ONET1151L-EVM: Safety Instructions

This guide provides a list of safety instructions for the ONET1151L-EVM.

Contents

Trademarks

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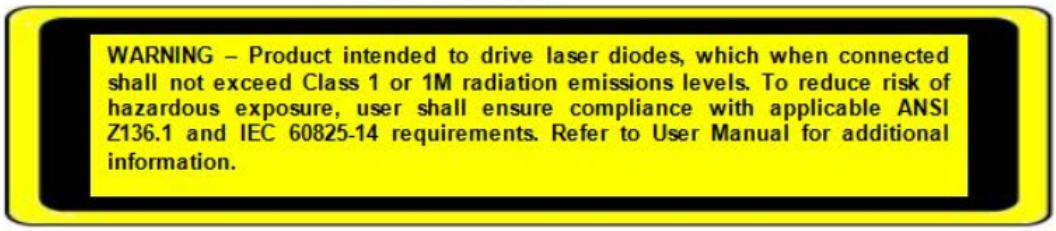
1 Safety Instructions

WARNING

Use of controls or adjustments or performance of procedures other than those specified herein mat result in hazardous radiation exposure.

The black and yellow label shown below is located on the ONET1151L-EVM board:



WARNING

WARNING: To minimize risk of personal injury including potential burn hazards and damage to eyes, the following safety precautions shall be followed by the user when using the ONET1151L-EVM. If there are any questions, please contact Texas Instruments at onet1130ex_evm@list.ti.com

1. Examine the ONET1151L-EVM for any damage before applying power to the board. If there is any damage, do not proceed to apply power to this board.
2. Choose a custom DML TOSA, compliant to the **XMD Multi-Source Agreement (http://xmd-msa.org/)**, to be soldered on to the ONET1151L-EVM board at the allotted pin slot as shown in the User's guide.
   a. The DML TOSA must be a Class 1 or 1M Laser product, compliant according to International Safety Standard IEC-60825 (Safety of Laser Products – Equipment Classification and Requirements). No laser safety eyewear is provided with the EVM, however, it is recommended

laser safety eyewear be worn with a rating of OD+5 or higher for the specific wavelength of the laser diode employed. Laser safety eyewear can be purchased from various laser safety product companies.

b. Make sure to follow all the safety instructions listed in the manual of the DML TOSA device being used. Failure to do so may cause potential for personal injury including burn hazard or eye damage to the user or other personnel in the surrounding area.

c. The DML TOSA output (typically LC or SC) must be kept covered with its corresponding protective cover at all times when it is not connected to the optical fiber or the appropriate testing equipment during the testing process. IF the protective cover is not present, or damage, do not proceed with any testing or energizing of the laser.

3. Only solder the DML TOSA on to the board when the EVM is completely powered OFF. Ensure the TOSA output is still covered and is pointed away from the direct line of viewing and is safely away from the eye. Follow normal soldering practices to ensure all the laser connections are electrically and mechanically sound.
4. Once the EVM board is powered ON, the default setting of the board is configured to NOT provide any bias current to the TOSA. The Laser device will not be powered until the laser bias current is set manually to the desired value through the GUI.
5. When the GUI is launched with the EVM board powered on, uncheck the “Enable the Chip” option. This will disable the chip and help to ensure any accidental/unintended settings of the laser bias/modulation current do not cause potential harm to the user. The chip must be enabled when all the other parameters are set and the user is ready for running the test.
6. Texas Instruments strongly recommends that all Laser safety features provided by the ONET1151L chip are effectively utilized.
7. It is strongly recommended to monitor the Laser bias current of the ONET1151L through the internal 8-bit ADC register. This can be done by selecting the relevant option in the “Core configurations” page of the EVM GUI. WARNING – TOSA laser modules and other laser diodes are capable of emitting levels of optical power much more hazardous than Class 1 and 1M if driven with higher current. To avoid exposure to hazardous laser radiation above Class 1 and 1M, monitor the Laser bias current.
8. This product is intended strictly for use in development/laboratory environments by technically qualified personnel familiar with laser safety and related laser safety hazards. Such laboratories should operate in conformance with ANSI Z136.1 and/or IEC/EN 60825-14, and include, at a minimum, safeguards such as limited access to non-qualified personnel, etc. This EVM is not to be used in residential environments.
9. Any kind of circuit modification to the board or use of software or firmware other than the recommended/supplied EVM tools and firmware provided by TI may lead to violation of Class 1 or 1M laser safety limits. Such modifications are prohibited by TI
10. There is no scheduled maintenance required for the ONET1151L-EVM. Any servicing or maintenance of this EVM shall be performed only by trained Texas Instruments or TI-appointed trained personnel.

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