

DATASHEET AND OPERATING GUIDE

WHS302 Heatsink

For Wxx Series Controllers



FEATURES AND BENEFITS

- Convenient and simple design

INCLUDED IN

- WEV300 Thermal Management Accessory Kit
- WEV301 Thermal Management Accessory Kit
- WEV302 Thermal Management Accessory Kit

GENERAL DESCRIPTION

The WHS302 is a high performance heatsink specifically designed to fit the Wxx style packages and is less than a half inch tall.

The heatsink will allow Wxx laser diode drivers and temperature controllers to operate at much higher power.

The fin configuration of the heatsink allows the unit to be mounted in almost any position without affecting heat dissipation. An optional fan (WXC303 or WXC304) may be installed on the heatsink for additional cooling.

USED WITH

- LDTCxx20 and LDTC2/2 Series Integrated Temperature and Laser Diode Controllers
- WHY5640 Temperature Controller & WHY5690 Evaluation Board
- WLD3343 Series Laser Diode Drivers & WLD3393 Evaluation Board
- WTC3243 Series Temperature Controllers & WTC3293 Evaluation Board
- WTCP5V5A Temperature Controller and WTCPEVAL Evaluation Board

CONTENTS

	PAGE
SAFE OPERATING AREA	2
ASSEMBLY INSTRUCTIONS	2
THERMAL PERFORMANCE	3
MECHANICAL SPECIFICATIONS	3
CERTIFICATION AND WARRANTY	4

ORDERING INFORMATION

PART NO	DESCRIPTION
WHS302	Heatsink for use with Wxx Series controllers

SAFE OPERATING AREA

Some Wavelength modules require heatsinking when operated above a particular power level, and forced airflow over the heatsink may be required at greater powers. The on-line SOA tool will help you to understand when these conditions apply to your situation.



IT IS IMPERATIVE THAT YOU VERIFY THE UNIT WILL OPERATE WITHIN THE INTERNAL HEAT DISSIPATION SAFE OPERATING AREA (SOA).

OPERATING THE CONTROLLER OUTSIDE THE SOA MAY DAMAGE OR DESTROY THE MODULE AND/OR LOADS.

To determine if the module is suitable for your application, if it will be operating in the safe range, or if forced airflow is required, consult the instructions for calculating the Safe Operating Area on-line at:

Laser Diode Drivers:

www.teamwavelength.com/support/design-tools/soa-ld-calculator/

Temperature Controllers:

www.teamwavelength.com/support/design-tools/soa-tc-calculator/

If you have any questions about the Safe Operating Area calculator, call the factory for free and prompt technical assistance.

ASSEMBLY INSTRUCTIONS

Refer to **Figure 1**.

- Clean all mating surfaces on the electronics module and heatsink. It is important to remove particulates and foreign materials from the mating faces.
- Remove the protective plastic cover from both sides.
- Apply the adhesive side of the WTW002 Thermal Washer to the WHS302 Heatsink surface, aligning the thermal washer holes with the heatsink holes.
- Secure the WHS302 Heatsink and the WXC303/304 Fan (if used) to PDIP14 Package with two screws.

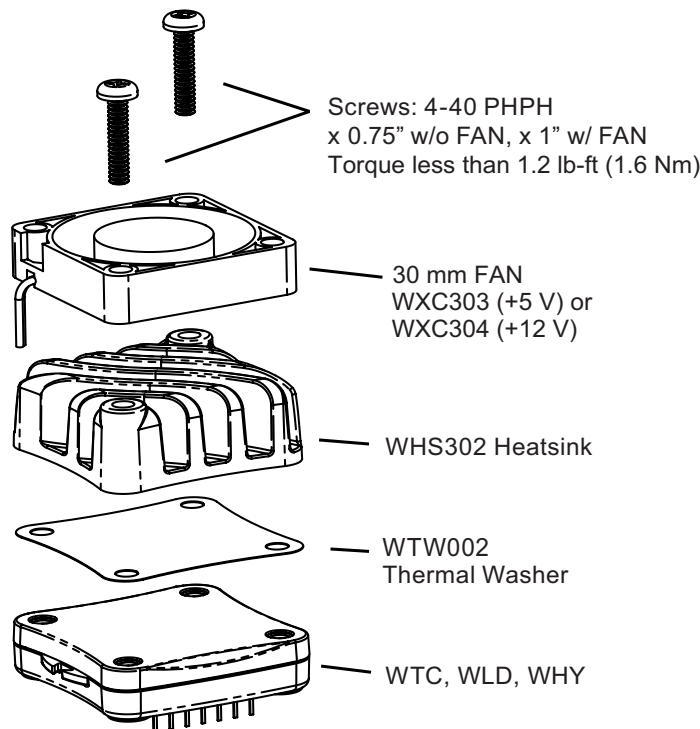


Figure 1. Exploded View of WEV Kit Assembly

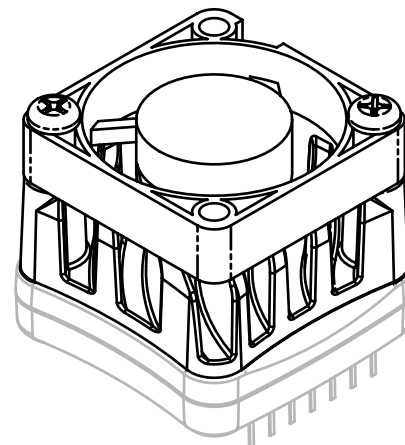
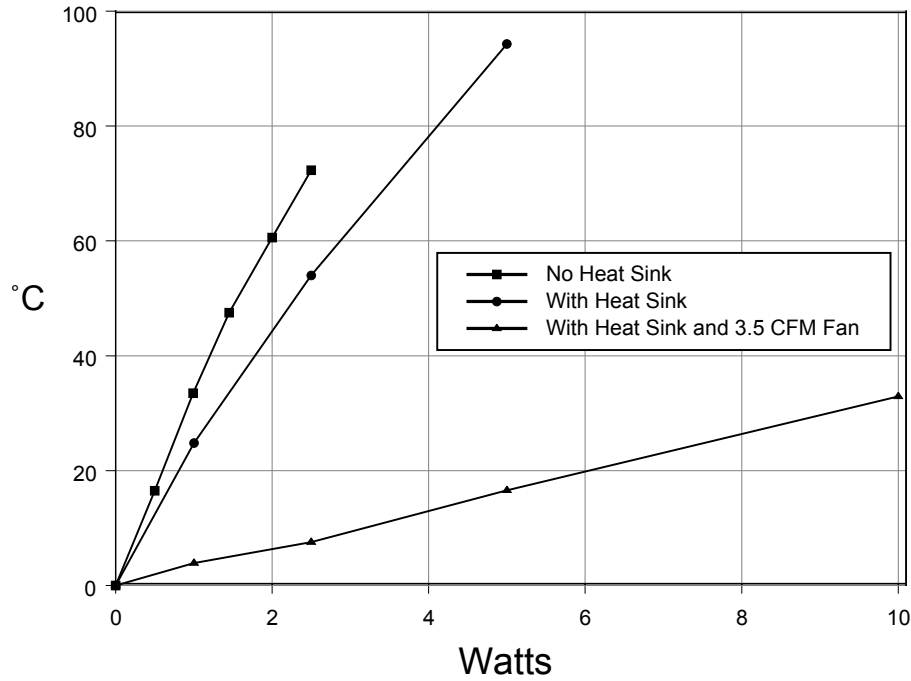


Figure 2. Composite Assembly

THERMAL PERFORMANCE

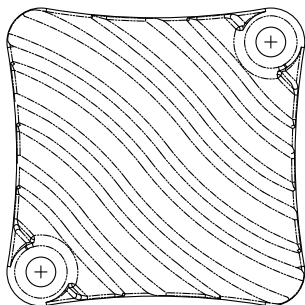
PARAMETER	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Heatspreader Temperature Rise	T _{AMBIENT} =25°C	28	30	33	°C / W
Heatspreader Temperature Rise	With WHS302 Heatsink, WTW002 Thermal Washer	18	21.5	25	°C / W
Heatspreader Temperature Rise	With WHS302 Heatsink, WTW002 Thermal Washer, and 3.5 CFM Fan	3.1	3.4	3.9	°C / W

Case Temperature Increase

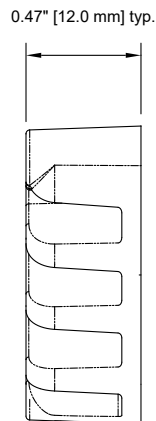


MECHANICAL SPECIFICATIONS

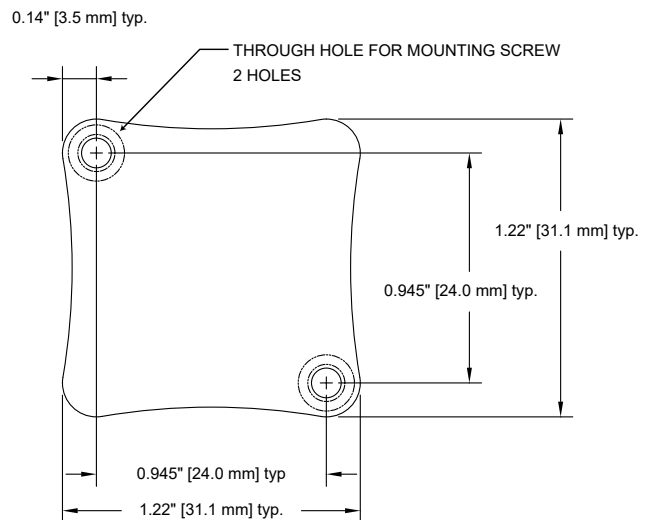
TOP VIEW



SIDE VIEW



BOTTOM VIEW



CERTIFICATION AND WARRANTY

CERTIFICATION

Wavelength Electronics, Inc. (Wavelength) certifies that this product met its published specifications at the time of shipment. Wavelength further certifies that its calibration measurements are traceable to the United States National Institute of Standards and Technology, to the extent allowed by that organization's calibration facilities, and to the calibration facilities of other International Standards Organization members.

WARRANTY

This Wavelength product is warranted against defects in materials and workmanship for a period of one (1) year from date of shipment. During the warranty period, Wavelength will, at its option, either repair or replace products which prove to be defective.

WARRANTY SERVICE

For warranty service or repair, this product must be returned to the factory. An RMA is required for products returned to Wavelength for warranty service. The Buyer shall prepay shipping charges to Wavelength and Wavelength shall pay shipping charges to return the product to the Buyer upon determination of defective materials or workmanship. However, the Buyer shall pay all shipping charges, duties, and taxes for products returned to Wavelength from another country.

LIMITATIONS OF WARRANTY

The warranty shall not apply to defects resulting from improper use or misuse of the product or operation outside published specifications. No other warranty is expressed or implied. Wavelength specifically disclaims the implied warranties of merchantability and fitness for a particular purpose.

EXCLUSIVE REMEDIES

The remedies provided herein are the Buyer's sole and exclusive remedies. Wavelength shall not be liable for any direct, indirect, special, incidental, or consequential damages, whether based on contract, tort, or any other legal theory.

REVERSE ENGINEERING PROHIBITED

Buyer, End-User, or Third-Party Reseller are expressly prohibited from reverse engineering, decompiling, or disassembling this product.

NOTICE

The information contained in this document is subject to change without notice. Wavelength will not be liable for errors contained herein or for incidental or consequential damages in connection with the furnishing, performance, or use of this material. No part of this document may be translated to another language without the prior written consent of Wavelength.

LIFE SUPPORT POLICY

This important safety information applies to all Wavelength Electronics, Inc, electrical and electronic products and accessories:

As a general policy, Wavelength Electronics, Inc. does not recommend the use of any of its products in life support applications where the failure or malfunction of the Wavelength product can be reasonably expected to cause failure of the life support device or to significantly affect its safety or effectiveness. Wavelength will not knowingly sell its products for use in such applications unless it receives written assurances satisfactory to Wavelength that the risks of injury or damage have been minimized, the customer assumes all such risks, and there is no product liability for Wavelength. Examples of devices considered to be life support devices are neonatal oxygen analyzers, nerve stimulators (for any use), auto-transfusion devices, blood pumps, defibrillators, arrhythmia detectors and alarms, pacemakers, hemodialysis systems, peritoneal dialysis systems, ventilators of all types, and infusion pumps as well as other devices designated as "critical" by the FDA. The above are representative examples only and are not intended to be conclusive or exclusive of any other life support device.

REVISION HISTORY

DOCUMENT NUMBER: WHS302-00400

REV.	DATE	CHANGE
C	October 2013	Extended Warranty
D	September 2018	Clarified through hole labels



WAVELENGTH
ELECTRONICS