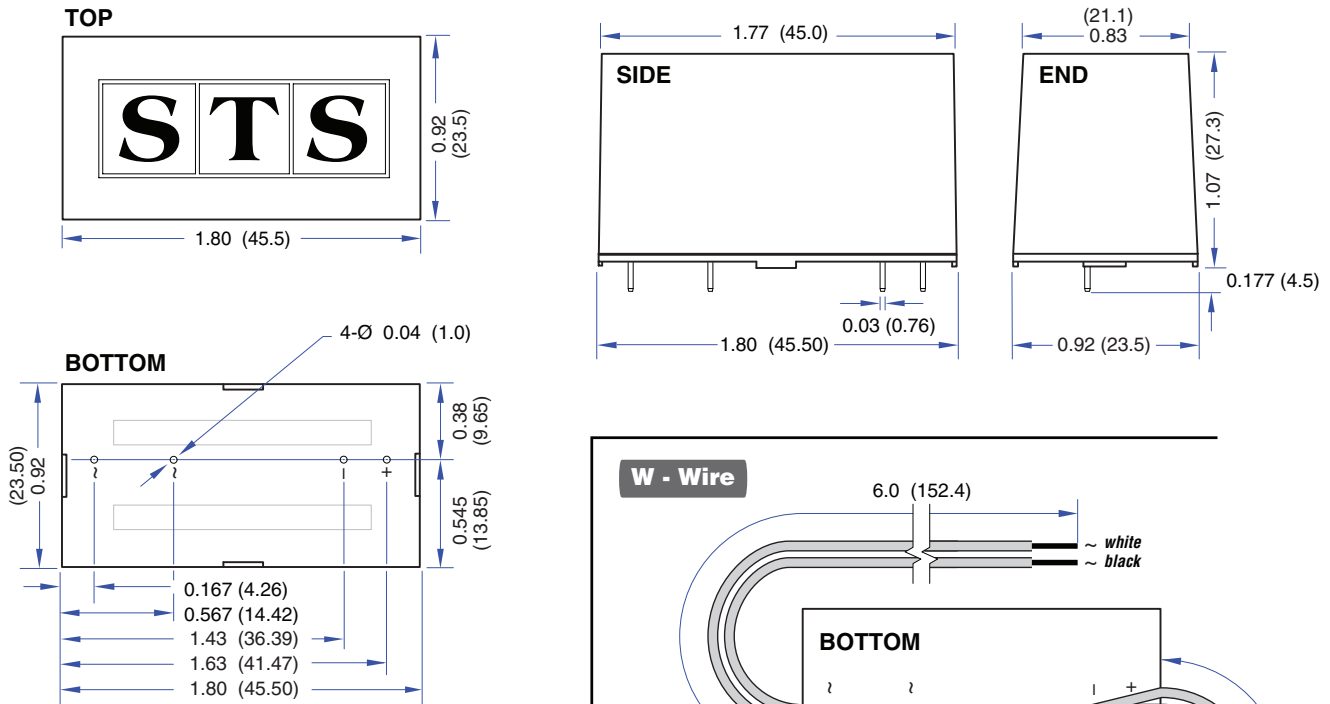
- Home appliances, white goods
- Industrial control, auxiliary supplies
- Stand-by power for clock, microprocessor
- Power for remote control sensor
- As linear transformer replacement in <5VA AC/DC applications

#### LX3i PRODUCT FAMILY

Part number	Voltage (V)	Current (mA)	Power (W)
LX3-05V-IP	5V	615	3.00
LX3-09V-IP	9V	360	3.25
LX3-12V-IP	12V	270	3.25
LX3-15V-IP	15V	216	3.25
LX3-24V-IP	24V	135	3.25

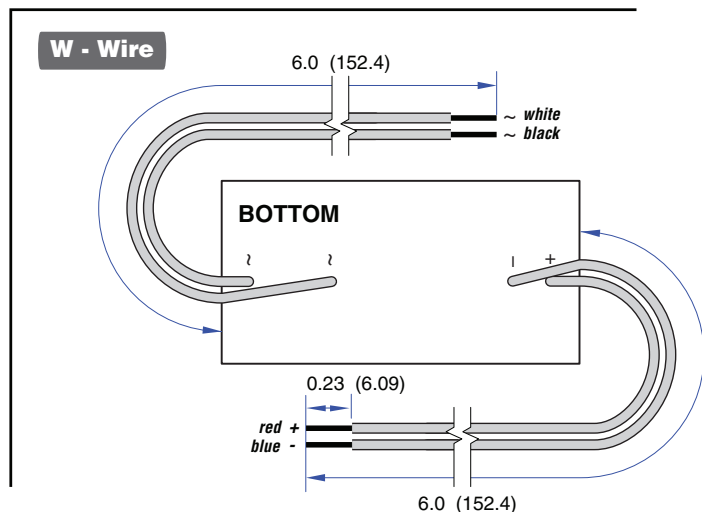
#### PART NUMBER KEY



**DERATING CURVE**

**PACKAGE OPTION SPECIFICATIONS**
**P - Pin**

**NOTES:**

1. Dimensions inches (mm)
2. 18 AWG wire for AC input
3. 20 AWG wire for DC output

For the latest updates visit our website:  
[www.sts-power.com](http://www.sts-power.com)

**W - Wire**

**North America**

**CORPORATE HEADQUARTERS**  
 Synergistic Technology Solutions, Inc.  
 935 Lakeview Parkway, Suite 110  
 Vernon Hills, IL 60061 USA  
 (847) 968-5501  
 email: [info@sts-power.com](mailto:info@sts-power.com)

**SALES & MARKETING**

Synergistic Technology Solutions, Inc.  
 65 River Mist Drive  
 Hoschton, GA 30548 USA  
 (706) 658-2320  
 email: [info@sts-power.com](mailto:info@sts-power.com)

**Asia**

**SALES & MARKETING**  
 STS Electronics  
 Shenzhen, Guangdong  
 China

**ELECTRONIC & APPLICATIONS CENTER**

STS Electronics  
 Shenzhen, Guangdong  
 China

BlueCube and the STS logo are trademarks of Synergistic Technology Solutions, Inc.

*Synergistic Technology Solutions reserves the right to make changes to its products at any time to improve reliability or manufacturability. Synergistic Technology Solutions does not assume any liability arising from the use of any device or circuit described herein. SYNERGISTIC TECHNOLOGY SOLUTIONS MAKES NO WARRANTY HEREIN AND SPECIFICALLY DISCLAIMS ALL WARRANTIES INCLUDING, WITHOUT LIMITATION, THE IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, AND NON-INFRINGEMENT OF THIRD PARTY RIGHTS.*