

Texas Instruments and/or its licensors do not warrant the accuracy or completeness of this specification or any information contained therein. Texas Instruments and/or its licensors warrant that this design will meet the specifications, will be suitable for your application or fit for any particular purpose, or will operate in an implementation. Texas Instruments and/or its licensors do not warrant that the design is production worthy. You should completely validate and test your design implementation to confirm the system functionality for your application.

Orderable: EVM, orderable	Designed for: Public Release	Mod. Date: 4/24/2017
TID #: TIDA-01372	Project Title: Automotive LED Front Lamp With Sequential Turn	Drawn By: [Redacted]
Number: TIDA-01372 Rev: E1	Sheet Title:	Sheet: 2 of 3
Assembly Variant: Not in version control	Assembly Variant: [No Variations]	Drawn By: [Redacted]
File: TIDA-01372 Sepic_Main_SchDoc	Contact: http://www.ti.com/support	© Texas Instruments 2016

H1 1 NY PMS 440 0025 PH
 H2 1 NY PMS 440 0025 PH
 H3 1 NY PMS 440 0025 PH
 H4 1 NY PMS 440 0025 PH

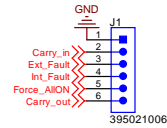
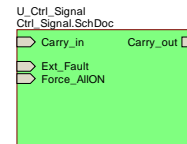
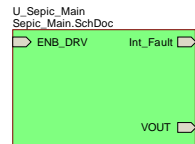
H5 1902C
 H6 1902C
 H7 1902C
 H8 1902C

H9 SJ-5303 (CLEAR)
 H10 SJ-5303 (CLEAR)
 H11 SJ-5303 (CLEAR)
 H12 SJ-5303 (CLEAR)

FID1
 FID2
 FID3

PCB Number: TIDA-01372
 PCB Rev: E1

PCB LOGO
 Texas Instruments
 Pb-Free Symbol
 FCC disclaimer



Variant/Label Table	
Variant	Label Text
001	ChangeMe!
002	ChangeMe!

LBL1
 PCB Label
 Size: 0.65" x 0.20"

ZZ1
 Label Assembly Note
 This Assembly Note is for PCB labels only

ZZ2
 Assembly Note
 These assemblies are ESD sensitive, ESD precautions shall be observed.

ZZ3
 Assembly Note
 These assemblies must be clean and free from flux and all contaminants. Use of no clean flux is not acceptable.

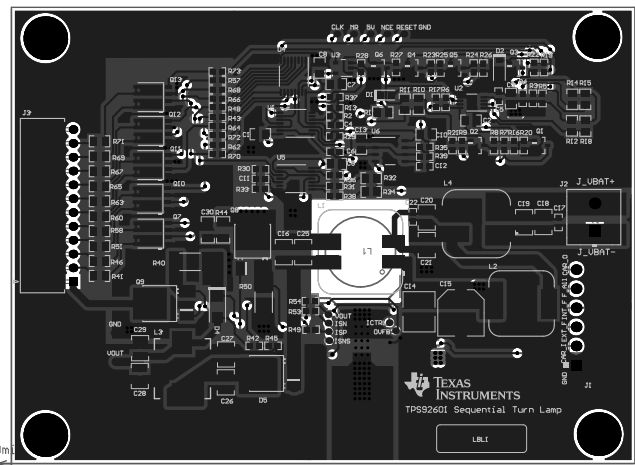
ZZ4
 Assembly Note
 These assemblies must comply with workmanship standards IPC-A-610 Class 2, unless otherwise specified.

Z24 These assemblies must comply with workmanship standards IPC-A-610 Class 2, unless otherwise specified.
 Z23 These assemblies must be clean and free from flux and all contaminants. Use of no clean flux is not permitted.
 Z22 These assemblies are ESD sensitive, ESD precautions shall be observed.

Z21 Install label in silkscreened box after final wash. Text shall be 8 pt font. Text shall be per the Label Table in the PDF schematic.
 Layer 2



Layer	Name	Material	Thickness	Constant	Board Layer Stack
1	Top Overlay				
2	Top Solder	Solder Resist	0.40mil	3.5	
3	Top Layer	Copper	1.40mil		
4	Dielectric1	FR-4	59.20mil	4.8	
5	Bottom Layer	Copper	1.40mil		
6	Bottom Solder	Solder Resist	0.40mil	3.5	
7	Bottom Overlay				



COMPONENTS MARKED 'DNP' SHOULD NOT BE ORDERED. THIS IS A DESIGN ERROR. CONTACT YOUR DESIGNER FOR CORRECTION.
 ASSEMBLY VARIANT: [No Variations]

DESIGN INFORMATION

MIN. TRACK WIDTH: 8_MIL
 MIN. CLEARANCE: 0.2 mm
 MIN. VIA PAD SIZE: 24_MIL

MINIMUM ANNULAR RING 0.05mm (2MIL) EXTERNAL
 PER IPC-D-275 CLASS 2 LEVEL C
 REGISTRATION TOLERANCES: METAL +/- 5_MIL, HOLES +/- 3_MIL
 HOLE SIZE TOLERANCE (UNLESS OTHERWISE SPECIFIED): +/- 3_MIL

MATERIAL:
 FR-408 FR-4 High Tg OTHER

THICKNESS: 62 MIL (1.6mm) +/-10% OTHER

TOLERANCE: ANSI IPC-6012 TYPE 3 CLASS 2
 OTHER +/-

BOW & TWIST: ANSI IPC-6012 TYPE 3 CLASS 2
 OTHER +/-

DRILLING:
 REFERENCE: AS SHOWN NC_DRILL FILES
 PTH COPPER THICKNESS: 20-30 um OTHER

BOARD FINISH:
 SILKSCREEN: TOP BOTTOM
 SILKSCREEN COLOR: WHITE OTHER
 SOLDER RESIST COLOR: GREEN OTHER
 MATTE SEMI-GLOSS

SURFACE FINISH: IMMERSION GOLD (ENIG) ENEPG
 IMM. TIN/SILVER OR EQUIV OTHER

ARRAY/PANEL: CUT AND TRIM PER M1 BOARD OUTLINE
 N.C. ROUTE V. SCORE

CERTIFICATION: MATERIALS AND WORKMANSHIP FOR ALL PCBs TO MEET OR EXCEED THE REQUIREMENTS OF:
 ANSI IPC-A-600F CLASS -> 1 2 3
 RoHS OTHER PER ORDER

ALL BOARDS MUST MEET OR EXCEED UL94-V0 REQUIREMENTS.
 PCB MUST BEAR THE UL94V-0 UL REGISTERED MATERIAL ID NUMBER

ADDITIONAL REQUIREMENTS:
 MICROSECTION: YES
 BARE BOARD ELEC. TEST: NONE REQUIRED PER ORDER



PROJECT TITLE:
 Automotive LED Front Lamp With Sequential Turn

DESIGNED FOR:
 Public Release

FILE NAME:
 TIDA-01372 .PcbDoc

ADDITIONAL COMMENTS:	REVISIONS:	DATE:	BY:	DESCRIPTION:	ENGINEER:	LAYOUT BY:
					Enter name of project	Who did the Layout?
SCALE: 1.00					ALTIUM DESIGNER VERSION: 16.1.12.290	

IMPORTANT NOTICE FOR TI DESIGN INFORMATION AND RESOURCES

Texas Instruments Incorporated ("TI") technical, application or other design advice, services or information, including, but not limited to, reference designs and materials relating to evaluation modules, (collectively, "TI Resources") are intended to assist designers who are developing applications that incorporate TI products; by downloading, accessing or using any particular TI Resource in any way, you (individually or, if you are acting on behalf of a company, your company) agree to use it solely for this purpose and subject to the terms of this Notice.

TI's provision of TI Resources does not expand or otherwise alter TI's applicable published warranties or warranty disclaimers for TI products, and no additional obligations or liabilities arise from TI providing such TI Resources. TI reserves the right to make corrections, enhancements, improvements and other changes to its TI Resources.

You understand and agree that you remain responsible for using your independent analysis, evaluation and judgment in designing your applications and that you have full and exclusive responsibility to assure the safety of your applications and compliance of your applications (and of all TI products used in or for your applications) with all applicable regulations, laws and other applicable requirements. You represent that, with respect to your applications, you have all the necessary expertise to create and implement safeguards that (1) anticipate dangerous consequences of failures, (2) monitor failures and their consequences, and (3) lessen the likelihood of failures that might cause harm and take appropriate actions. You agree that prior to using or distributing any applications that include TI products, you will thoroughly test such applications and the functionality of such TI products as used in such applications. TI has not conducted any testing other than that specifically described in the published documentation for a particular TI Resource.

You are authorized to use, copy and modify any individual TI Resource only in connection with the development of applications that include the TI product(s) identified in such TI Resource. NO OTHER LICENSE, EXPRESS OR IMPLIED, BY ESTOPPEL OR OTHERWISE TO ANY OTHER TI INTELLECTUAL PROPERTY RIGHT, AND NO LICENSE TO ANY TECHNOLOGY OR INTELLECTUAL PROPERTY RIGHT OF TI OR ANY THIRD PARTY IS GRANTED HEREIN, including but not limited to any patent right, copyright, mask work right, or other intellectual property right relating to any combination, machine, or process in which TI products or services are used. Information regarding or referencing third-party products or services does not constitute a license to use such products or services, or a warranty or endorsement thereof. Use of TI Resources may require a license from a third party under the patents or other intellectual property of the third party, or a license from TI under the patents or other intellectual property of TI.

TI RESOURCES ARE PROVIDED "AS IS" AND WITH ALL FAULTS. TI DISCLAIMS ALL OTHER WARRANTIES OR REPRESENTATIONS, EXPRESS OR IMPLIED, REGARDING TI RESOURCES OR USE THEREOF, INCLUDING BUT NOT LIMITED TO ACCURACY OR COMPLETENESS, TITLE, ANY EPIDEMIC FAILURE WARRANTY AND ANY IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, AND NON-INFRINGEMENT OF ANY THIRD PARTY INTELLECTUAL PROPERTY RIGHTS.

TI SHALL NOT BE LIABLE FOR AND SHALL NOT DEFEND OR INDEMNIFY YOU AGAINST ANY CLAIM, INCLUDING BUT NOT LIMITED TO ANY INFRINGEMENT CLAIM THAT RELATES TO OR IS BASED ON ANY COMBINATION OF PRODUCTS EVEN IF DESCRIBED IN TI RESOURCES OR OTHERWISE. IN NO EVENT SHALL TI BE LIABLE FOR ANY ACTUAL, DIRECT, SPECIAL, COLLATERAL, INDIRECT, PUNITIVE, INCIDENTAL, CONSEQUENTIAL OR EXEMPLARY DAMAGES IN CONNECTION WITH OR ARISING OUT OF TI RESOURCES OR USE THEREOF, AND REGARDLESS OF WHETHER TI HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

You agree to fully indemnify TI and its representatives against any damages, costs, losses, and/or liabilities arising out of your non-compliance with the terms and provisions of this Notice.

This Notice applies to TI Resources. Additional terms apply to the use and purchase of certain types of materials, TI products and services. These include; without limitation, TI's standard terms for semiconductor products (<http://www.ti.com/sc/docs/stdterms.htm>), [evaluation modules](#), and [samples](http://www.ti.com/sc/docs/sampterm.htm) (<http://www.ti.com/sc/docs/sampterm.htm>).

Mailing Address: Texas Instruments, Post Office Box 655303, Dallas, Texas 75265
Copyright © 2017, Texas Instruments Incorporated