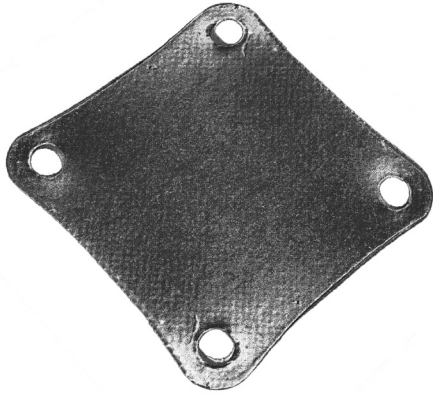


DATASHEET AND OPERATING GUIDE

WTW002

Thermal Washer



OPERATING RANGE EXTENDER

The WTW002 Thermal Washer is used with Wavelength's WLD/WHY/WTC Series products to help improve heat dissipation, protect the modules from over-heating, and extend the operating temperature range. The thermal washer is shaped to match the Power DIP 14 (PDIP14) package of the WLD Laser Diode Driver and the WHY/WTC Series Temperature Controller modules.

These controllers operate up to 500 mA without any additional heatsinking (review the product specification for details). To operate at higher currents, choose the WEV Thermal Solution Kit that suits your application: up to 1 A output, use the WEV300 which includes the thermal washer and heatsink. To achieve full output current order the WEV301 or WEV302, which includes a fan for improved airflow control.

FEATURES AND BENEFITS

- Flexible graphite
- Adhesive backing
- Thermal conductivity up to 5 W / mK
- Extends the Safe Operating Area of the WLD, WTC, and WHY

INCLUDED IN

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

OPTIMUM THERMAL CONDUCTIVITY

The WTW002 is composed of a non-silicone, flexible graphite material, and does not break down under high heat conditions. One side has adhesive to ensure contact to the heatsink. When positioned between the PDIP14 package and heatsink, the WTW002 will provide optimum thermal conductivity as high as 5 Watts / mK.

USED WITH

- LDTCxx20 & 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 & WTCPEVAL Evaluation Board

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WTW002	Thermal Washer for use with Wxx Series controllers



SAFE OPERATING AREA



TO DETERMINE IF THE THERMAL WASHER AND/OR HEATSINK IS REQUIRED IN YOUR APPLICATION, IT IS IMPERATIVE THAT YOU VERIFY THE UNIT WILL BE OPERATING WITHIN THE INTERNAL HEAT DISSIPATION SAFE OPERATING AREA (SOA).

Visit the Wavelength Electronics website for the most accurate, up-to-date, and easy to use SOA calculator.

The SOA calculator for Laser Diode Drivers is at this page: <http://www.teamwavelength.com/support/calculator/soa/soald.php>

The SOA calculator for Temperature Controllers: <http://www.teamwavelength.com/support/calculator/soa/soatc.php>

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.

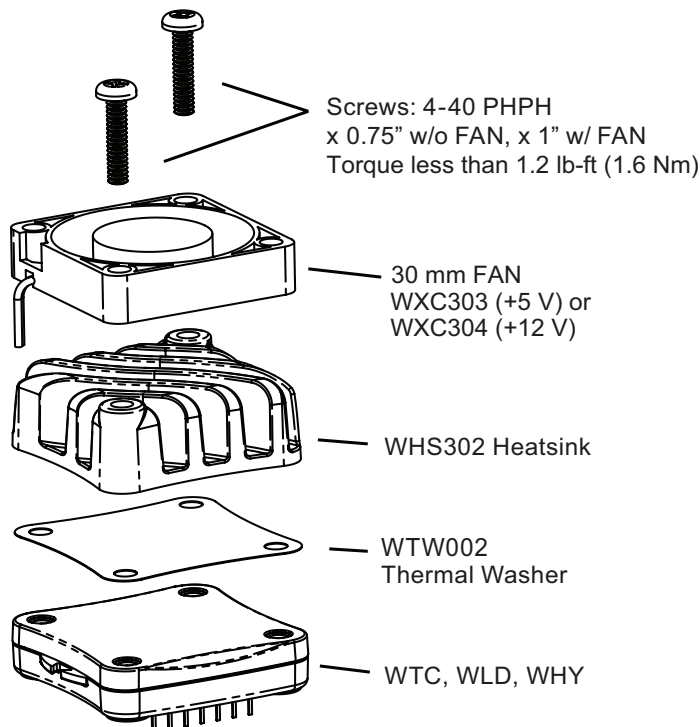


Figure 1. Exploded View of WEV Kit Assembly

Table 1. Thermal Performance Specifications

MATERIAL	Flexible graphite, adhesive backed
THICKNESS	0.005" [0.13 mm]
HARDNESS	85 Shore A
THERMAL CONDUCTIVITY	5 W / mK

Mechanical specifications for the thermal washer are shown in **Figure 2**. All dimensions are in inches [mm] with $\pm 5\%$ tolerance.

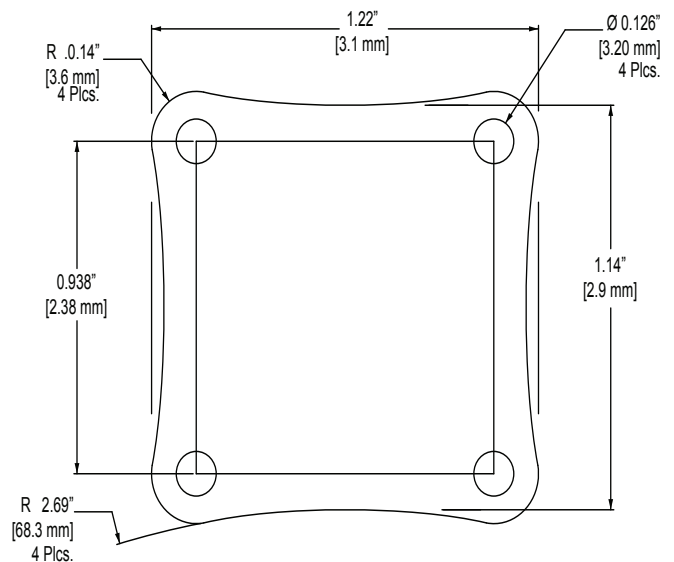


Figure 2. WTW002 Thermal Washer Dimensions

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.

SAFETY

There are no other user-serviceable parts inside this product. Return the product to Wavelength for service and repair to ensure that safety features are maintained.

LIFE SUPPORT POLICY

This important safety information applies to all Wavelength 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 WTW002-00400

REV.	DATE	CHANGE
E	July 2012	Release in new format
F	March 2013	Updated for adhesive backing
G	October 2013	Extended warranty

