

REVISION HISTORY

REV	DESCRIPTION	DATE	APPROVAL
X	Preliminary	1/16/09	J. Lee
A	Revise input voltage from 96-264VAC to 96-144VAC	1/27/09	J. Lee

LEVEL OF PURCHASE	APPRV'D BY	DATE
RECORD AND FILE		
PRELIMINARY		
FINAL		

		DATE	INSYNC Peripherals Corporation 22951 La Cadena Dr. Laguna Hills, CA 92653 Tel: 949-588-2675; Fax: 949-588-2679 Email: info@insyncperipherals.com
DRAWN BY			
RELEASE BY			
ENGINEERING	J. Lee	1/16/09	
QA	Alan Phan	1/16/09	2.0A LED Backlight Driver Series With AC Input (Product Specification)

SIZE	CAGE CODE	DWG NO.	REV.
A	1TWU7	04-SPEC-243	A
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2.0A LED Backlight Driver Series with AC Input Product Specification

ORIGINATOR

DATE

SYSTEM ENGINEER

DATE

ENGINEERING PROGRAM MGR

DATE

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1.0 SCOPE

This specification establishes the performance and test requirements for a 2.0A LED backlight driver. This driver is designed to provide AC input to DC current output to drive LED backlight. It has two outputs. Each output is a current source and is capable of sourcing current selectable ranging from +0.3A to +1.0A. This driver is used for high brightness displays, sizes from 10.4 to 19” for outdoor and wide temperature applications. A separate part number shall be assigned to each driver corresponding to a given maximum drive current, such as from 0.3A to 1.0A. See note 1 below for part number assignment.

2.0 APPLICABLE DOCUMENTS

The following documents, of the exact issue shown, form a part of this specification to the extent specified herein. In the event of a conflict between the documents referenced herein and the contents of this specification, the contents of this specification shall have precedence.

ANSI / IPC-A-610 Acceptability for Electronic Assemblies

ANSI / IPC-A-620 Requirements and Acceptance for Cable and Wire Harness Assemblies

IPC DOCUMENTS TBD

3.0 REQUIREMENTS

This driver is designed in accordance with this specification, including requirements covering all operating and non-operating conditions. The driver shall meet performance and all other requirements of this specification while installed in the intended equipment, provided the environment is no more severe than that specified herein.

3.1 PRODUCT DEFINITION

This driver includes the following.

- a. Driver (conformal coating optional)
- b. Input cable (optional)

See Figure on page 5 for mechanical dimensions.

4.0 SPECIFICATION

4.1 Input Voltage: 96-144VAC; 47- 63 Hz

4.2 Output Voltage: limited to maximum +27VDC +/-2.0V

4.3 Output Current: Two outputs, each output is selectable from, +0.3A to +0.8A in multiple steps (Note 1) and dimmable to TBD. (Note 2)

4.4 Output Dimming Control: 0V=Maximum Current; +5VDC=Minimum Current

4.5 ----

4.5 Enable Control Signal: 0V=On; +5VDC=Off

4.6 Efficiency: 85% at maximum load

4.7 Operating Temperature: -40C to +60C

4.8 Non-operating Temperature: -40C to +70C

Notes:

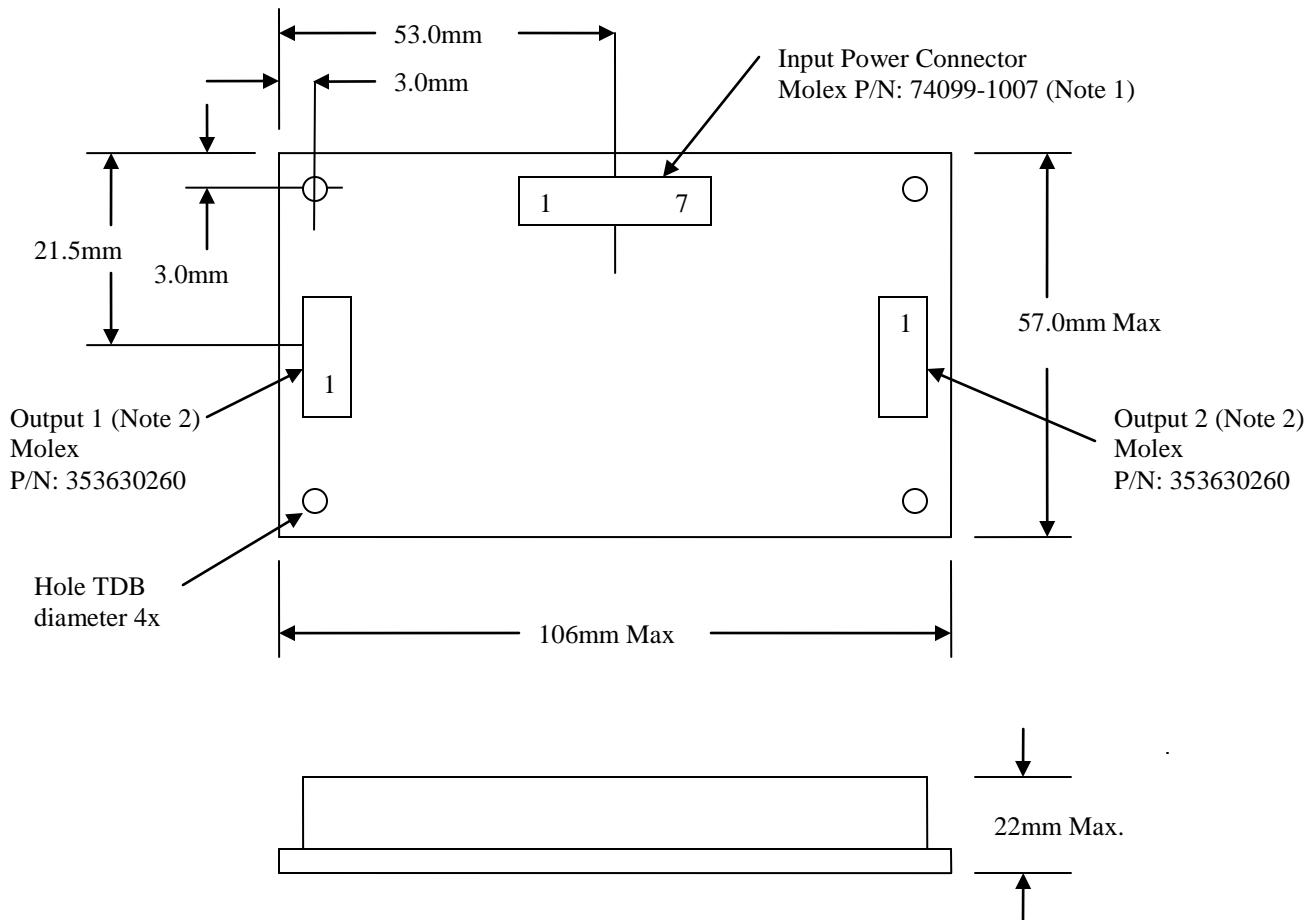
1. A separate part number shall be assigned to each driver. Each driver corresponds to a given maximum drive current For example for 0.32A, the unit is adjusted to a maximum of 0.32A and the part number is assigned as 04-SPEC-239-0.32. Likewise, 0.50A maximum current, the part number is assigned as 04-SPEC-239-0.50.

2.. Output current is controllable and output voltage is a function of output current; therefore output current is an independent variable. At all time, output voltage shall not exceed +25VDC.

5.0 MECHANICAL

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Driver Dimensions



Notes

1. 7-pin Input Connector
Pin1 and Pin 2= Input Voltage = 96-144VAC
Pin 3 and Pin 4=Return/Ground
Pin 5 Enable On=0V or floating; Off=+5V to +12V
Pin 6 Dimming: 0= Maximum brightness; +5V=Minimum Brightness
Pin 7 +5V Output
2. 2-pin Output Connector
Pin 1 +25VDC output Max
Pin 2 Power Return
3. Output 1 and 2 mating connector housing is Molex 35507020; pin is Molex 50212800.
4. Input Power connector mating housing is Molex 50579407; pin will be Molex 16020082.
5. Mating cable for outputs 1 and 2 is UL1596AWG24.

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6.0 INSPECTION

- 6.1 Quality Inspection Standard
- 6.1.1 Inspection Criteria is based on Military Standard Mil-Std-105D.
- 6.1.2 Lot Size: 91 to 150
- 6.1.3 General Inspection Level: Level 1
- 6.1.4 AQL: 1.0
- 6.1.5 Sampling Plan: Single
- 6.1.6 Inspection: Normal
- 6.1.7 Sample Size: 8
- 6.1.8 AC=0; Re=1

7.0 RELIABILITY

- 7.1 FAILURE REPORTING ANALYSIS AND CORRECTIVE ACTION
IPC shall identify the root cause and corrective action of any driver failures that occur during the manufacture, test and deployment of the driver. IPC shall provide individual failure analysis for each driver returned to IPC as a result of a failure in the intended equipment. These analysis will list the symptoms of the failure, the root cause of the failure and the corrective action taken to prevent any reoccurrence.

8.0 QUALITY ASSURANCE PROVISIONS

8.1 GENERAL

The requirements for the formal verification of the performance, design, and construction of the driver shall be as specified in this section. The product must demonstrate its adequacy to meet the design/performance requirements of Section 4. Verification of each requirement shall be designated for accomplishment by analysis, inspection, demonstration or test, or combinations of these as specified herein. Verification methods are established as follows:

Test: An examination or trial which yields analytical data for use in comparing the measured performance with the specified requirement. Included are accept/reject criteria for comparison of test results with design requirements.

8.2 RESPONSIBILITY

Unless otherwise specified IPC is responsible for the performance of all verifications as specified herein. IPC may use its own or any other facilities suitable for the performance of tests and other verifications specified herein, unless disapproved by user. IPC reserves the right to perform any of the tests and other verifications set forth in the specification where such tests or verifications are deemed necessary to assure supplies and conform to prescribed requirements. IPC shall correct any design, material, or performance defect made evident during these tests.

8.3 EXAMINATION OF PRODUCT

Each driver shall be carefully examined to determine conformance to the requirements of this specification. Particular attention shall be given to workmanship, finish, dimensions, construction, cleanliness, identification and marking.

9.0 PREPARATION FOR DELIVERY

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9.1 GENERAL

The driver shall be cleaned, preserved, packed, packaged, labeled, and marked in accordance with industry's standard commercial practices to protect from contamination and damage. The methods for cleaning, preserving, packing, packaging, labeling, and marking shall be subject to approval by the Buyer if it is specified in the Purchase Order.

9.2 MARKING

All parts and assemblies which require special care during packing, handling, or shipping shall be identified and marked appropriately. The driver shall be marked with at least the following information in such a manner that the marking will not be rendered illegible:

<p>LED DRIVER Insync Peripherals Corp. 949-588-2675 P/N: 04-SPEC-243-X.XX Date Code: YYWW</p>
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Note: X.XX represents pre-adjusted maximum current.

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