



CoolBoost Module Overview

CoolBoost is an optional accessory available for the TherMoiré PS400 that provides dramatic cooling rate improvement over the standard setup. While recent lead-free initiatives have driven peak reflow temperatures to 260C and above, fast post-peak cooling rates have become more critical than ever as engineers try to limit the high-temperature exposure of components as much as possible. The JEDEC Standard 22B112 (High Temperature Package Warpage Measurement Methodology) also underlines the importance of precisely replicating real-world cooling rates, specifically warning against extended profiles. The CoolBoost option allows the user to reproduce these profiles more accurately, while also lowering test times and increasing throughput.

CoolBoost is comprised of a refrigerated air source and controller; the refrigerated air is ported directly into the oven during the cooling portion of the profile, allowing for rapid cool down of the sample, as well as other sources of latent heat (oven walls, IR tubes, fixtures, etc.). CoolBoost is installed inside the PS400 chassis in the lower storage area, so there is no increase in footprint size.

CoolBoost Specifications

The CoolBoost optional accessory has no effect on the field of view, resolution, repeatability, or accuracy of the PS400.

Dimensions:	12.1" H x 19.9" W x 19.9" D, (306mm x 506mm x 506mm)
Weight:	75 lbs (34 kg)
Cooling Capacity:	6000 BTUH @ 125F (1760 Watts @ 50C)
Power Requirement:	None (draws power directly from PS400)
Facility Requirements:	No additional connections

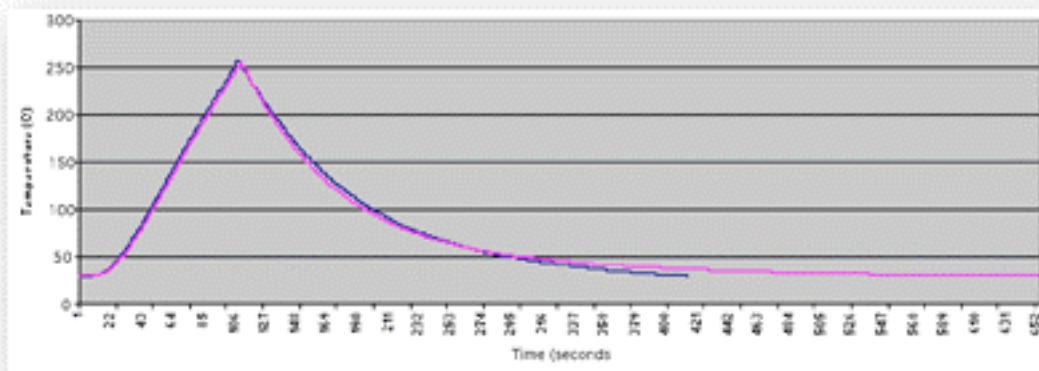


Figure 1: Single cycle, 30C to 250C to 30C. Pink line represents standard PS400 setup; blue line represents PS400 with CoolBoost, illustrating improved cycle time (413 s vs. 660 s).