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

FEATURES AND BENEFITS

• Convenient and simple design

INCLUDED IN

• WEV300 Thermal Management Accessory Kit
• WEV301 Thermal Management Accessory Kit
• WEV302 Thermal Management Accessory Kit

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ORDERING INFORMATION

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<th>PART NO</th>
<th>DESCRIPTION</th>
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<tr>
<td>WHS302</td>
<td>Heatsink for use with Wxx Series controllers</td>
</tr>
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</table>
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.**

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.

*Screws: 4-40 PHPH x 0.75” w/o FAN, x 1” w/ FAN
Torque less than 1.2 lb-ft (1.6 Nm)*

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:


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

---

**Figure 1.** Exploded View of WEV Kit Assembly

**Figure 2.** Composite Assembly
THERMAL PERFORMANCE

<table>
<thead>
<tr>
<th>PARAMETER</th>
<th>TEST CONDITIONS</th>
<th>MIN</th>
<th>TYP</th>
<th>MAX</th>
<th>UNIT</th>
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</thead>
<tbody>
<tr>
<td>Heatspreader Temperature Rise</td>
<td>T&lt;sub&gt;AMBIENT&lt;/sub&gt; = 25°C</td>
<td>28</td>
<td>30</td>
<td>33</td>
<td>°C / W</td>
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<tr>
<td>Heatspreader Temperature Rise</td>
<td>With WHS302 Heatsink, WTW002 Thermal Washer</td>
<td>18</td>
<td>21.5</td>
<td>25</td>
<td>°C / W</td>
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<tr>
<td>Heatspreader Temperature Rise</td>
<td>With WHS302 Heatsink, WTW002 Thermal Washer, and 3.5 CFM Fan</td>
<td>3.1</td>
<td>3.4</td>
<td>3.9</td>
<td>°C / W</td>
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MECHANICAL SPECIFICATIONS

<table>
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<tr>
<th>TOP VIEW</th>
<th>SIDE VIEW</th>
<th>BOTTOM VIEW</th>
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<tbody>
<tr>
<td></td>
<td>0.47&quot; [12.0 mm] typ.</td>
<td>0.14&quot; [3.5 mm] typ.</td>
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<tr>
<td></td>
<td>0.945&quot; [24.0 mm] typ.</td>
<td>1.22&quot; [31.1 mm] typ.</td>
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<tr>
<td></td>
<td>0.945&quot; [24.0 mm] typ.</td>
<td>1.22&quot; [31.1 mm] typ.</td>
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Case Temperature Increase

Watts

°C
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.

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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

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<th>REV.</th>
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